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Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

::  
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## (RPAQQ TALKCOMS

```
(( * TALK client/server code)
 (LOCALVARS . T)
 (FNS TALK)
 (FNS TALK.RECONNECT TALK.PROCESS TALK.DISPLAY TALK.LISTEN TALK.CLOSEFN TALK.ANSWER TALK.ANSWER.WINDOW
  TALK.ANSWER.USERNAME TALK.GET.NAME TALK.ADD.NAME TALK.FLASH.CARET TALK.WHENSELECTEDFN
  TALK.RINGBELLS TALK.START.SERVER)
 (FNS TALK.ICON.BUTTONEVENTFN TALK.ICON.CLOSEFN)
 (* TALK data)
 (DECLARE%: DONTCOPY (RECORDS TALK.SERVICETYPE TALK.PROTOCOLTYPE))
 (VARS TALK.MENU.ITEMS TALK.USER.MESSAGES)
 (INITVARS TALK.SERVICETYPES TALK.PROTOCOLTYPES TALK.GAG TALK.HOSTNAMES TALK.ICON.WINDOWS (
  TALK.ANSWER.WAIT
  15)

  (TALK.READTABLE (COPYREADTABLE 'ORIG))
  (TALK.DEFAULT.REGION (CREATEREGION 0 0 500 500))
  (TALK.CLOSED.STRING " -- Connection Closed")
  (TALK.ICON.FONT LITTLEFONT))
 (GLOBALVARS TALK.MENU.ITEMS TALK.USER.MESSAGES TALK.SERVICETYPES TALK.PROTOCOLTYPES TALK.GAG
  TALK.HOSTNAMES TALK.ICON.WINDOWS TALK.ANSWER.WAIT TALK.READTABLE TALK.DEFAULT.REGION
  TALK.CLOSED.STRING TALK.ICON.FONT)
 (ALISTS (BackgroundMenuCommands TALK))
 (VARS (BackgroundMenu))
 (APPENDVARS (BACKGROUNDFNS TALK.START.SERVER)
  (AFTERMAKESYSFORMS (TALK.START.SERVER NIL T)))
 (BITMAPS TALK.ICON.BITMAP)
 (GLOBALVARS TALK.ICON.BITMAP)
 (P (SETSYNTAX (CHARCODE SPACE)
  (CHARCODE A)
  TALK.READTABLE))))
```

(\* \* TALK client/server code)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(LOCALVARS . T)
)

