```
17-May-90 15:58:24 {DSK}<usr>local>lde>lispcore>sources>TRSERVER.;2
 File created:
  changes to:
                (VARS TRSERVERCOMS)
                6-Jun-88 11:27:47 {DSK}<usr>local>lde>lispcore>sources>TRSERVER.;1
previous date:
 Read Table:
               INTERLISP
    Package:
               INTERLISP
       Format:
                 XCCS
"; Copyright (c) 1983, 1984, 1985, 1988, 1990 by Venue & Xerox Corporation. All rights reserved.
(RPAQQ TRSERVERCOMS
              \DOTELERAID \TELERAIDINIT \TELERAIDSERVER \TELEBLTCURSOR \TELERAIDCOMMAND \TELERAIDBREAK
               \TELERAIDGET \TELERAIDSEND \TELERAIDRELEASE \TELERAIDENTRY \TELERAIDEXIT \3MBRAWRECEIVE
               \3MBRAWTRANSMIT \10MBRAWRECEIVE \10MBRAWTRANSMIT \10MBRAWENCAPSULATE \10MBSETUPRECEIVER)
         (INITVARS (\TELERAIDBUFFER)
                 (\TELERAIDBLOCK))
         (BITMAPS \TELERAIDBITMAPS)
         (DECLARE%: EVAL@COMPILE DONTCOPY (GLOBALVARS \TELERAIDPACKET \TELERAIDBUFFER \TELERAIDIOCB
                                                       \TELERAIDBLOCK \TELERAIDBITMAPS)
                 (RECORDS TRBLOCK)
(MACROS \TELEKBDWAIT)
                 (CONSTANTS \#WORDS.CURSOR)
                 (FILES (LOADCOMP)
                         LLETHER 10MBDRIVER REMOTEVMEM LLFAULT))
         (DECLARE%: DONTEVAL@LOAD DOCOPY (P (\TELERAIDINIT])
(DEFINEO
(\DOTELERAID
  [LAMBDA NIL
                                                                         (* bvm%: "15-MAR-83 17:10")
     (PROG NII
           (\TELERAIDSERVER)
            (\CONTEXTSWITCH \TeleRaidFXP)
            (GO LP])
(\TELERAIDINIT
                                                                          (* bvm%: "16-Aug-85 01:06")
  [LAMBDA NIL
     (for FN
        in '(\TELERAIDSERVER \TELERAIDCOMMAND \DOTELERAID \TELERAIDGET \TELERAIDSEND \TELERAIDSETUP
                    \TELERAIDENTRY\TELERAIDEXIT\TELEBLTCURSOR\3MBRAWTRANSMIT\3MBRAWRECEIVE\WRITERAWPBI\READRAWPBI\GETPACKETBUFFER\10MBRAWRECEIVE\10MBRAWTRANSMIT\TELERAIDRELEASE
                    \10MBRAWENCAPSULATE \10MBSETUPRECEIVER FLIPCURSOR \KEYBOARDON \KEYBOARDOFF \10MB.TURNONETHER \QUEUE.OUTPUT.IOCB \QUEUE.INPUT.IOCB \10MB.GETPACKETSTATUS \10MB.GETPACKETLENGTH SETMAINTPANEL
                    \TELERAIDBREAK \FREESTACKBLOCK \DOHELPINTERRUPT1 \MAKEFRAME \DoveEther.ByteSwapIOCB
                    \DoveEther.DeQueue \DoveEther.EnQueue \DoveEther.GetPacketStatus \DoveEther.MakeSureOff
                    \DoveEther.QueueInput \DoveEther.QueueOutput \DoveEther.TurnOn)
        do (\LOCKEN FN))
     (for var in '(\teleraidpacket \teleraidbuffer \teleraidiocb \teleraidblock \localndbs \pup.ready \defspace)
        do (\LOCKVAR VAR))
     (COND
        ((NOT (TYPENAMEP \TELERAIDPACKET 'ETHERPACKET))
         (SETQ \TELERAIDPACKET (\ALLOCATE.ETHERPACKET))
         (\LOCKPAGES \TELERAIDPACKET 2)))
     (\Lockwords (Setq \teleraidblock (fetch bitmapbase of \teleraidbitmaps))
            (fetch BITMAPHEIGHT of \TELERAIDBITMAPS])
(\TELERAIDSERVER
   LAMBDA (METADEBUGGING)
(DECLARE (GLOBALVARS \RCLKSECOND))
                                                                          ; Edited 6-Jun-88 11:17 by bvm
     (PROG ((NDB \LOCALNDBS)
             (PACKET \TELERAIDPACKET)
            RECEIVER PTR VP FILEPAGE BODY)
            (SETQ RECEIVER (\TELERAIDENTRY NDB METADEBUGGING))
           [ COND
               ((AND RECEIVER (\TELERAIDGET NDB PACKET RECEIVER))
                (SELECTC (fetch PUPTYPE of PACKET)
                     (TR.GIVEPAGE (COND
                                       ((NOT (EVENP (fetch PUPIDLO of PACKET)
