

File created: 25-Oct-2021 15:12:33 {DSK}<home>larry>medley>sources>MAIKOETHER.;2

changes to: (FNS \\DISPLAYLINE)  
(VARS MAIKOETHERCOMS)

previous date: 25-Mar-2021 09:50:57 {DSK}<home>larry>medley>sources>MAIKOETHER.;1

Read Table: XCL

Package: INTERLISP

Format: XCCS

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```
(RPAQQ MAIKOETHERCOMS
  ((FNS \\10MB.RESTART.ETHER \\10MB.STARTDRIVER \\10MB.TURNOFFETHER \\10MB.TURNONETHER \\10MBSENDPACKET
    \\10MBWATCHER \\MAIKO.10MBSENDPACKET \\MAIKO.10MBWATCHER \\MAIKO.ETHERRESUME \\MAIKO.ETHERSUSPEND
    \\MAIKO.INPUT.INTERRUPT \\NS.SETTIME \\PUP.SETTIME \\MAIKO.10MBSTARTDRIVER \\MAIKO.10MBTURNONETHER
    \\MAIKO.10MB.RESTART.ETHER \\MAIKO.CHECKSUM)
  (INITVARS (\\MAIKO.INPUT.PACKET)
    (|\\ETHERtopMonitor| (CREATE.MONITORLOCK "ETHERtopMonitor")))
  (DECLARE\\: EVAL@COMPILE DONTCOPY (FILES (LOADCOMP
    10MBDRIVER)
    (GLOBALVARS \\MAIKO.INPUT.PACKET |\\ETHERtopMonitor|)
    ;; The NDB for Maiko's 10MB connection; used by \\MAIKO.ETHER-INTERRUPT:
    (GLOBALVARS \\MAIKO.10MB.NDB)
    (GLOBALVARS \\MAIKO.IO-INTERRUPT-FLAGS \\MAIKO.IO-INTERRUPT-VECTOR))
  (ADDVARS (\\MAIKO.MOVDs (\\MAIKO.10MBSTARTDRIVER \\10MB.STARTDRIVER)
    (\\MAIKO.10MBWATCHER \\10MBWATCHER)
    (\\MAIKO.10MBSENDPACKET \\10MBSENDPACKET)
    (\\MAIKO.ETHERSUSPEND \\10MB.TURNOFFETHER)
    (\\MAIKO.10MBTURNONETHER \\10MB.TURNONETHER)
    (\\MAIKO.ETHERRESUME \\10MB.RESTART.ETHER)
    (\\MAIKO.CHECKSUM \\CHECKSUM)))
  (COMS ; MAIKO handler for new interrupt-driven incoming ethernet
    ; communication, rather than polling for it.
    (FNS \\MAIKO.ETHER-INTERRUPT))
  (COMS ; MAIKO Log & Console message handling. Interrupt-driven
    ; message printing, instead of polled printing.
    (FNS \\MAIKO.CONSOLE-LOG-PRINT))
  (COMS ;; Asynchronous I/O handling
    (FNS \\MAIKO.IO-INTERRUPT)
    (VARS \\EPT.3TO10 (\\MAIKO.IO-INTERRUPT-FLAGS (\\CREATECELL \\FIXP))
      (\\MAIKO.IO-INTERRUPT-VECTOR NIL))))))
```

(DEFINEQ

(\\10MB.RESTART.ETHER

(LAMBDA NIL  
(SUBRCALL ETHER-RESUME)))

; Edited 11-May-88 16:09 by MASINTER

(\\10MB.STARTDRIVER