(DEFINEQ

## TALK

```
[LAMBDA (USER.OR.HOSTNAME SERVICE PROTOCOL)
; Edited 9-Jun-88 12:32 by cdl
(* DECLARATIONS%: (RECORD RESULT
 (SERVICETYPE INPUTSTREAM . OUTPUTSTREAM)))

 (PROG (USER PROTOCOLTYPE PROTOCOLTYPES SERVICETYPE SERVICETYPES RESULT ADDRESSABLE?)
  (if (NULL USER.OR.HOSTNAME)
   then (if (SETQ USER.OR.HOSTNAME (TALK.GET.NAME))
    then (if (LISTP USER.OR.HOSTNAME)
     then (RETURN (TALK.RECONNECT USER.OR.HOSTNAME)))
    else (RETURN)))
  (if SERVICE
   then (if [SETQ SERVICETYPE (for SERVICETYPE in TALK.SERVICETYPES thereis (with TALK.SERVICETYPE
    SERVICETYPE
    (STRING-EQUAL SERVICE
    TALK.SERVICENAME]
    then (SETQ SERVICETYPES (LIST SERVICETYPE))
    else (RETURN (LIST "Unknown service type!" SERVICE)))
   else (if (NULL (SETQ SERVICETYPES TALK.SERVICETYPES))
    then (RETURN "No services available!"))
  (if PROTOCOL
   then (if (SETQ PROTOCOLTYPE (ASSOC PROTOCOL TALK.PROTOCOLTYPES))
    then (SETQ PROTOCOLTYPES (LIST PROTOCOLTYPE))
    else (RETURN (LIST "Unknown protocol!" PROTOCOL)))
   else (if (NULL (SETQ PROTOCOLTYPES TALK.PROTOCOLTYPES))
    then (RETURN "No protocols available!"))
  (if [SETQ PROTOCOLTYPE (bind ADDRESS for PROTOCOLTYPE in PROTOCOLTYPES
   when (with TALK.PROTOCOLTYPE PROTOCOLTYPE (SETQ ADDRESS (APPLY*
    TALK.HOSTNAMEFN
    USER.OR.HOSTNAME
    )))
   thereis (PROGN (TALK.ADD.NAME USER.OR.HOSTNAME ADDRESS (with TALK.PROTOCOLTYPE
```

```

                                PROTOCOLTYPE
                                TALK.PROTOCOLNAME
                                ))

                                (SETQ ADDRESSABLE? T)
                                (SELECTQ (SETQ RESULT (with TALK.PROTOCOLTYPE PROTOCOLTYPE
                                                                (APPLY* TALK.CONNECTFN ADDRESS
                                                                  SERVICETYPES))))

                                (ANSWER (RETURN))
                                (LISTP RESULT)

                                then (with RESULT RESULT (RETURN (TALK.PROCESS INPUTSTREAM OUTPUTSTREAM SERVICETYPE PROTOCOLTYPE
                                                                'CLIENT USER.OR.HOSTNAME T)))
                                else (RETURN (if ADDRESSABLE?
                                                then (SELECTQ RESULT
                                                    (ANSWER "No answer from TALK service!")
                                                    (LIST "Can't connect to host!" USER.OR.HOSTNAME))
                                                else (LIST "Host not found!" USER.OR.HOSTNAME)))

)

(DEFINEQ

(TALK.RECONNECT
  [LAMBDA (DESTINATION)

; Edited 10-Jun-88 14:59 by cdl
(* DECLARATIONS%: (RECORD RESULT
(SERVICETYPE INPUTSTREAM . OUTPUTSTREAM))
(RECORD DESTINATION (NAME . ENTRIES))
(RECORD ENTRY (PROTOCOL . ADDRESS)))

(DECLARE (SPECVARS DESTINATION))
(if TALK.SERVICETYPES
  then [LET (PROTOCOLTYPE RESULT ENTRY ADDRESS)

(* try all the protocols but prefer those that have already
succeeded)
(FUNCTION (LAMBDA (PROTOCOLTYPE)
(* DECLARATIONS%: (RECORD DESTINATION
(NAME . ENTRIES)))
(with TALK.PROTOCOLTYPE
PROTOCOLTYPE
(with DESTINATION DESTINATION
(ASSOC TALK.PROTOCOLNAME
ENTRIES]

when [with TALK.PROTOCOLTYPE PROTOCOLTYPE
(AND [SETQ ADDRESS
(with DESTINATION DESTINATION
(if (SETQ ENTRY (ASSOC TALK.PROTOCOLNAME ENTRIES)
)
then (with ENTRY ENTRY ADDRESS)
else (APPLY* TALK.HOSTNAMEFN NAME]
(SETQ RESULT (APPLY* TALK.CONNECTFN ADDRESS
TALK.SERVICETYPES]

thereis (SELECTQ RESULT
(ANSWER (RETURN))
(LISTP RESULT)

then (with RESULT RESULT (TALK.PROCESS INPUTSTREAM OUTPUTSTREAM SERVICETYPE PROTOCOLTYPE
'CLIENT
(with DESTINATION DESTINATION NAME)
T))

else (SELECTQ RESULT
(ANSWER "No answer from TALK service!")
(LIST "Can't connect to host!" (with DESTINATION DESTINATION NAME]

else "No services available!"])]

(TALK.PROCESS
  [LAMBDA (INPUTSTREAM OUTPUTSTREAM SERVICETYPE PROTOCOLTYPE MODE USER SPAWN?)

; Edited 9-Jun-88 12:35 by cdl

(if (LITATOM SERVICETYPE)
  then (SETQ SERVICETYPE (ASSOC SERVICETYPE TALK.SERVICETYPES)))
(if (LITATOM PROTOCOLTYPE)
  then (SETQ PROTOCOLTYPE (ASSOC PROTOCOLTYPE TALK.PROTOCOLTYPES)))
(LET ((DISPLAYSTREAM (TALK.DISPLAY INPUTSTREAM OUTPUTSTREAM SERVICETYPE PROTOCOLTYPE MODE USER)))
  (if SPAWN?
    then [ADD.PROCESS `(TALK.LISTEN ,INPUTSTREAM ,OUTPUTSTREAM ,(KWOTE SERVICETYPE)
                        ,(KWOTE PROTOCOLTYPE)
                        ,DISPLAYSTREAM]
    else (TALK.LISTEN INPUTSTREAM OUTPUTSTREAM SERVICETYPE PROTOCOLTYPE DISPLAYSTREAM)])

(TALK.DISPLAY
  [LAMBDA (INPUTSTREAM OUTPUTSTREAM SERVICETYPE PROTOCOLTYPE MODE USER)

; Edited 9-Jun-88 14:46 by cdl
(* DECLARATIONS%: (ASSOCRECORD MESSAGES
(GREETING)))

(LET (MAINWINDOW WINDOW REGION GREETING)
  (DECLARE (SPECVARS GREETING))
  (SETQ USER (with TALK.PROTOCOLTYPE PROTOCOLTYPE (APPLY* TALK.USERNAMEFN INPUTSTREAM OUTPUTSTREAM
                                                            SERVICETYPE MODE USER)))
  (with REGION (SETQ REGION (if (REGIONP TALK.DEFAULT.REGION)

