

File created: 14-Oct-2025 10:13:27 {WMEDLEY}<lispusers>talk>TALK-SKETCH.;4

edit by: rmk

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```
(RPAQQ TALK-SKETCHCOMS
(* TALK Sketch Service)
(LOCALVARS . T)
(FNS TALK.SKETCH.DISPLAY TALK.SKETCH.LISTEN)
(FNS TALK.SKETCH.FIND.ELEMENT TALK.SKETCH.FIND.SYMBOLS)
(* Sketch Viewer Control Properties)
(FNS TALK.SKETCH.WHENADDED TALK.SKETCH.WHENCHANGED TALK.SKETCH.WHENDELETED TALK.SKETCH.WHENMOVED TALK.SKETCH.PREMOVED)
(FNS TALK.SKETCH.WHENGROUPEDFN TALK.SKETCH.WHENUNGROUPEDFN)
(VARS TALK.TO.SKETCH.PROPS TALK.SKETCH.REDISPLAY.PROPS)
(* TALK Sketch Actions)
(FNS TALK.SKETCH.ADD.ELEMENT TALK.SKETCH.CHANGE.ELEMENT TALK.SKETCH.DELETE.ELEMENTS TALK.SKETCH.MOVE.ELEMENTS TALK.SKETCH.POSITION.ELEMENTS)
(VARS TALK.SKETCH.ACTIONS)
(* TALK Sketch Data)
(VARS TALK.SKETCH.DELETE.ITEMS)
(SETVARS TALK.SKETCH.TRACK)
(GLOBALVARS TALK.SKETCH.ACTIONS TALK.TO.SKETCH.PROPS TALK.SKETCH.REDISPLAY.PROPS TALK.SKETCH.DELETE.ITEMS TALK.SKETCH.TRACK)
(* etc)
(FILES TALK SKETCH)
(APPENDVARS (GAP.SERVICETYPES (7 Sketch TALK.NS.SERVER)
(TALK.SERVICETYPES (Sketch TALK.SKETCH.DISPLAY TALK.SKETCH.LISTEN)))
(* Sketch Bug Fixes)
(FNS TALK.SKETCH.NOP)
(P (CHANGENAME 'SK.PUT.FONT 'SK.INSURE.TEXT 'TALK.SKETCH.NOP)
(ADVISE BITMAPELT.CHANGEFN SK.IMAGEOBJ.CHANGEFN (TEXTUREP :IN SKFILLINGP))))

(* * TALK Sketch Service)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(LOCALVARS . T)
)

(DEFINEQ
TALK.SKETCH.DISPLAY
[LAMBDA (MAINWINDOW WINDOW INPUTSTREAM OUTPUTSTREAM PROTOCOL USER)
; Edited 9-Jun-88 16:36 by cdl
(LET (MENUWINDOW)
(SKETCH NIL MAINWINDOW)
(SKETCH NIL WINDOW)
(DETACHWINDOW (SETQ MENUWINDOW (WINDOWPROP WINDOW 'SKETCHFIXEDMENU NIL)))
(CLOSEW MENUWINDOW)
(DETACHWINDOW (SETQ MENUWINDOW (WINDOWPROP MAINWINDOW 'SKETCHFIXEDMENU NIL)))
(CLOSEW MENUWINDOW)
(WINDOWPROP MAINWINDOW 'SKETCHFIXEDMENU (ATTACHMENU (LET ((ITEMS (SKETCH.COMMANDMENU.ITEMS
NIL T)))
(for KEY in
TALK.SKETCH.DELETE.ITEMS
do (SETQ ITEMS (DREMOVE (SASSOC
KEY
ITEMS)
ITEMS)))
(SKETCH.COMMANDMENU ITEMS)))
MAINWINDOW
'RIGHT
'TOP))
(WINDOWPROP MAINWINDOW 'SKETCHPOPUPMENU NIL)
(WINDOWPROP WINDOW 'SKETCHPOPUPMENU NIL)
(for PAIR on TALK.TO.SKETCH.PROPS do (PUTSKETCHPROP MAINWINDOW (CAR PAIR)
(CADR PAIR)))
(PUTSKETCHPROP MAINWINDOW 'TALK OUTPUTSTREAM) (* Still need to combine the two prompt windows into one)
(WINDOWPROP MAINWINDOW 'SCROLLFN NIL)
(WINDOWPROP WINDOW 'SCROLLFN NIL)
(PUTWINDOWPROP MAINWINDOW 'DONTQUERYCHANGES T)
(PUTWINDOWPROP WINDOW 'DONTQUERYCHANGES T)
(RPLACA (CDAR (INSURE.SKETCH MAINWINDOW))
```