```
(LAMBDA (NDB RESTARTFLG MYNSNUMBER) ; Edited 5-Apr-89 15:03 by snow
  (DECLARE (GLOBALVARS \\MAIKO.INPUT.PACKET \\10MB.EXPECTED.RECEIVE.INTERVAL \\10MB.INPUT.TIMEOUT))
  (SUBRCALL ETHER-SUSPEND)
  (OR (\\INIT.ETHER.BUFFER.POOL)
    (ERROR "Unable to create buffer pool"))
  (|replace| NDBTQ |of| NDB |with| (|create| SYSQUEUE))
  (SETQ \\10MB.RAWPACKETQ (|create| SYSQUEUE))
  (SETQ \\10MB.INPUT.TIMEOUT (TIMES \\RCLKSECOND \\10MB.EXPECTED.RECEIVE.INTERVAL))
  (\\10MB.TURNONETHER NDB NIL NIL (OR MYNSNUMBER T)
    0 0)
  (PROG ((CSB (|fetch| NDBCSB |of| NDB))
    (OR \\MAIKO.INPUT.PACKET (SETQ \\MAIKO.INPUT.PACKET (\\ALLOCATE.ETHERPACKET)))
    (|replace| DLFIRSTCIB |of| (|fetch| NDBCSB |of| NDB) |with| \\ES.PENDING)
    (SUBRCALL ETHER-GET \\10MBPACKETLENGTH (|fetch| 10MBPACKETBASE |of| \\MAIKO.INPUT.PACKET))
    (|replace| NDBWATCHER |of| NDB |with| (ADD.PROCESS (LIST ' \\10MBWATCHER (KWOTE NDB))
      'RESTARTABLE
      'SYSTEM
      'AFTEREXIT
      'DELETE)))
    (RETURN NDB))))
```

(\\10MB.TURNOFFETHER

(LAMBDA NIL  
(SUBRCALL ETHER-SUSPEND)))

; Edited 11-May-88 16:11 by MASINTER

(\\10MB.TURNONETHER

(LAMBDA (NDB SMASHSTATE NEWSTATE NSHOSTNUMBER ININTERRUPT OUTINTERRUPT)

; Edited 11-May-88 16:08 by MASINTER

;;; Reset and activate ether associated with NDB. If SMASHSTATE is given, it is a CSB-length block into which state is saved for later restoration by

;; passing as the NEWSTATE arg. If NEWSTATE is NIL, then the remaining non-NIL args give parameters for this activation: the host number for  
 ;; microcode to watch for, T meaning my own number; and interrupt masks for when a packet arrives or finishes transmitting

;; For Daybreak, SMASHSTATE and NEWSTATE must be NIL

```
(PROG ((CSB (|fetch| NDBCBSB |of| NDB)))
  (\\MAIKO.ETHERSUSPEND)
  (OR CSB (|replace| NDBCBSB |of| NDB |with| (SETQ CSB (LOCF (|fetch| DLETHERNET |of| \\IOPAGE)))))
  (|replace| DLFIRSTOCB |of| CSB |with| 0)
  (|replace| DLFIRSTICB |of| CSB |with| 0)
  (AND NSHOSTNUMBER (COND
    ((EQ NSHOSTNUMBER T)
      (\\BLT (LOCF (|fetch| DLLOCALHOST0 |of| CSB))
        (LOCF (|fetch| (IFPAGE |NSHost0|) |of| |\\InterfacePage|))
        \\#WDS.NSHOSTNUMBER))
      (T (\\STORENSHOSTNUMBER (LOCF (|fetch| DLLOCALHOST0 |of| CSB))
        NSHOSTNUMBER))))
  (AND OUTINTERRUPT (|replace| DLOUTPUTMASK |of| CSB |with| OUTINTERRUPT))
  (AND ININTERRUPT (|replace| DLINPUTMASK |of| CSB |with| ININTERRUPT))
  (|replace| DLMISSDPACKETS |of| CSB |with| 0)
  (|replace| DLLASTICB |of| CSB |with| 0)
  (|replace| DLLASTOCB |of| CSB |with| 0)
  (SUBRCALL ETHER-RESET)
  (SUBRCALL ETHER-RESUME)
  (RETURN NDB)))
```

## (\\10MBSENDPACKET

(LAMBDA (NDB PACKET)

; Edited 11-May-88 16:10 by MASINTER