                                                      WORDSPERPAGE))
                                         (GO ERROR)))
                                    [SETQ VP (create WORD
                                                      HIBYTE _ (fetch LOBYTE of (fetch PUPIDHI of PACKET))
LOBYTE _ (fetch HIBYTE of (fetch PUPIDLO of PACKET]
                                    (COND
                                        ((fetch (VP INVALID) of VP)
                                         (GO ERROR)))
                                    (SETQ PTR (\GETBASEPTR (LOCF (fetch PUPIDHI of PACKET))
                                                       0))
                                    (COND
```

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((NOT (fetch (VMEMFLAGS VACANT) of (\READFLAGS VP)))
                                                                 ; page is resident, we can just blt it
                                 (\BLT (fetch PUPCONTENTS of PACKET)
                                        PTR WORDSPERPAGE))
                                      (SETQ FILEPAGE (\LOOKUPPAGEMAP VP))
                                       (NEQ FILEPAGE 0))
                                                               ; Page exists, so swap it into private buffer
                                 (\ACTONVMEMFILE FILEPAGE \TELERAIDBUFFER 1)
                                 (\BLT (fetch PUPCONTENTS of PACKET)
                                        \TELERAIDBUFFER WORDSPERPAGE))
                                (T (GO ERROR)))
                             (replace PUPLENGTH of PACKET with (IPLUS BYTESPERPAGE \PUPOVLEN))
                             (replace PUPTYPE of PACKET with TR.HEREISPAGE)
                            (\TELERAIDSEND NDB PACKET))
              (TR.STORE (SETQ BODY (fetch PUPCONTENTS of PACKET))
                         (COND
                            ((NEQ (\GETBASEBYTE BODY 0)
                             (GO ERROR)))
                         (SETQ VP (create WORD
                                          HIBYTE _ (\GETBASEBYTE BODY 1)
                                                   (\GETBASEBYTE BODY 2)))
                                           LOBYTE
                         (COND
                            ((fetch (VP INVALID) of VP)
                              (GO ERROR)))
                         (SETQ PTR (\GETBASEPTR BODY 0))
                         (COND
                            ((NOT (fetch (VMEMFLAGS VACANT) of (\READFLAGS VP)))
                                                                 ; page is resident, we can just store directly
                              (\PUTBASE PTR 0 (\GETBASE BODY 2)))
                             ((AND (SETQ FILEPAGE (\LOOKUPPAGEMAP VP))
                                   (NEQ FILEPAGE 0))
                                                                ; Page exists, so swap it into private buffer
                              (\ACTONVMEMFILE FILEPAGE \TELERAIDBUFFER 1)
                              (\PUTBASE \TELERAIDBUFFER (fetch (POINTER WORDINPAGE) of PTR)
                                     (\GETBASE BODY 2))
                              (\ACTONVMEMFILE FILEPAGE \TELERAIDBUFFER 1 T))
                             (T (GO ERROR)))
                         (replace PUPLENGTH of PACKET with \PUPOVLEN)
                         (replace PUPTYPE of PACKET with TR.STOREDONE)
                         (\TELERAIDSEND NDB PACKET))
              (TR.GO (COND
                         ([PROG ((IDHI (fetch PUPIDHI of PACKET))
