```
20-Jan-93 13:50:03 {DSK}<python>lde>lispcore>library>ETHERRECORDS.;2
 File created:
  changes to:
              (RECORDS ETHERPACKET SYSOUEUE OABLEITEM PUP ERRORPUP PUPADDRESS XIP ERRORXIP NSHOSTNUMBER
                     NSADDRESS NSNAME)
previous date:
              17-Dec-92 14:33:27 {DSK}<python>lde>lispcore>library>ETHERRECORDS.;1
 Read Table:
              INTERLISP
   Package:
              INTERLISP
               XCCS
      Format:
;; Copyright (c) 1983, 1984, 1985, 1987, 1990, 1992, 1993 by Venue & Xerox Corporation. All rights reserved.
(RPAGO ETHERRECORDSCOMS
       ((RECORDS ETHERPACKET SYSQUEUE QABLEITEM)
        (COMS
                                                                  : Pup things
              (RECORDS PUP ERRORPUP PUPADDRESS)
              (MACROS \LOCALPUPADDRESS \LOCALPUPHOSTNUMBER \LOCALPUPNETNUMBER)
              (CONSTANTS (\PUPOVLEN 22)
                      (\MAX.PUPDATALENGTH 532))
              (CONSTANTS * PUPERRORCODES))
                                                                  ; XIP things
        (COMS
              (RECORDS XIP ERRORXIP NSHOSTNUMBER NSADDRESS NSNAME)
              (CONSTANTS (\XIPOVLEN 30)
                      (\MAX.XIPDATALENGTH 546))
              (CONSTANTS * XIPERRORCODES))))
(DECLARE%: EVAL@COMPILE
(DATATYPE ETHERPACKET ((NIL BYTE)
                        (EPLINK POINTER)
                                                                  ; For queue maintenence
                        (EPFLAGS BYTE)
                                                                   optional flags for some applications
                        (EPUSERFIELD POINTER)
                                                                  ; Arbitrary pointer for applications
                        (NIL BYTE)
                        (EPPLIST POINTER)
                                                                  ; Extra field for use as an A-list for properties
                        (EPTRANSMITTING FLAG)
                                                                   True while packet is being transmitted and hence cannot be
                                                                   True when a packet has been seen at the head of the network's
                        (EPRECEIVING FLAG)
                                                                  ; input queue at least once
                        (NIL BITS 6)
                                                                  ; Where to requeue this packet after transmission
                        (EPREQUEUE POINTER)
                        (NIL BYTE)
                        (EPSOCKET POINTER)
                        (NIL BYTE)
                        (EPNETWORK POINTER)
                        (EPTYPE WORD)
                                                                  ; Type of packet to be encapsulated (PUP or XIP or 10TO3)
                        (NIL WORD)
                                                                   Gets RCLK value when transmitted/received
                        (EPTIMESTAMP FIXP)
                        (EPRECUEUEFN POINTER)
                                                                   FN to perform requeueing
                                                                   Space for expansion
                        (NIL 4 WORD)
                                                                   Note: This next field wants to be quad+2 aligned so that the
                                                                   10mb packet is quad+3 aligned
                                                                   10mb encapsulation, or 3mb encapsulation with padding
                        (EPENCAPSULATION 8 WORD)
                                                                   Body of packet, header up to 16 words plus data up to 546