```

```

                then (with REGION TALK.DEFAULT.REGION (GETBOXREGION WIDTH HEIGHT))
                else (GETREGION)))
    (SETQ HEIGHT (QUOTIENT HEIGHT 2))
    (SETQ MAINWINDOW (CREATEW (with REGION REGION (create REGION
                                BOTTOM _ (PLUS BOTTOM HEIGHT) using REGION))
                                (PACK* "TALK (" (with TALK.SERVICETYPE SERVICETYPE TALK.SERVICENAME)
                                "))))))
    (SETQ WINDOW (CREATEW REGION (CONCAT "(" (with TALK.PROTOCOLTYPE PROTOCOLTYPE TALK.PROTOCOLNAME)
                                " Talk from " USER)))
    (WINDOWPROP MAINWINDOW 'STREAMS (CONS INPUTSTREAM OUTPUTSTREAM))
    (WINDOWADDPROP MAINWINDOW 'CLOSEFN (FUNCTION TALK.CLOSEFN))
    (ATTACHWINDOW WINDOW MAINWINDOW 'BOTTOM)
    (ATTACHMENU (create MENU
                        ITEMS _ TALK.MENU.ITEMS
                        CENTERFLG _ T
                        MENUBORDERSIZE _ 1
                        WHENSELECTEDFN _ (FUNCTION TALK.WHENSELECTEDFN))
    WINDOW
    'BOTTOM)
    (with TALK.SERVICETYPE SERVICETYPE (APPLY* TALK.DISPLAYFN MAINWINDOW WINDOW INPUTSTREAM OUTPUTSTREAM
                                PROTOCOLTYPE USER))
    (if (AND (SETQ GREETING (CAR (with MESSAGES TALK.USER.MESSAGES GREETING)))
            (SETQ GREETING (ERRORSET GREETING)))
        then (BKSYSEB (CAR GREETING)))
    WINDOW])