```
(PROG NIL
  (COND
    (\\RAWTRACING (\\MAYBEPRINTPACKET PACKET 'RAWPUT)))
  (COND
    ((OR (|fetch| 10MBMULTICASTP |of| PACKET)
      (EQNSADDRESS.HOST \\MY.NSADDRESS (|fetch| 10MBDESTHOSTBASE |of| PACKET)))
      ; We would hear this packet if our hardware let us, so fake
      ; receipt
      (PROG ((COPYPACKET (\\ALLOCATE.ETHERPACKET)))
        (\\BLT (LOCF (|fetch| 10MBLENGTH |of| COPYPACKET))
          (LOCF (|fetch| 10MBLENGTH |of| PACKET))
          (ADD1 (|fetch| 10MBLENGTH |of| PACKET))) ; Copy all data that would have been transmitted
        (|replace| EPNETWORK |of| COPYPACKET |with| NDB)
        (|replace| EPTYPE |of| COPYPACKET |with| (|for| PAIR |in| \\10MBTYPE.TRANSLATIONS
          |bind| (TYPE _ (|fetch| 10MBTYPE |of| PACKET))
          |when| (EQ TYPE (CAR PAIR))
          |do|
            ;; TYPE is the raw type of the etherpacket. These do not always correspond one-to-one with the
            ;; EPTYPE constants we use (in particular, for pups), so translate if necessary.
            (RETURN (CDR PAIR))
          |finally| (RETURN TYPE))))
      (COND
        (\\RAWTRACING (\\MAYBEPRINTPACKET COPYPACKET 'RAWGET)))
        (\\HANDLE.RAW.PACKET COPYPACKET)))
    (UNINTERRUPTABLY
      (SUBRCALL ETHER-SEND (IMAX (|fetch| 10MBLENGTH |of| PACKET)
        \\10MB.MINPACKETLENGTH)
        (|fetch| 10MBPACKETBASE |of| PACKET))
      (|replace| EPNETWORK |of| PACKET |with| NIL)
      (\\REQUEUE.ETHERPACKET PACKET))
    (RETURN T))))
```

## (\\10MBWATCHER

(LAMBDA (NDB)

; Edited 16-May-88 22:24 by MASINTER

;; merge message and packet reading

```
(PROG ((CNTR 0)
  MESSAGE-BUFFER MESSAGE-LENGTH PACKET)
  LP (IF (SUBRCALL MESSAGE-READP)
    THEN (PROMPTPRINT (IF (SETQ MESSAGE-LENGTH (SUBRCALL MESSAGE-READ (OR MESSAGE-BUFFER
      (SETQ MESSAGE-BUFFER
        (ALLOCSTRING 1024)))
      1024))
      THEN (SUBSTRING MESSAGE-BUFFER 1 MESSAGE-LENGTH)
      ELSE "?? system message: polling failed"))
    (UNINTERRUPTABLY
      (SUBRCALL ETHER-CHECK)
      (SETQ PACKET (\\MAIKO.INPUT.INTERRUPT NDB)))
    (COND
      (PACKET (\\HANDLE.RAW.PACKET PACKET)
        (COND
          ((ILESSP (|add| CNTR 1)
            \\MAXWATCHERGETS)
            (GO LP))))
      (BLOCK)
      (SETQ CNTR 0)
      (GO LP))))
```

**(\\MAIKO.10MBSENDPACKET**

; Edited 31-Oct-89 14:10 by bvm

```

(LAMBDA (NDB PACKET)
  (PROG NIL
    (COND
      (\\RAWTRACING (\\MAYBEPRINTPACKET PACKET 'RAWPUT)))
    (COND
      ((OR (|fetch| 10MBMULTICASTP |of| PACKET)
        (EQNSADDRESS.HOST \\MY.NSADDRESS (|fetch| 10MBDESTNSADDRESSBASE |of| PACKET)))
        ; We would hear this packet if our hardware let us, so fake
        ; receipt

      (PROG ((COPYPACKET (\\ALLOCATE.ETHERPACKET)))
        (\\BLT (LOCF (|fetch| 10MBLENGTH |of| COPYPACKET))
          (LOCF (|fetch| 10MBLENGTH |of| PACKET))
          (ADD1 (|fetch| 10MBLENGTH |of| PACKET))) ; Copy all data that would have been transmitted
        (|replace| EPNETWORK |of| COPYPACKET |with| NDB)
        (|replace| EPTYPE |of| COPYPACKET |with| (|for| PAIR |in| \\10MBTYPE.TRANSLATIONS
          |bind| (TYPE _ (|fetch| 10MBTYPE |of| PACKET))
          |when| (EQ TYPE (CAR PAIR))
          |do|

          ;; TYPE is the raw type of the etherpacket. These do not always correspond one-to-one with the
          ;; EPTYPE constants we use (in particular, for pups), so translate if necessary.