                                  (IDLO (fetch PUPIDLO of PACKET)))
                                 (replace PUPTYPE of PACKET with TR.GOACK)
                                 (\TELERAIDSEND NDB PACKET)
                                 (RETURN (to 20000 when (\TELERAIDGET NDB PACKET RECEIVER)
                                             do (COND
                                                    ([AND (EQ (fetch PUPTYPE of PACKET)
                                                               TR.GOREPLY)
                                                           (COND
                                                              [(EQ_IDLO MAX.SMALL.INTEGER)
                                                                  ; Sigh, opencoded 32-bit arithmetic
                                                                (AND (EQ (fetch PUPIDLO of PACKET)
                                                                     (EQ (fetch PUPIDHI of PACKET)
                                                                          (ADD1 IDHI1
                                                              (T (AND (EQ (fetch PUPIDLO of PACKET)
                                                                            (ADD1 IDLO))
                                                                        (EQ (fetch PUPIDHI of PACKET)
                                                                           IDHIl
                                                     (RETIIRN T))
                                                    (T (\TELERAIDRELEASE NDB PACKET]
                          (\TELERAIDEXIT NDB)
              (RETURN))))
(\TELERAIDRELEASE NDB PACKET]
    [COND
       ((OR (XKEYDOWNP 'BLANK-BOTTOM)
(XKEYDOWNP 'CTRL))
(\TELEBLTCURSOR (fetch TRCOMMAND of \TELERAIDBLOCK))
(SELECTQ (\TELERAIDCOMMAND NDB)
                                                                 ; Command key
              (RESET (\TELERAIDEXIT NDB T)
                         (METADEBUGGING (HARDRESET))
                             (\CONTEXTSWITCH \ResetFXP))))
              (RETURN (\TELERAIDEXIT NDB)
                       (RETURN))
        (T (\TELEBLTCURSOR (fetch TRCURSOR of \TELERAIDBLOCK)
    (\UPDATETIMERS)
                                                                 ; Keep the clock running
    (GO LP)
ERROR
    (replace PUPLENGTH of PACKET with \PUPOVLEN)
     (replace PUPTYPE of PACKET with TR.ERROR)
    (\TELERAIDSEND NDB PACKET)
    (GO LP1)
```

(SETQ FREE

(\FREESTACKBLOCK

(IPLUS (PROG1 (fetch (FNHEADER STKMIN)

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of (fetch (LITATOM DEFPOINTER)
                                                                                   of (FUNCTION \DOHELPINTERRUPT1)))
                                                                          ; Stack needed to call this fn
                                                                         (UNFOLD 20 WORDSPERCELL)
                                                                 (PROG1
                                                                          ; Extra slop
                                                         FRAME))
                                                       (IPLUS FREE (fetch (FSB SIZE) of FREE))
                                                      FRAME FRAME)))
                         (COND
                            (USERFRAME (replace (IFPAGE FAULTFXP) of \InterfacePage with NEWFRAME))
                             (T (replace (IFPAGE TELERAIDFXP) of \InterfacePage with NEWFRAME)))
                         'RETURN])