```

**(TALK.LISTEN**

```

[LAMBDA (INPUTSTREAM OUTPUTSTREAM SERVICETYPE PROTOCOLTYPE WINDOW)
; Edited 7-Jun-88 08:42 by cdl
  (PROG (ICON? (MAINWINDOW (MAINWINDOW WINDOW)))
    (with TALK.SERVICETYPE SERVICETYPE (APPLY* TALK.LISTENFN MAINWINDOW WINDOW INPUTSTREAM OUTPUTSTREAM
                                PROTOCOLTYPE))
    (TTY.PROCESS T)
    (CLOSE? INPUTSTREAM)
    (if [OR (OPENWP WINDOW)
            (for PROP in ' (ICON ICONWINDOW) thereis (SETQ ICON? (OPENWP (WINDOWPROP MAINWINDOW PROP)
                                then (WINDOWPROP WINDOW 'TITLE (CONCAT (WINDOWPROP WINDOW 'TITLE)
                                TALK.CLOSED.STRING))
                                (for WINDOW in (ATTACHEDWINDOWS WINDOW) when (WINDOWPROP WINDOW 'MENU)
                                do (if (DETACHWINDOW WINDOW)
                                then (CLOSEW WINDOW)))
                                (if ICON?
                                then (SHRINKW MAINWINDOW)
                                else (FLASHWINDOW WINDOW)])

```

**(TALK.CLOSEFN**

```

[LAMBDA (WINDOW)
; Edited 9-Jun-88 14:45 by cdl
(* DECLARATIONS%: (RECORD STREAMS
(INPUTSTREAM . OUTPUTSTREAM)))
  (LET ((STREAMS (WINDOWPROP WINDOW 'STREAMS NIL)))
    (if STREAMS
        then (with STREAMS STREAMS (CLOSE? INPUTSTREAM)
                (CLOSE? OUTPUTSTREAM])

```

**(TALK.ANSWER**

```

[LAMBDA (USER SERVICE PROTOCOL ADDRESS)
; Edited 9-Jun-88 09:20 by cdl
  (LET [WINDOW REGION (EVENT (CREATE.EVENT))
        (TIME (DATE ' (DATEFORMAT NO.SECONDS)
        (DECLARE (GLOBALVARS \IDLING))
        (PROGN
            (SPAWN.MOUSE))
            (WINDOWPROP (SETQ WINDOW (TALK.ANSWER.WINDOW USER))
            'EVENT EVENT)
            (BITBLT TALK.ICON.BITMAP NIL NIL WINDOW)
            [SETQ REGION (with REGION (DSPCLIPPINGREGION NIL WINDOW)
                (CREATEREGION LEFT BOTTOM WIDTH (QUOTIENT HEIGHT 3)
            (CENTERPRINTINREGION (CONCAT SERVICE "(" PROTOCOL ")")
                (with REGION REGION (CREATEREGION LEFT BOTTOM WIDTH (DIFFERENCE HEIGHT 7)))
                WINDOW)
            (DSPFONT (PROG1 (DSPFONT TALK.ICON.FONT WINDOW)
                (CENTERPRINTINREGION (CONCAT (SUBSTRING TIME 1 6)
                (SUBSTRING TIME 10 -1))
                (with REGION REGION (add BOTTOM HEIGHT)
                (CREATEREGION LEFT BOTTOM WIDTH (DIFFERENCE HEIGHT 7)))
                WINDOW))
            WINDOW)
            (if USER
                then (TALK.ADD.NAME USER ADDRESS PROTOCOL)
                (with REGION REGION (add BOTTOM HEIGHT)
                (TALK.ANSWER.USERNAME USER (CREATEREGION LEFT BOTTOM WIDTH (DIFFERENCE HEIGHT 7))
                WINDOW)))
            (TALK.RINGBELLS WINDOW)
            (if (AND [STRINGP (AWAIT.EVENT EVENT (TIMES TALK.ANSWER.WAIT 1000 (if \IDLING
                then

```

```

(* Provide extra time to login)
2
else 1]

USER)
then (* We timed out, leave the icon up but change its functionality)
(WINDOWPROP WINDOW 'TALK (LIST USER (CONS PROTOCOL ADDRESS)))
(WINDOWPROP WINDOW 'EVENT NIL)
(INVERTW WINDOW)
else (WINDOWPROP WINDOW 'EVENT NIL)
(CLOSEW WINDOW)
(WINDOWPROP WINDOW 'RESULT])