          (RETURN (CDR PAIR)))
        |finally| (RETURN TYPE)))

    (COND
      (\\RAWTRACING (\\MAYBEPRINTPACKET COPYPACKET 'RAWGET)))
      (\\HANDLE.RAW.PACKET COPYPACKET)))
    (UNINTERRUPTABLY
      (SUBRCALL ETHER-SEND (IMAX (|fetch| 10MBLENGTH |of| PACKET)
        \\10MB.MINPACKETLENGTH)
        (|fetch| 10MBPACKETBASE |of| PACKET))
        (|replace| EPNETWORK |of| PACKET |with| NIL)
        (\\REQUEUE.ETHERPACKET PACKET))
      (RETURN T))))

```

**(\\MAIKO.10MBWATCHER**

; Edited 16-May-88 22:24 by MASINTER

```

(LAMBDA (NDB)
  ;; merge message and packet reading

  (PROG ((CNTR 0)
    MESSAGE-BUFFER MESSAGE-LENGTH PACKET)
    LP (IF (SUBRCALL MESSAGE-READP)
      THEN (PROMPTPRINT (IF (SETQ MESSAGE-LENGTH (SUBRCALL MESSAGE-READ (OR MESSAGE-BUFFER
        (SETQ MESSAGE-BUFFER
          (ALLOCSTRING 1024)))
        1024))
        THEN (SUBSTRING MESSAGE-BUFFER 1 MESSAGE-LENGTH)
        ELSE "?? system message: polling failed")))

    (UNINTERRUPTABLY
      (SUBRCALL ETHER-CHECK)
      (SETQ PACKET (\\MAIKO.INPUT.INTERRUPT NDB)))

    (COND
      (PACKET (\\HANDLE.RAW.PACKET PACKET)
        (COND
          ((ILESSP (|add| CNTR 1)
            \\MAXWATCHERGETS)
            (GO LP))))

      (BLOCK)
      (SETQ CNTR 0)
      (GO LP))))

```

**(\\MAIKO.ETHERRESUME**

; Edited 11-May-88 16:09 by MASINTER

```

(LAMBDA NIL
  (SUBRCALL ETHER-RESUME))

```

**(\\MAIKO.ETHERSUSPEND**

; Edited 11-May-88 16:11 by MASINTER

```

(LAMBDA NIL
  (SUBRCALL ETHER-SUSPEND))

```

**(\\MAIKO.INPUT.INTERRUPT**

; Edited 11-May-88 16:05 by MASINTER

```

(LAMBDA (NDB)
  ;; This routine gets called when 10MB input signals an interrupt. See if the \\MAIKO.INPUT.PACKET has indeed been processed, and if so, take
  ;; care of it

  (PROG (LENGTH (PACKET \\MAIKO.INPUT.PACKET))
    (COND
      ((NEQ (SETQ LENGTH (|fetch| DLFIRSTICB |of| (|fetch| NDBCSB |of| NDB)))
        \\ES.PENDING)
        (|replace| 10MBLENGTH |of| PACKET |with| LENGTH)
        (\\RCLK (LOCF (|fetch| EPTIMESTAMP |of| PACKET)))
        (|replace| EPNETWORK |of| PACKET |with| NDB))

```

```

(|replace| EPTYPE |of| PACKET |with| (|for| PAIR |in| \\10MBTYPE.TRANSLATIONS
                                     |bind| (TYPE _ (|fetch| 10MBTYPE |of| PACKET))
                                     |when| (EQ TYPE (CAR PAIR)) |do| (RETURN (CDR PAIR))
                                     |finally| (RETURN TYPE)))
(COND
  (\\RAWTRACING (\\MAYBEPRINTPACKET PACKET 'RAWGET)))
(RETURN (PROG1 PACKET
  (SETQ \\MAIKO.INPUT.PACKET (\\ALLOCATE.ETHERPACKET))
  (|replace| DLFIRSTICB |of| (|fetch| NDBCSB |of| NDB) |with| \\ES.PENDING)
  (SUBRCALL ETHER-GET \\10MBPACKETLENGTH (|fetch| 10MBPACKETBASE |of| \\MAIKO.INPUT.PACKET))
)))
(T (RETURN NIL))))))

```

**(\\NS.SETTIME**