(\TELERAIDGET
  [LAMBDA (NDB PACKET RECEIVER)
                                                                          : Edited 6-Jun-88 11:27 by bym
    (COND
        ((CL:FUNCALL RECEIVER NDB PACKET T)
(SELECTC (fetch EPTYPE of PACKET)
              (\EPT.PUP (FLIPCURSOR)
                         (COND
                                        (fetch PUPDESTSOCKETLO of PACKET)
                             ((AND (EQ
                                         (PUPSOC.TELERAID)
                                        (fetch PUPDESTHOST of PACKET)
                                         (fetch NDBPUPHOST# of NDB))
                                    (EQ
                                        (fetch PUPDESTSOCKETHI of PACKET)
                             (T (\TELERAIDRELEASE NDB PACKET))))
              (\EPT.3T010 (COND
                               ((AND (EQ
                                          (fetch NETTYPE OF NDB)
                                           (fetch TRANSOPERATION of PACKET)
                                            TRANS.OP.REQUEST)
                                           (fetch TRANSPUPHOST of PACKET)
                                           (fetch NDBPUPHOST# of NDB))); It's for us
                                (\BLTLOCALHOSTNUMBER (LOCF (fetch BASETRANSNSHOST of PACKET)))
                                                                          ; Add in the information he wants
                                (replace TRANSOPERATION of PACKET with \TRANS.OP.RESPONSE)
                                (\10MBRAWENCAPSULATE NDB PACKET \TRANS.DATALENGTH)
                                                                         ; Send back the response
                                (\10MBRAWTRANSMIT NDB PACKET)
                                NIL)
                                                                          ; Not on a 10mb net (e.g., on 3mb this packet type is IP), or not
                               (T
                                                                          ; for us
                                   (\TELERAIDRELEASE NDB PACKET))))
              (\TELERAIDRELEASE NDB PACKET])
(\TELERAIDSEND
                                                                         (* bvm%: "19-JUL-83 11:10")
  [LAMBDA (NDB PACKET)
    ;; Swap the ports on PACKET and send it back where it came from
    (swap (fetch PUPDESTHOST of PACKET)
            (fetch PUPSOURCEHOST of PACKET))
           (fetch PUPDESTNET of PACKET)
    (swap
           (fetch PUPSOURCENET of PACKET))
    (replace Pupdestsockethi of packet with (fetch pupsourcesockethi of packet)) (replace pupdestsocketho of packet with (fetch pupsourcesocketho of packet))
    (replace PUPSOURCESOCKETHI of PACKET with 0)
    (replace PUPSOURCESOCKETLO of PACKET with \PUPSOC.TELERAID)
    (replace PUPCHECKSUM of PACKET with \NULLCHECKSUM)
    (SELECTQ (fetch NETTYPE of NDB)
         (3 (swap (fetch 3MBDESTHOST of PACKET)
                    (fetch 3MBSOURCEHOST of PACKET))
             (replace 3mblength of packet with (iplus \3mbencapsulation.words (foldhi (fetch puplength of packet)
                                                                                             BYTESPERWORD)))
             (\3MBRAWTRANSMIT NDB PACKET))
              (\10MBRAWENCAPSULATE NDB PACKET (fetch PUPLENGTH of PACKET))
         (10
              (\10MBRAWTRANSMIT NDB PACKET))
         NIL)
    (FLIPCURSOR])
(\TELERAIDRELEASE
                                                                          (* bvm%: "16-JUL-83 16:42")