```

**(TALK.ANSWER.WINDOW**

; Edited 9-Jun-88 10:27 by cdl

```

[LAMBDA (USER)
  (PROG (WINDOW REGION)
    [if TALK.ICON.WINDOWS
      then [if [AND USER (SETQ WINDOW (for WINDOW in TALK.ICON.WINDOWS
        thereis (EQUAL USER (CAR (WINDOWPROP WINDOW 'TALK)
          then (RETURN WINDOW)
          else (SETQ REGION (with REGION (WINDOWPROP (CAR TALK.ICON.WINDOWS)
            'REGION)
            (if (LESSP (PLUS PRIGHT WIDTH)
              SCREENWIDTH)
            then (CREATEREGION PRIGHT BOTTOM WIDTH HEIGHT)
            else (CREATEREGION (OR (fetch (REGION LEFT) of (REGIONP
              TALK.DEFAULT.REGION
            ))
              0)
            (if (LESSP (PLUS PTOP HEIGHT)
              SCREENHEIGHT)
            then PTOP
            else (OR (fetch (REGION BOTTOM) of (REGIONP
              TALK.DEFAULT.REGION
            ))
              0)
            WIDTH HEIGHT])
          else (SETQ REGION (with BITMAP TALK.ICON.BITMAP (if (REGIONP TALK.DEFAULT.REGION)
            then (with REGION TALK.DEFAULT.REGION
              (CREATEREGION LEFT BOTTOM BITMAPWIDTH
                BITMAPHEIGHT))
            else (CREATEREGION 0 0 BITMAPWIDTH BITMAPHEIGHT])
          (push TALK.ICON.WINDOWS (SETQ WINDOW (CREATEW REGION NIL 0 T)))
          (WINDOWPROP WINDOW 'BUTONEVENTFN (FUNCTION TALK.ICON.BUTONEVENTFN))
          (WINDOWPROP WINDOW 'CLOSEFN (FUNCTION TALK.ICON.CLOSEFN))
          (RETURN WINDOW])
    ]
  ]

```

**(TALK.ANSWER.USERNAME**

(\* cdl "10-Jun-87 08:38")

```

[LAMBDA (USER REGION WINDOW)
  (LET (PTR FONTHEIGHT (FONT (DSPFONT NIL WINDOW)))
    (if (AND (GREATERP (NCHARS USER)
      (QUOTIENT (BITMAPWIDTH TALK.ICON.BITMAP)
        (CHARWIDTH (CHARCODE A)
          FONT)))
      (SETQ PTR (STRPOS (CONSTANT (CHARACTER (CHARCODE SPACE)))
        USER))
      then (DSPFONT TALK.ICON.FONT WINDOW)
      (SETQ FONTHEIGHT (QUOTIENT (FONTPROP TALK.ICON.FONT 'HEIGHT)
        2))
      (CENTERPRINTINREGION (SUBSTRING USER 1 (SUB1 PTR))
        (with REGION REGION (CREATEREGION LEFT (PLUS BOTTOM FONTHEIGHT)
          WIDTH HEIGHT))
        WINDOW)
      (CENTERPRINTINREGION (SUBSTRING USER (ADD1 PTR)
        -1)
        (with REGION REGION (CREATEREGION LEFT (DIFFERENCE BOTTOM FONTHEIGHT)
          WIDTH HEIGHT))
        WINDOW)
      (DSPFONT FONT WINDOW)
      else (CENTERPRINTINREGION USER REGION WINDOW])
  )

```

**(TALK.GET.NAME**; Edited 16-Jun-88 09:24 by cdl  
(\* DECLARATIONS%: (RECORD ENTRY  
(NAME . PAIRS)) (RECORD PAIR  
(PROTOCOL . ADDRESS)))

```

[LAMBDA NIL
  (LET
    [HOSTNAME HOSTNAMES MENU (ITEM '("" NIL "")
    (if
      (SETQ HOSTNAMES
        (for ENTRY in TALK.HOSTNAMES
          collect
            (if (LISTP ENTRY)
              then [with ENTRY ENTRY
                ` (,NAME , (KWOTE ENTRY)