```

(LAMBDA (RETFLG)
  (CL:UNLESS (AND RETFLG (NOT (STRINGP RETFLG)))
    (SETQ |\\TimeZoneComp| (SUBRCALL GETUNIXTIME 8 NIL)))
  (\\PROCESS.RESET.TIMERS)
  (DAYTIME)))

```

; Edited 13-May-88 15:22 by MASINTER

**(\\PUP.SETTIME**

```

(LAMBDA (RETFLG)
  (CL:UNLESS (AND RETFLG (NOT (STRINGP RETFLG)))
    (SETQ |\\TimeZoneComp| (SUBRCALL GETUNIXTIME 8 NIL)))
  (\\PROCESS.RESET.TIMERS)
  (DAYTIME)))

```

; Edited 13-May-88 15:22 by MASINTER

**(\\MAIKO.10MBSTARTDRIVER**

```

(LAMBDA (NDB RESTARTFLG MYNSNUMBER)

```

; Edited 4-May-91 15:50 by jds

```

;; Start the "driver" for the 10MB ethernet on Sun Medley. In particular, turn on the C ethernet code, queue up the first input packet, and start the
;; \\10MBWATCHER process.

```

```

(SUBRCALL ETHER-SUSPEND)
(OR (\\INIT.ETHER.BUFFER.POOL)
  (ERROR "Unable to create buffer pool"))
(|replace| NDBTQ |of| NDB |with| (|create| SYSQUEUE))
(SETQ \\10MB.RAWPACKETQ (|create| SYSQUEUE))
(SETQ \\10MB.INPUT.TIMEOUT (TIMES \\RCLKSECOND \\10MB.EXPECTED.RECEIVE.INTERVAL))
(SETQ \\MAIKO.10MB.NDB NDB)
(\\10MB.TURNONETHER NDB NIL NIL (OR MYNSNUMBER T)
  0 0)
(PROG ((CSB (|fetch| NDBCSB |of| NDB)))
  (OR \\MAIKO.INPUT.PACKET (SETQ \\MAIKO.INPUT.PACKET (\\ALLOCATE.ETHERPACKET)))
  (|replace| DLFIRSTICB |of| (|fetch| NDBCSB |of| NDB) |with| \\ES.PENDING)
  (AND (SUBRCALL ETHER-GET \\10MBPACKETLENGTH (|fetch| 10MBPACKETBASE |of| \\MAIKO.INPUT.PACKET))
    (\\MAIKO.ETHER-INTERRUPT)))

```

```

;; Commented out the 10MBWATCHER adder, so this process never gets created.

```

```

;; (replace NDBWATCHER of NDB with (ADD.PROCESS (LIST \\10MBWATCHER (KWOTE NDB)) 'RESTARTABLE 'SYSTEM 'AFTEREXIT
;; 'DELETE))

```

```

(RETURN NDB)))

```

**(\\MAIKO.10MBTURNONETHER**

```

(LAMBDA (NDB SMASHSTATE NEWSTATE NSHOSTNUMBER ININTERRUPT OUTINTERRUPT)

```

; Edited 11-May-88 16:08 by MASINTER

```

;;; Reset and activate ether associated with NDB. If SMASHSTATE is given, it is a CSB-length block into which state is saved for later restoration by
;;; passing as the NEWSTATE arg. If NEWSTATE is NIL, then the remaining non-NIL args give parameters for this activation: the host number for
;;; microcode to watch for, T meaning my own number; and interrupt masks for when a packet arrives or finishes transmitting

```