                        (EPBODY 289 WORD)
                                                                   bytes
                       ))
(DATATYPE SYSQUEUE ((NIL BYTE)
                     (SYSQUEUEHEAD POINTER)
                     (NIL BYTE)
                     (SYSQUEUETAIL POINTER)))
[BLOCKRECORD QABLEITEM ((NIL BITS 4)
                         (QLINK POINTER)
                                                                  ; Link to next thing in queue always in first pointer of datum,
                                                                   ; independent of what the datum is
       (BLOCKRECORD QABLEITEM ((NIL BITS 4)
                                                                  ; Let's also be able to call it a LINK
                                (LINK POINTER)
                                1
)
(/DECLAREDATATYPE 'ETHERPACKET
        (BYTE POINTER BYTE POINTER BYTE POINTER FLAG FLAG (BITS 6)
              POINTER BYTE POINTER BYTE POINTER WORD WORD FIXP POINTER WORD WORD WORD WORD WORD WORD WORD
              WORD WORD WORD WORD WORD WORD
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           WORD WORD
           WORD WORD WORD WORD WORD WORD)
     ;; ---field descriptor list elided by lister---
     ′324)
(/DECLAREDATATYPE 'SYSQUEUE '(BYTE POINTER BYTE POINTER)
     ;; ---field descriptor list elided by lister---
     ′6)
;; Pup things
(DECLARE%: EVAL@COMPILE
(ACCESSFNS PUP [ (PUPBASE (LOCF (fetch (ETHERPACKET EPBODY) of DATUM]
     [BLOCKRECORD PUPBASE ((PUPLENGTH WORD)
                        (PUPTCONTROL BYTE)
                        (PUPTYPE BYTE)
                        (PUPID FIXP)
                        (PUPDEST WORD)
                        (PUPDESTSOCKET FIXP)
                        (PUPSOURCE WORD)
                        (PUPSOURCESOCKET FIXP)
                        (PUPDATASTART 266 WORD))
           (BLOCKRECORD PUPBASE ((NIL WORD)
                              (TYPEWORD WORD)
                             (PUPIDHI WORD)
(PUPIDLO WORD)
                              (PUPDESTNET BYTE)
                              (PUPDESTHOST BYTE)
                              (PUPDESTSOCKETHI WORD)
                              (PUPDESTSOCKETLO WORD)
                              (PUPSOURCENET BYTE)
                              (PUPSOURCEHOST BYTE)
                              (PUPSOURCESOCKETHI WORD)
                              (PUPSOURCESOCKETLO WORD))
                                                     ; Temporary extra synonyms
                 (SYNONYM PUPDESTNET (DESTNET))
(SYNONYM PUPDESTHOST (DESTHOST))
                 (SYNONYM PUPDESTSOCKETHI (DESTSKTHI))
                 (SYNONYM PUPDESTSOCKETLO (DESTSKTLO))
                 (SYNONYM PUPSOURCENET (SOURCENET))
(SYNONYM PUPSOURCEHOST (SOURCEHOST))
                 (SYNONYM PUPSOURCESOCKETHI (SOURCESKTHI))
                 (SYNONYM PUPSOURCESOCKETLO (SOURCESKTLO)))
           (SYNONYM PUPDEST (DEST))
           (SYNONYM PUPDESTSOCKET (DESTSKT))
           (SYNONYM PUPSOURCE (SOURCE))
           (SYNONYM PUPSOURCESOCKET (SOURCESKT))
           (ACCESSFNS PUPDATASTART ((PUPCONTENTS (LOCF DATUM)
     [ACCESSFNS PUP [ (PUPCHECKSUMBASE (fetch PUPBASE of DATUM) )
                   (PUPCHECKSUMLOC (\ADDBASE (fetch PUPBASE of DATUM)
                                      (FOLDLO (SUB1 (fetch PUPLENGTH of DATUM))
                                           BYTESPERWORD]
           (BLOCKRECORD PUPCHECKSUMLOC ((PUPCHECKSUM WORD]
     (TYPE? (type? ETHERPACKET DATUM)))
[ACCESSFNS ERRORPUP ((ERRORPUPBASE (fetch PUPCONTENTS of DATUM)))
     (BLOCKRECORD ERRORPUPBASE ((ERRORPUPCOPY 10 WORD)
(ERRORPUPCODE WORD)
                                                     ; Copy of pup header