```

```

NIL
(SUBITEMS ,@(for PAIR in PAIRS
              collect (with PAIR PAIR `((, (CONCAT PROTOCOL " " ADDRESS)
              , (KWOTE (LIST NAME PAIR)

else ENTRY)))
then (push HOSTNAMES ITEM))
[SETQ MENU (create MENU
  TITLE _ "TALK"
  ITEMS _ `(("Prompt for User/Host" 'PROMPT "Prompt for a new user or hostname.")
            , (if TALK.GAG
                  then "Turn TALK On"
                  else "Turn TALK Off")
            (PROGN (SETQ TALK.GAG (NOT TALK.GAG))
                  NIL)
            "Toggle TALK connection accept/refuse switch.")
            ,@HOSTNAMES]

[if HOSTNAMES
 then (SHADEITEM ITEM MENU BLACKSHADE) (* Kludge to make entire line of menu inverted, not just up to
                                         subitem arrows)
      (with REGION (MENUITEMREGION ITEM MENU)
        (with MENU MENU (BLTSHADE BLACKSHADE (with WINDOW IMAGE SAVE)
          (PLUS LEFT MENUOUTLINESIZE)
          (PLUS BOTTOM MENUOUTLINESIZE)
          WIDTH HEIGHT]
        (SELECTQ (SETQ HOSTNAME (MENU MENU))
          (PROMPT (SETQ HOSTNAME (MKATOM (PROMPTFORWARD "User or host?" NIL NIL PROMPTWINDOW)))
          (TERPRI PROMPTWINDOW))
        NIL)
      HOSTNAME])

```

## (TALK.ADD.NAME

```

[LAMBDA (NAME ADDRESS PROTOCOL) ; Edited 9-Jun-88 12:39 by cdl
                                  (* DECLARATIONS%:(RECORD ENTRY
                                  (NAME . PAIRS)))

(LET (ENTRY)
  (if (NOT (EQUAL NAME ADDRESS))
    then (if (SETQ ENTRY (bind HOSTNAME (NCHARS _ (NCHARS NAME)) for ENTRY in TALK.HOSTNAMES
                              eachtime (SETQ HOSTNAME (if (LISTP ENTRY)
                                                            then (with ENTRY ENTRY NAME)
                                                            else ENTRY))
                              thereis (STRING-EQUAL HOSTNAME NAME)))
      then (if (NLISTP ENTRY)
        then (SETQ TALK.HOSTNAMES (DREMOVE ENTRY TALK.HOSTNAMES))
        (push TALK.HOSTNAMES (LIST NAME (CONS PROTOCOL ADDRESS)))
        else (PUTASSOC PROTOCOL ADDRESS (with ENTRY ENTRY PAIRS)))
      else (push TALK.HOSTNAMES (LIST NAME (CONS PROTOCOL ADDRESS))

```

## (TALK.FLASH.CARET

```

[LAMBDA (WINDOW POSITION FLG) ; Edited 2-Jun-88 15:17 by cdl
  (DECLARE (GLOBALVARS DEFAULTCARET))
  (if (OPENWP WINDOW)
    then (SELECTQ FLG
      (OFF [with POSITION POSITION
        (if XCOORD
          then (with CURSOR DEFAULTCARET (BITBLT CUIIMAGE NIL NIL WINDOW XCOORD YCOORD NIL
            NIL NIL 'INVERT]))
        (ON [with POSITION POSITION (with CURSOR DEFAULTCARET (BITBLT CUIIMAGE NIL NIL WINDOW
          (SETQ XCOORD
            (DIFFERENCE (DSPXPOSITION NIL
              WINDOW)
              CUHOTSPOTX))
          (SETQ YCOORD
            (DIFFERENCE (DSPYPOSITION NIL
              WINDOW)
              CUHOTSPOTY))
          NIL NIL NIL 'INVERT]))
      NIL]))