```

;; For Daybreak, SMASHSTATE and NEWSTATE must be NIL

```

```

(PROG ((CSB (|fetch| NDBCSB |of| NDB)))
  (\\MAIKO.ETHERSUSPEND)
  (OR CSB (|replace| NDBCSB |of| NDB |with| (SETQ CSB (LOCF (|fetch| DLETHERNET |of| \\IOPAGE)))))
  (|replace| DLFIRSTOCB |of| CSB |with| 0)
  (|replace| DLFIRSTICB |of| CSB |with| 0)
  (AND NSHOSTNUMBER (COND
    ((EQ NSHOSTNUMBER T)
      (\\BLT (LOCF (|fetch| DLLOCALHOST0 |of| CSB))
        (LOCF (|fetch| (IFPAGE |NSHost0|) |of| |\\InterfacePage|))
        \\#WDS.NSHOSTNUMBER))
    (T (\\STORENSHOSTNUMBER (LOCF (|fetch| DLLOCALHOST0 |of| CSB))
      NSHOSTNUMBER))))
  (AND OUTINTERRUPT (|replace| DLOUTPUTMASK |of| CSB |with| OUTINTERRUPT))
  (AND ININTERRUPT (|replace| DLINPUTMASK |of| CSB |with| ININTERRUPT))
  (|replace| DLMISSEDPACKETS |of| CSB |with| 0)
  (|replace| DLLASTICB |of| CSB |with| 0)
  (|replace| DLLASTOCB |of| CSB |with| 0)
  (SUBRCALL ETHER-RESET)
  (SUBRCALL ETHER-RESUME)
  (RETURN NDB)))

```

## (\MAIKO.10MB.RESTART.ETHER

(LAMBDA (NDB)

; Edited 11-May-88 16:08 by MASINTER

;; Kick the Ethernet receiver task to restart the Ethernet receiver task. This function gets called when the 10MBDRIVER thinks the Ethernet has been  
 ;; accidentally disabled

(SUBRCALL ETHER-RESUME))

## (\MAIKO.CHECKSUM

(LAMBDA (BASE NWORDS INITSUM)

(SUBRCALL CHECK-SUM BASE NWORDS INITSUM)))

; Edited 20-May-88 11:48 by MASINTER

)

(RPAQ? \MAIKO.INPUT.PACKET )

(RPAQ? |\ETHERtopMonitor| (CREATE.MONITORLOCK "ETHERTopMonitor"))

(DECLARE\ : EVAL@COMPILE DONTCOPY

 (FILESLOAD (LOADCOMP)  
 10MBDRIVER)

(DECLARE\ : DOEVAL@COMPILE DONTCOPY

 (GLOBALVARS \MAIKO.INPUT.PACKET |\ETHERtopMonitor|)  
 )

(DECLARE\ : DOEVAL@COMPILE DONTCOPY

 (GLOBALVARS \MAIKO.10MB.NDB)  
 )

(DECLARE\ : DOEVAL@COMPILE DONTCOPY

 (GLOBALVARS \MAIKO.IO-INTERRUPT-FLAGS \MAIKO.IO-INTERRUPT-VECTOR)  
 )  
 )

 (ADDTOTVAR \MAIKO.MOVDS (\MAIKO.10MBSTARTDRIVER \10MB.STARTDRIVER)  
 (\MAIKO.10MBWATCHER \10MBWATCHER)  
 (\MAIKO.10MBSENDPACKET \10MBSENDPACKET)  
 (\MAIKO.ETHERSUSPEND \10MB.TURNOFFETHER)  
 (\MAIKO.10MBTURNONETHER \10MB.TURNONETHER)  
 (\MAIKO.ETHERRESUME \10MB.RESTART.ETHER)  
 (\MAIKO.CHECKSUM \CHECKSUM))

;; MAIKO handler for new interrupt-driven incoming ethernet communication, rather than polling for it.

(DEFINEQ

## (\MAIKO.ETHER-INTERRUPT

(LAMBDA NIL

; Edited 4-May-91 13:46 by jds

;; This routine gets called when 10MB input signals an interrupt. See if the \MAIKO.INPUT.PACKET has indeed been processed, and if so, take  
 ;; care of it

 (PROG ((NDB \MAIKO.10MB.NDB)  
 LENGTH)

;; First, turn off the interrupt flag:

(REPLACE (INTERRUPTSTATE ETHERINTERRUPT) OF \INTERRUPTSTATE WITH NIL)

;; Now handle it:

 (UNINTERRUPTABLY  
 (WITH.MONITOR |\ETHERtopMonitor|  
 (PROG ((PACKET \MAIKO.INPUT.PACKET))

;; We come back here if there's more than one packet ready to be read, so we process as many as possible in one swell foop.

READ-MORE-LOOP

(COND

 ((NEQ (SETQ LENGTH (|fetch| DLFIRSTICB |of| (|fetch| NDBCSB |of| NDB)))  
 \ES.PENDING)

(|replace| 10MBLENGTH |of| PACKET |with| LENGTH)

(\RCLK (LOCF (|fetch| EPTIMESTAMP |of| PACKET)))

(|replace| EPNETWORK |of| PACKET |with| NDB)

(|replace| EPTYPE |of| PACKET |with| (|for| PAIR |in| \10MBTYPE.TRANSLATIONS

|bind| (TYPE \_ (|fetch| 10MBTYPE |of| PACKET))

|when| (EQ TYPE (CAR PAIR))

|do| (RETURN (CDR PAIR)) |finally| (RETURN TYPE)))

(COND

(\RAWTRACING (\MAYBEPRINTPACKET PACKET 'RAWGET)))

(\HANDLE.RAW.PACKET PACKET)

(SETQ \MAIKO.INPUT.PACKET (\ALLOCATE.ETHERPACKET))

(|replace| DLFIRSTICB |of| (|fetch| NDBCSB |of| NDB) |with| \ES.PENDING)

(COND

((SUBRCALL ETHER-GET \10MBPACKETLENGTH (|fetch| 10MBPACKETBASE |of|

\\MAIKO.INPUT.PACKET

))

;; Returned T, so there's another packet waiting already. Process it.