```

      (CONCAT "Talk with " USER))
    (WINDOWDELPROP WINDOW 'SHRINKFN 'SK.SHRINK.ICONCREATE)
    (WINDOWDELPROP WINDOW 'SHRINKFN 'SK.RETURN.TTY)
    (with REGION (DSPCLIPPINGREGION NIL MAINWINDOW)
      (SKED.SET.SELECTION (CREATEPOSITION (QUOTIENT WIDTH 2)
                                           (QUOTIENT HEIGHT 2))
        MAINWINDOW))
    (TTY.PROCESS (WINDOWPROP MAINWINDOW 'PROCESS])

```

(TALK.SKETCH.LISTEN

[LAMBDA (MAINWINDOW WINDOW INPUTSTREAM OUTPUTSTREAM PROTOCOLTYPE)

; Edited 7-Jun-88 08:46 by cdl

```

(* DECLARATIONS%: (RECORD EXPR
  (KEY . ARGUMENTS)) (RECORD OPERATION
  (KEY FUNCTION)))

```

(PROG [OPERATION (EVENTFN (with TALK.PROTOCOLTYPE PROTOCOLTYPE TALK.EVENTFN))

(SKETCH (INSURE.SKETCH (MAINWINDOW WINDOW)

(DECLARE (GLOBALVARS TALK.CLOSED.STRING))

(while (OPENWP WINDOW) do (APPLY* EVENTFN INPUTSTREAM OUTPUTSTREAM)

```

  (if (NOT (AND (OPENP INPUTSTREAM)
                (OPENP OUTPUTSTREAM))))

```

then (RETURN))

[SELCHARQ (PEEKCCODE INPUTSTREAM)

(↑G (TALK.RINGBELLS WINDOW))

(with EXPR (HREAD INPUTSTREAM)

(if (SETQ OPERATION (ASSOC KEY TALK.SKETCH.ACTIONS))

```

  then (with OPERATION OPERATION (APPLY FUNCTION
                                           (CONS WINDOW
                                            ARGUMENTS)
                                           )))

```

```

  else (PRINTOUT (GETPROMPTWINDOW MAINWINDOW)
    "Unknown Sketch Talk operation:" %, KEY]

```

(BIN INPUTSTREAM))

(RPLACA (CDAR SKETCH)

(CONCAT (CADAR SKETCH)

TALK.CLOSED.STRING))

(PUTSKETCHPROP MAINWINDOW 'TALK NIL])

)

(DEFINEQ

(TALK.SKETCH.FIND.ELEMENT

[LAMBDA (SKETCH SYMBOLS)

; Edited 18-Jun-87 09:21 by cdl

(DECLARE (SPECVARS SYMBOLS))

(SKETCH.LIST.OF.ELEMENTS SKETCH (FUNCTION (LAMBDA (ELEMENT)

```

  (EQMEMB (GETSKETCHELEMENTPROP ELEMENT 'TALK)
    SYMBOLS])

```

(TALK.SKETCH.FIND.SYMBOLS

[LAMBDA (SKETCH ELEMENTS)

; Edited 18-Jun-87 11:11 by cdl

(for ELEMENT in ELEMENTS collect (GETSKETCHELEMENTPROP ELEMENT 'TALK])

)

(* * Sketch Viewer Control Properties)

(DEFINEQ

(TALK.SKETCH.WHENADDEDFN

[LAMBDA (VIEWER ELEMENT)

; Edited 23-Jun-87 07:48 by cdl

(LET [(STREAM (GETSKETCHPROP VIEWER 'TALK)

(if (AND STREAM (OPENP STREAM))

then (PROG [(SCRATCHSTREAM (OPENSTREAM '{NODIRCORE} 'BOTH)

(PUTSKETCHELEMENTPROP ELEMENT 'TALK (GENSYM 'TALK))

(HPRINT '(ADD ,ELEMENT

SCRATCHSTREAM)

(SETFILEPTR SCRATCHSTREAM 0)

```

(COPYBYTES SCRATCHSTREAM STREAM)
(FORCEOUTPUT STREAM)
(CLOSEF? SCRATCHSTREAM])

```

(TALK.SKETCH.WHENCHANGEDFN
[LAMBDA (VIEWER ELEMENT PROPERTY NEWVALUE OLDVALUE)

; Edited 10-Jun-88 09:17 by cdl