                            (ERRORPUPARG WORD)
                                                     Usually zero
                            (ERRORPUPSTRINGBASE WORD)
                                                     ; Human readable message
(CREATE (IPLUS (LLSH PUPNET# 8)
                  PUPHOST#)))
(DECLARE%: EVAL@COMPILE
(PUTPROPS \LOCALPUPADDRESS MACRO (NIL \LOCALPUPNETHOST))
(PUTPROPS \LOCALPUPHOSTNUMBER MACRO (NIL (fetch PUPHOST# of \LOCALPUPNETHOST)))
(PUTPROPS \LOCALPUPNETNUMBER MACRO (NIL (fetch PUPNET# of \LOCALPUPNETHOST)))
```

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(DECLARE%: EVAL@COMPILE
(RPAQQ \PUPOVLEN 22)
(RPAQQ \MAX.PUPDATALENGTH 532)
(CONSTANTS (\PUPOVLEN 22)
        (\MAX.PUPDATALENGTH 532))
(RPAQQ PUPERRORCODES
        ((\PUPE.CHECKSUM 1)
         (\PUPE.NOSOCKET 2)
         (\PUPE.SOCKETFULL 3)
         (\PUPE.GATEWAY.BADPUP 513)
(\PUPE.NOROUTE 514)
         (\PUPE.NOHOST 515)
(\PUPE.LOOPED 516)
         (\PUPE.TOOLARGE 517)
         (\PUPE.WRONG.GATEWAY 518)
         (\PUPE.GATEWAYFULL 519)))
(DECLARE%: EVAL@COMPILE
(RPAQQ \PUPE.CHECKSUM 1)
(RPAQQ \PUPE.NOSOCKET 2)
(RPAQQ \PUPE.SOCKETFULL 3)
(RPAQQ \PUPE.GATEWAY.BADPUP 513)
(RPAQQ \PUPE.NOROUTE 514)
(RPAQQ \PUPE.NOHOST 515)
(RPAQQ \PUPE.LOOPED 516)
(RPAQQ \PUPE.TOOLARGE 517)
(RPAQQ \PUPE.WRONG.GATEWAY 518)
(RPAQQ \PUPE.GATEWAYFULL 519)
(CONSTANTS (\PUPE.CHECKSUM 1)
        (\PUPE.NOSOCKET 2)
        (\PUPE.SOCKETFULL 3)
        (\PUPE.GATEWAY.BADPUP 513)
(\PUPE.NOROUTE 514)
        (\PUPE.NOHOST 515)
(\PUPE.LOOPED 516)
        (\PUPE.TOOLARGE 517)
        (\PUPE.WRONG.GATEWAY 518)
        (\PUPE.GATEWAYFULL 519))
;; XIP things
(DECLARE%: EVAL@COMPILE
(ACCESSFNS XIP [(XIPBASE (LOCF (fetch (ETHERPACKET EPBODY) of DATUM]
        [BLOCKRECORD XIPBASE ((XIPCHECKSUM WORD)
                                 (XIPLENGTH WORD)
                                 (XIPTCONTROL BYTE)
                                 (XIPTYPE BYTE)
                                 (XIPDESTNET FIXP)
                                 (XIPDESTWORD1 3 WORD)
                                 (XIPDESTSOCKET WORD)
                                 (XIPSOURCENET FIXP)
                                 (XIPSOURCEWORD1 3 WORD) (XIPSOURCESOCKET WORD)
                                                                         : Start of data
                                 (XIPFIRSTDATAWORD WORD)
                [ACCESSFNS XIPLENGTH ((XIPCHECKSUMBASE (LOCF DATUM]
                [ACCESSFNS XIPFIRSTDATAWORD ((XIPCONTENTS (LOCF DATUM)]
[ACCESSFNS XIPSOURCEWORD1 ((XIPSOURCEHOST (\LOADNSHOSTNUMBER (LOCF DATUM)))
                                                      (\STORENSHOSTNUMBER (LOCF DATUM)
                                                              NEWVALUE]
                [ACCESSFNS XIPDESTWORD1 ((XIPDESTHOST (\LOADNSHOSTNUMBER (LOCF DATUM))
                                                    (\STORENSHOSTNUMBER (LOCF DATUM)
                                                            NEWVALUE]
                [ACCESSFNS XIPSOURCENET ((XIPSOURCENSADDRESS (\LOADNSADDRESS (LOCF DATUM))
                                                    (\STORENSADDRESS (LOCF DATUM)
                                                            NEWVALUE]
                (ACCESSFNS XIPDESTNET ((XIPDESTNSADDRESS (\LOADNSADDRESS (LOCF DATUM))
```

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(\STORENSADDRESS (LOCF DATUM)
                                                       NEWVALUE]
        (TYPE? (type? ETHERPACKET DATUM)))
[ACCESSFNS ERRORXIP ((ERRORXIPBASE (fetch XIPCONTENTS of DATUM)))
        (BLOCKRECORD ERRORXIPBASE ((ERRORXIPCODE WORD)
                                     (ERRORXIPARG WORD)
                                                                      ; As many words of offending XIP as sender felt like including...