```
(SETQ PACKET \\MAIKO.INPUT.PACKET)
(GO READ-MORE-LOOP)))))))))
```

)

;; MAIKO Log &amp; Console message handling. Interrupt-driven message printing, instead of polled printing.

(DEFINEQ

(\\MAIKO.CONSOLE-LOG-PRINT

(LAMBDA NIL

; Edited 18-Dec-89 12:16 by jds

;; Read any pending Console or Log messages, and print them in the prompt window.

;; Called from INTERRUPTED when the Maiko emulator sets the LogMsgPending flag in \\INTERRUPTSTATE.

```
(PROG (MESSAGE-BUFFER MESSAGE-LENGTH)
  (|replace| (INTERRUPTSTATE LOGMSGSPENDING) |of| \\INTERRUPTSTATE |with| NIL)
  (|while| (SUBRCALL MESSAGE-READP) |do| (FRESHLINE PROMPTWINDOW)
    (PRIN1 (|if| (SETQ MESSAGE-LENGTH (SUBRCALL MESSAGE-READ
      (OR MESSAGE-BUFFER
        (SETQ MESSAGE-BUFFER
          (ALLOCSTRING 1024)))
      1024))
      |then| (SUBSTRING MESSAGE-BUFFER 1 MESSAGE-LENGTH)
      |else| "?? system message: polling failed")
    PROMPTWINDOW))))))
```

)

;; Asynchronous I/O handling

(DEFINEQ

(\\MAIKO.IO-INTERRUPT

(LAMBDA NIL

; Edited 18-Dec-89 13:09 by jds

;; Handle I/O pending on an asynchronous file descriptor.

;; Called from INTERRUPTED when the Maiko emulator sets theIOINTERRUPT flag in \\INTERRUPTSTATE.

```
(PROG NIL
  (|replace| (INTERRUPTSTATE IOINTERRUPT) |of| \\INTERRUPTSTATE |with| NIL)
  (FOR INFO IN \\MAIKO.IO-INTERRUPT-VECTOR WHEN (NOT (ZEROP (LOGAND (CAR INFO)
    \\MAIKO.IO-INTERRUPT-FLAGS)))
    DO (CL:FUNCALL (CADR INFO))))))
```

)

(RPAQQ \\EPT.3TO10 513)

(RPAQ \\MAIKO.IO-INTERRUPT-FLAGS (\\CREATECELL \\FIXP))

(RPAQQ \\MAIKO.IO-INTERRUPT-VECTOR NIL)

(PUTPROPS MAIKOETHER COPYRIGHT ("Venue &amp; Xerox Corporation" 1988 1989 1990 1991 2021))

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