  [LAMBDA (NDB PACKET)
    ;; Called when Teleraid is finished with PACKET, so that it can be reused for receiving
    (SELECTQ (fetch NETTYPE of NDB)
         (10 (\10MBSETUPRECEIVER NDB PACKET))
         NIL)
    (FLIPCURSOR)
    NIL1)
```

```
(\TELERAIDENTRY
  [LAMBDA (NDB METADEBUGGING)
                                                                       (* ejs%: "30-Oct-85 17:41")
    ;; Called on entry to TeleRaid. Returns a packet receiver function
    (OR METADEBUGGING (\KEYBOARDOFF))
    (\BLT (fetch TROLDCURSOR of \TELERAIDBLOCK)
            EM.CURSORBITMAP \#WORDS.CURSOR)
    (\TELEBLTCURSOR (fetch TRCURSOR of \TELERAIDBLOCK))
    (COND
       ((AND NDB \PUP.READY)
        (SELECTQ (AND NDB (fetch NETTYPE of NDB))
(3 (FUNCTION \3MBRAWRECEIVE))
             (10 (\10MB.TURNONETHER NDB (fetch TROLDCSB of \TELERAIDBLOCK)
                         NIL T 0 0)
                  (\10MBSETUPRECEIVER NDB \TELERAIDPACKET)
                  (FUNCTION \10MBRAWRECEIVE))
             NIL1)
(\TELERAIDEXIT
                                                                       (* eis%: "30-Oct-85 17:41")
  [LAMBDA (NDB RESET)
                                                                       : Restore state for teleraid exit
    (SELECTQ (AND NDB (fetch NETTYPE of NDB))
         (10 (\10MB.TURNONETHER NDB NIL (fetch TROLDCSB of \TELERAIDBLOCK)))
         NIT
    (\TELEBLTCURSOR (fetch TROLDCURSOR of \TELERAIDBLOCK))
    (OR RESET (\KEYBOARDON])
(\3MBRAWRECEIVE
  [LAMBDA (NDB PACKET)
                                                                       (* bvm%: "12-JUL-83 19:09")
    (COND
       ((UNINTERRUPTABLY
             (PROG ((PBI (\READRAWPBI)))
                   [COND
                       (PBI (\BLT (fetch 3MBBASE of PACKET)
                                   (fetch PBIRAWSTART of PBI)
                                   (ADD1 (fetch PBILENGTH of PBI]
                    (RETURN PBI)))
        (replace EPTYPE of PACKET with (fetch 3MBTYPE of PACKET))
        PACKET1)
(\3MBRAWTRANSMIT
  [LAMBDA (NDB PACKET)
                                                                       (* bvm%: "14-MAR-83 15:23")
    ;; Sends raw seething etherpacket on the 3mb net denoted by NDB
    (SETO PACKET (\DTEST PACKET 'ETHERPACKET))
    (UNINTERRUPTABLY
        (PROG ((PBI (\GETPACKETBUFFER)))
               (OR PBI (RETURN))
               (\BLT (fetch PBIRAWSTART of PBI)
(fetch 3MBBASE of PACKET)
                      (ADD1 (fetch 3MBLENGTH of PACKET)))
               (\WRITERAWPBI PBI)
               (RETURN T)))))
(\10MBRAWRECEIVE
  [LAMBDA (NDB PACKET METADEBUGGING)
                                                                       (* ejs%: " 6-Nov-85 22:18")
    (COND
       ((AND (EQ \MACHINETYPE \DAYBREAK)
              (EQ (fetch (Dove.EtherIOCB IOCBType) of \TELERAIDIOCB)
                   DoveEther.outputIOCBType))
        (\10MBSETUPRECEIVER NDB PACKET)
       (T (LET ((STATUS (\10MB.GETPACKETSTATUS \TELERAIDIOCB METADEBUGGING)))
                    ((EQ STATUS \ES.PENDING)
                                                                       ; nothing received yet
                    NIL)
                    ((OR (EQ STATUS \ES.GOOD.PACKET)
                         \10MB.GETGARBAGE)
                                                                       ; Accept the packet
                     (replace 10MBLENGTH of PACKET with (\10MB.GETPACKETLENGTH \TELERAIDIOCB))
                     (replace EPTYPE of PACKET with (fetch 10MBTYPE of PACKET))
                    PACKET)