```

(PROG [(STREAM (GETSKETCHPROP VIEWER 'TALK]
  (if (AND STREAM (OPENP STREAM))
    then (SELECTQ PROPERTY
      (HASBOX (TALK.SKETCH.WHENDELETEDFN VIEWER (LIST OLDVALUE))
        (TALK.SKETCH.WHENADDEDFN VIEWER NEWVALUE)
        (RETURN))
      (DATA (SELECTQ NEWVALUE
        ((NIL CHANGED)
          (SETQ NEWVALUE OLDVALUE))
        NIL))
      NIL)
    (LET [(SCRATCHSTREAM (OPENSTREAM '{NODIRCORE} 'BOTH)
      (HPRINT '(CHANGE ,(TALK.SKETCH.FIND.SYMBOLS VIEWER (CONS ELEMENT))
        ,PROPERTY
        ,NEWVALUE)
        SCRATCHSTREAM)
      (SETFILEPTR SCRATCHSTREAM 0)
      (COPYBYTES SCRATCHSTREAM STREAM)
      (FORCEOUTPUT STREAM)
      (CLOSEF? SCRATCHSTREAM])

```

(TALK.SKETCH.WHENDELETEDFN
[LAMBDA (VIEWER ELEMENTS)

; Edited 23-Jun-87 07:48 by cdl

```

(PROG [(STREAM (GETSKETCHPROP VIEWER 'TALK]
  (if (AND STREAM (OPENP STREAM))
    then (HPRINT '(DELETE ,(TALK.SKETCH.FIND.SYMBOLS VIEWER ELEMENTS))
      STREAM)
    (FORCEOUTPUT STREAM])

```

(TALK.SKETCH.WHENMOVEDFN
[LAMBDA (VIEWER ELEMENTS DELTA)

; Edited 23-Jun-87 10:14 by cdl

```

(PROG [(STREAM (GETSKETCHPROP VIEWER 'TALK]
  (if (AND STREAM (OPENP STREAM))
    then [SETQ ELEMENTS (if (EQ (CAR ELEMENTS)
      T)
      then [if (NULL TALK.SKETCH.TRACK)
        then (if (LISTP (CAADR ELEMENTS))
          then [for ELEMENT in (CDR ELEMENTS)
            collect (CONS T (TALK.SKETCH.FIND.SYMBOLS VIEWER
              (LIST ELEMENT)
            else (* Fix for Sketch UNDO/MOVE bug)
              (with POSITION DELTA (SETQ XCOORD (MINUS XCOORD)
                )
                (SETQ YCOORD (MINUS YCOORD)))
              (LIST (CONS T (TALK.SKETCH.FIND.SYMBOLS VIEWER
                (CONS (CDR ELEMENTS)
                elseif (in (CAR ELEMENTS) always NUMBERP)
                then [LIST (CONS (CAR ELEMENTS)
                  (TALK.SKETCH.FIND.SYMBOLS VIEWER (LIST (CDR ELEMENTS)
                else (for ELEMENT in ELEMENTS when (OR (NEQ (CAR ELEMENT)
                  T)
                  (NOT TALK.SKETCH.TRACK))
                collect (CONS (CAR ELEMENT)
                  (TALK.SKETCH.FIND.SYMBOLS VIEWER (CONS (CDR ELEMENT]
      (HPRINT '(MOVE ,ELEMENTS ,DELTA)
      STREAM)
      (FORCEOUTPUT STREAM])

```

(TALK.SKETCH.PREMOVEDFN

{MEDLEY}<lispusers>talk>TALK-SKETCH.;1 (TALK.SKETCH.PREMOVEFN cont.)

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```
[LAMBDA (VIEWER ELEMENTS ALIGNHOW) ; Edited 23-Jun-87 07:53 by cdl
  (LET [(STREAM (GETSKETCHPROP VIEWER 'TALK)
    (if (AND TALK.SKETCH.TRACK (NULL ALIGNHOW)
      (EQ (CAR ELEMENTS)
        T)
        STREAM
        (OPENP STREAM)))
    then (LET [(SYMBOLS (TALK.SKETCH.FIND.SYMBOLS VIEWER (CDR ELEMENTS)
      (SKETCH.TRACK.ELEMENTS (CDR ELEMENTS)
        VIEWER
        [FUNCTION (LAMBDA (POSITION VIEWER STREAM)
          (HPRINT '(POSITION ,SYMBOLS ,POSITION)
            STREAM)
          (FORCEOUTPUT STREAM]
          NIL NIL STREAM))
        ]
        )
    ]
    )
  )
```