```

## (TALK.WHENSELECTEDFN

```

[LAMBDA (ITEM FROMMENU BUTTON) ; Edited 9-Jun-88 14:50 by cdl
                                  (* DECLARATIONS%:(RECORD STREAMS
                                  (INPUTSTREAM . OUTPUTSTREAM)))

(LET [MAINWINDOW TEXTSTREAM STREAMS (WINDOW (MAINWINDOW (WFROMMENU FROMMENU)
  (DECLARE (SPECVARS WINDOW MAINWINDOW TEXTSTREAM STREAMS))
  (SETQ TEXTSTREAM (WINDOWPROP (SETQ MAINWINDOW (MAINWINDOW WINDOW))
    'TEXTSTREAM))
  (if (AND (SETQ STREAMS (WINDOWPROP MAINWINDOW 'STREAMS))
    (OPENP (with STREAMS STREAMS OUTPUTSTREAM)))
    then (ERRORSET (CADR ITEM))

```

## (TALK.RINGBELLS

```

[LAMBDA (WINDOW) (* cdl "16-Mar-87 08:01")
  (DECLARE (GLOBALVARS RINGBELLS.L1 RINGBELLS.L2))

```

```
(PLAYTUNE RINGBELLS.L1)

(FLASHWINDOW WINDOW)
(PLAYTUNE RINGBELLS.L2])
```

(\* Dorados and Dolphins can't do PLAYTUNE but let BEEPON/BEEPOFF handle that)

**(TALK.START.SERVER**

```
[LAMBDA (PROTOCOL RESTART)
  (DECLARE (SPECVARS RESTART))
  (if PROTOCOL
    then (LET ((PROTOCOLTYPE (ASSOC PROTOCOL TALK.PROTOCOLTYPES)))
      (DECLARE (SPECVARS PROTOCOLTYPE))
      (if PROTOCOLTYPE
        then [with TALK.PROTOCOLTYPE PROTOCOLTYPE (if TALK.STARTSERVERFN
          then (CAR (NLSETQ (APPLY* TALK.STARTSERVERFN
            RESTART])
        else (ERROR PROTOCOL "Unknown protocol!")))]
      else (for PROTOCOLTYPE declare%: (SPECVARS PROTOCOLTYPE) in TALK.PROTOCOLTYPES
        do (with TALK.PROTOCOLTYPE PROTOCOLTYPE (if TALK.STARTSERVERFN
          then (NLSETQ (APPLY* TALK.STARTSERVERFN RESTART]))
        )
    )
  )
```

; Edited 8-Jun-88 15:06 by cdl

```
(DEFINEQ
```

**(TALK.ICON.BUTTONEVENTFN**

```
[LAMBDA (WINDOW)
  (RESETFORM (INVERTW WINDOW)
    (until (MOUSESTATE UP) do))
  (ALLOW.BUTTON.EVENTS)
  (if (WINDOWPROP WINDOW 'EVENT)
    then (WINDOWPROP WINDOW 'RESULT T)
    (NOTIFY.EVENT (WINDOWPROP WINDOW 'EVENT NIL)
      T)
  else (LET ((DESTINATION (WINDOWPROP WINDOW 'TALK))
    RESULT)
    (if (MOUSECONFIRM (CONCAT "(Re)Connect to " (with DESTINATION DESTINATION NAME)
      "?"))
      then (if (PROCESSP (SETQ RESULT (TALK.RECONNECT DESTINATION)))
        then (CLOSEW WINDOW)
        else (FLASHWINDOW WINDOW)
        (PROMPTPRINT RESULT])
    )
  )
```

; Edited 9-Jun-88 10:02 by cdl

(\* DECLARATIONS%: (RECORD DESTINATION  
(NAME (PROTOCOL . ADDRESS))))

**(TALK.ICON.CLOSEFN**

```
[LAMBDA (WINDOW)
  (LET ((EVENT (WINDOWPROP WINDOW 'EVENT NIL)))
    (if EVENT
      then (NOTIFY.EVENT EVENT T)))
  (SETQ TALK.ICON.WINDOWS (DREMOVE WINDOW TALK.ICON.WINDOWS])
  )
```