                                                                       ; Bad packet, stuff it back on input
                    (T
                       (\10MBSETUPRECEIVER NDB PACKET)
                       NIL])
(\10MBRAWTRANSMIT
                                                                       (* ejs%: "16-Aug-85 07:30")
  [LAMBDA (NDB PACKET)
    (\OUEUE.OUTPUT.IOCB NDB \TELERAIDIOCB (fetch 10MBPACKETBASE of PACKET)
            (IMAX (fetch 10MBLENGTH of PACKET)
                   \10MB.MINPACKETLENGTH))
                                                                       : And then wait until transmitted
    (repeatuntil (NEQ (\10MB.GETPACKETSTATUS \TELERAIDIOCB)
```

\ES.PENDING])

```
(\10MBRAWENCAPSULATE
  [LAMBDA (NDB PACKET LENGTH)
                                                                     (* bvm%: "16-Dec-84 22:11")
    (replace 10mblength of packet with (iplus \10mbencapsulation.words (foldhi length bytesperword)))
    (\BLT (fetch 10MBDESTHOSTBASE of PACKET)
           (fetch 10MBSOURCEHOSTBASE of PACKET)
    (\BLTLOCALHOSTNUMBER (fetch 10MBSOURCEHOSTBASE of PACKET])
(\10MBSETUPRECEIVER
                                                                      (* bvm%: "14-JUL-83 13:45")
  [LAMBDA (NDB PACKET)
    (\QUEUE.INPUT.IOCB NDB \TELERAIDIOCB (fetch 10MBPACKETBASE of PACKET)
           \10MBPACKETLENGTH])
(RPAO? \TELERAIDBUFFER )
(RPAO? \TELERAIDBLOCK )
(RPAQQ \TELERAIDBITMAPS
                          TELE
                          RAID
                          đĐ
                          ŧΝ
                          CMD
                          Raid
                          Brk
                          Ν'Τ
                          SAV-
ING
(DECLARE%: EVAL@COMPILE DONTCOPY
(DECLARE%: DOEVAL@COMPILE DONTCOPY
(GLOBALVARS \TELERAIDPACKET \TELERAIDBUFFER \TELERAIDIOCB \TELERAIDBLOCK \TELERAIDBITMAPS)
(DECLARE%: EVAL@COMPILE
[ACCESSFNS TRBLOCK ((TROLDCSB (PROGN DATUM))
                      (TROLDCURSOR (\ADDBASE DATUM 16))
                     (TRCURSOR (\ADDBASE DATUM 32))
                      (TRCONTROLD (\ADDBASE DATUM 48))
                     (TRCONTROLN (\ADDBASE DATUM 64))
(TRCOMMAND (\ADDBASE DATUM 80))
                     (TRRAID (\ADDBASE DATUM 96))
(TRBREAK (\ADDBASE DATUM 112))
                      (TRNOBREAK (\ADDBASE DATUM 128))
                     (TRCONTROLS (\ADDBASE DATUM 144]
(DECLARE%: EVAL@COMPILE
(PUTPROPS \TELEKBDWAIT MACRO [ (KEY)
                                  (while [AND (XKEYDOWNP KEY)
                                              (OR (XKEYDOWNP 'BLANK-BOTTOM)
                                                   (XKEYDOWNP 'CTRL]
                                     finally (RETURN (COND
                                                        ((OR (XKEYDOWNP 'BLANK-BOTTOM)
                                                             (XKEYDOWNP 'CTRL))
                                                         T)
                                                        (T (\TELEBLTCURSOR (fetch TRCURSOR of \TELERAIDBLOCK))
                                                           NIL])
(DECLARE%: EVAL@COMPILE
(RPAQQ \#WORDS.CURSOR 16)
(CONSTANTS \#WORDS.CURSOR)
(FILESLOAD (LOADCOMP)
```

```
{MEDLEY}<sources>TRSERVER.;1
    LLETHER 10MBDRIVER REMOTEVMEM LLFAULT)
)
(DECLARE%: DONTEVAL@LOAD DOCOPY
(\TELERAIDINIT)
)
(PUTPROPS TRSERVER COPYRIGHT ("Venue & Xerox Corporation" 1983 1984 1985 1988 1990))
```

{MEDLEY}<sources>TRSERVER.;1 28-Jun-2024 18:34:03 -- Listed on 30-Jun-2024 13:16:22 --

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