                                     (ERRORXIPBODY WORD)
                                    1
(TYPERECORD NSHOSTNUMBER (NSHOST0 NSHOST1 NSHOST2))
[DATATYPE NSADDRESS ((NSNET FIXP)
                       (NSHNM0 WORD)
                       (NSHNM1 WORD)
                       (NSHNM2 WORD)
                       (NSSOCKET WORD))
        (ACCESSFNS (NSHOSTNUMBER (\Loadnshostnumber (Locf (fetch NSHNMO of DATUM)))
                           (\STORENSHOSTNUMBER (LOCF (fetch NSHNMO of DATUM))
                                  NEWVALUE)))
        (BLOCKRECORD NSADDRESS ((NSNETHI WORD)
                                  (NSNETLO WORD]
(DATATYPE NSNAME ((NSOBJECT POINTER)
                    (NSDOMAIN POINTER)
                                                                      (* Canonical three-part Clearinghouse name)
                   (NSORGANIZATION POINTER))
       )
(/DECLAREDATATYPE 'NSADDRESS '(FIXP WORD WORD WORD)
       ;; ---field descriptor list elided by lister---
       ′6)
(/DECLAREDATATYPE 'NSNAME ' (POINTER POINTER POINTER)
       ;; ---field descriptor list elided by lister---
(DECLARE%: EVAL@COMPILE
(RPAQQ \XIPOVLEN 30)
(RPAQQ \MAX.XIPDATALENGTH 546)
(CONSTANTS (\XIPOVLEN 30)
       (\MAX.XIPDATALENGTH 546))
(RPAQQ XIPERRORCODES ((\XIPE.CHECKSUM 1)
                          (\XIPE.NOSOCKET 2)
                          (\XIPE.SOCKETFULL 3)
                          (\XIPE.GATEWAY.CHECKSUM 513)
                          (\XIPE.NOROUTE 514)
(\XIPE.LOOPED 515)
                          (\XIPE.TOOLARGE 516)))
(DECLARE%: EVAL@COMPILE
(RPAQQ \XIPE.CHECKSUM 1)
(RPAQQ \XIPE.NOSOCKET 2)
(RPAQQ \XIPE.SOCKETFULL 3)
(RPAQQ \XIPE.GATEWAY.CHECKSUM 513)
(RPAQQ \XIPE.NOROUTE 514)
(RPAQQ \XIPE.LOOPED 515)
(RPAQQ \XIPE.TOOLARGE 516)
(CONSTANTS (\XIPE.CHECKSUM 1)
        (\XIPE.NOSOCKET 2)
        (\XIPE.SOCKETFULL 3)
        (\XIPE.GATEWAY.CHECKSUM 513)
        (\XIPE.NOROUTE 514)
        (\XIPE.LOOPED 515)
        (\XIPE.TOOLARGE 516))
)
(PUTPROPS ETHERRECORDS COPYRIGHT ("Venue & Xerox Corporation" 1983 1984 1985 1987 1990 1992 1993))
```

{MEDLEY}library>ETHERRECORDS.;1 28-Jun-2024 18:34:03 -- Listed on 30-Jun-2024 13:12:51 --

CONSTANT INDEX			
\MAX.PUPDATALENGTH3 \MAX.XIPDATALENGTH4 \PUPE.CHECKSUM3 \PUPE.GATEWAY.BADPUP3 \PUPE.GATEWAYFULL3 \PUPE.LOOPED3	\PUPE.NOHOST	\PUPOVLEN \XIPE.CHECKSUM \XIPE.GATEWAY.CHECKSU \XIPE.LOOPED \XIPE.NOROUTE \XIPE.NOSOCKET	4 \XIPE.TOOLARGE4 M4 \XIPOVLEN44
RECORD INDEX ERRORPUP 2 ETHERPACKET 1 NSHOSTNUMBER 4 PUP 2 OABLEITEM 1 XIP			
		~	ABLEITEM1 XIP3 YSQUEUE1
MACRO INDEX			
\LOCALPUPADDRESS	2 \LOCALPUPHOSTNUMBE	ER2 \	LOCALPUPNETNUMBER2
VARIABLE INDEX			
PUPERRORCODES	3 XIPERRORCODES	4	