(\* cdl "10-May-87 10:07")

(\* \* TALK data)

```
(DECLARE%: DONTCOPY
```

```
(DECLARE%: EVAL@COMPILE
```

```
(RECORD TALK.SERVICETYPE (TALK.SERVICENAME TALK.DISPLAYFN TALK.LISTENFN))
```

```
(RECORD TALK.PROTOCOLTYPE (TALK.PROTOCOLNAME TALK.HOSTNAMEFN TALK.USERNAMEFN TALK.CONNECTFN TALK.EVENTFN
  TALK.STARTSERVERFN TALK.CASEARRAY))
)
```

**(RPAQQ TALK.MENU.ITEMS**

```
((Disconnect (TALK.CLOSEFN MAINWINDOW)
  "Close TALK connection and keep window open.")
(RingBells (PROGN (PRINTCCODE (CHARCODE ^G)
  (CDR STREAMS))
  (FORCEOUTPUT (CDR STREAMS))
  (FLASHWINDOW MAINWINDOW))
  "Execute a (RINGBELLS) on the remote machine.")
(Message (LET [(MESSAGE (MENU (create MENU ITEMS _ TALK.USER.MESSAGES)
  (if [AND MESSAGE (TTY.PROCESSP (WINDOWPROP MAINWINDOW 'PROCESS]
    then
      (BKSYSEBUF MESSAGE)))
  "Insert a generic message.")))
```

```
(RPAQQ TALK.USER.MESSAGES (("One moment please" "One moment please..." NIL (SUBITEMS ("the phone's ringing"
  "One moment please, the
  phone's ringing..."
  ("there's someone at the
```

```
door" "One moment please,
      there's someone at the
      door...")
("someone is trying to TALK
to me" "One moment please,
      someone is trying to
      TALK to me...")))
```

```
(DATE (DATE)
      "The current date and time.")
"Bye."))
```

```
(RPAQ? TALK.SERVICETYPES NIL)

(RPAQ? TALK.PROTOCOLTYPES NIL)

(RPAQ? TALK.GAG NIL)

(RPAQ? TALK.HOSTNAMES NIL)

(RPAQ? TALK.ICON.WINDOWS NIL)

(RPAQ? TALK.ANSWER.WAIT 15)

(RPAQ? TALK.READTABLE (COPYREADTABLE 'ORIG))

(RPAQ? TALK.DEFAULT.REGION (CREATEREGION 0 0 500 500))

(RPAQ? TALK.CLOSED.STRING " -- Connection Closed")

(RPAQ? TALK.ICON.FONT LITTLEFONT)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS TALK.MENU.ITEMS TALK.USER.MESSAGES TALK.SERVICETYPES TALK.PROTOCOLTYPES TALK.GAG TALK.HOSTNAMES
  TALK.ICON.WINDOWS TALK.ANSWER.WAIT TALK.READTABLE TALK.DEFAULT.REGION TALK.CLOSED.STRING TALK.ICON.FONT)
)

(ADDTOVAR BackgroundMenuCommands (Talk ' (PRINTOUT PROMPTWINDOW T (TALK)
                                          T)
                                          "Start a TALK session with another user/host."))

(RPAQQ BackgroundMenu NIL)

(APPENDTOVAR BACKGROUNDFNFS TALK.START.SERVER)

(APPENDTOVAR AFTERMAKESYSFORMS (TALK.START.SERVER NIL T))

(RPAQQ TALK.ICON.BITMAP 

|            |
|------------|
| TALK FROM: |
|            |
| TIME:      |
|            |
| MODE:      |
|            |

)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS TALK.ICON.BITMAP)
)

(SETSYNTAX (CHARCODE SPACE)
  (CHARCODE A)
  TALK.READTABLE)

(PUTPROPS TALK COPYRIGHT ("Stanford University" 1987 1988))
```

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