(DEFINEQ

```
(TALK.SKETCH.WHENGROUPEDFN
  [LAMBDA (VIEWER ELEMENTS) ; Edited 18-Jun-87 11:02 by cdl
    'DON'T])
```

```
(TALK.SKETCH.WHENUNGROUPEDFN
  [LAMBDA (VIEWER ELEMENTS) ; Edited 18-Jun-87 11:02 by cdl
    'DON'T])
```

```
(RPAQQ TALK.TO.SKETCH.PROPS (WHENADDED FN TALK.SKETCH.WHENADDED FN WHENDELETED FN TALK.SKETCH.WHENDELETED FN
  WHENMOVED FN TALK.SKETCH.WHENMOVED FN WHENCHANGED FN
  TALK.SKETCH.WHENCHANGED FN WHENGROUPEDFN TALK.SKETCH.WHENGROUPEDFN
  WHENUNGROUPEDFN TALK.SKETCH.WHENUNGROUPEDFN REMOVEFN
  TALK.SKETCH.PREMOVEFN))
```

```
(RPAQQ TALK.SKETCH.REDISPLAY.PROPS ((TEXT FONT)
  (TEXTBOX FONT BRUSH)
  (CLOSEDWIRE DASHING)))
```

(* * TALK Sketch Actions)

(DEFINEQ

```
(TALK.SKETCH.ADD.ELEMENT
  [LAMBDA (SKETCH ELEMENT) ; Edited 21-Jun-87 11:24 by cdl
    (SKETCH.ADD.ELEMENT ELEMENT SKETCH)])
```

```
(TALK.SKETCH.CHANGE.ELEMENT
  [LAMBDA (SKETCH ELEMENT PROPERTY VALUE) ; Edited 10-Jun-88 09:35 by cdl
    (* DECLARATIONS%: (RECORD ENTRY
      (TYPE . PROPERTIES)))
    (bind ENTRY for ELEMENT in (TALK.SKETCH.FIND.ELEMENT SKETCH ELEMENT)
      do (PUTSKETCHELEMENTPROP ELEMENT PROPERTY VALUE SKETCH)
      (if (SETQ ENTRY (ASSOC (SKETCH.ELEMENT.TYPE ELEMENT)
        TALK.SKETCH.REDISPLAY.PROPS))
        then (with ENTRY ENTRY (if (OR (NULL PROPERTIES)
          (MEMB PROPERTY PROPERTIES))
            then (REDISPLAYW SKETCH]))
        )
```

```
(TALK.SKETCH.DELETE.ELEMENTS
  [LAMBDA (SKETCH ELEMENTS) ; Edited 18-Jun-87 09:47 by cdl
    (for ELEMENT inside (TALK.SKETCH.FIND.ELEMENT SKETCH ELEMENTS) do (SKETCH.DELETE.ELEMENT ELEMENT
      SKETCH)])
```

```
(TALK.SKETCH.MOVE.ELEMENTS
  [LAMBDA (SKETCH ELEMENTS DELTA) ; Edited 18-Jun-87 17:48 by cdl
    (for PAIR in ELEMENTS do (SELECTQ (CAR PAIR)
      (T (SKETCH.MOVE.ELEMENTS (TALK.SKETCH.FIND.ELEMENT SKETCH (CDR PAIR))
```

```

      DELTA SKETCH))
(bind POSITIONS POSITION CONTROLPT [ELEMENT ← (CAR (
                                                    TALK.SKETCH.FIND.ELEMENT
                                                    SKETCH
                                                    (CDR PAIR]
for NUMBER in (CAR PAIR) do (SELECTQ NUMBER
                                   ((1 2 3)
                                   (SETQ CONTROLPT (SELECTQ NUMBER
                                                         (1,
                                                         1STCONTROLPT
                                                         (2,
                                                         2NDCONTROLPT
                                                         (3,
                                                         3RDCONTROLPT
                                                         (SHOULDNT)))
(with POSITION (SETQ POSITION
                  (COPY (
                        GETSKETCHELEMENTPROP
                        ELEMENT
                        CONTROLPT)))
(add XCOORD (fetch (POSITION
                    XCOORD
                    )
                    of DELTA))
(add YCOORD (fetch (POSITION
                    YCOORD
                    )
                    of DELTA)))
(PUTSKETCHELEMENTPROP ELEMENT
CONTROLPT POSITION
SKETCH))
(if [SETQ POSITIONS (COPY (
                        GETSKETCHELEMENTPROP
                        ELEMENT
                        'DATA]
then (with POSITION (CAR (NTH
                        POSITIONS
                        NUMBER)
                        )
      (add XCOORD (fetch (POSITION
                        XCOORD
                        )
                        of DELTA))
      (add YCOORD (fetch (POSITION
                        YCOORD
                        )
                        of DELTA)))
(PUTSKETCHELEMENTPROP ELEMENT
'DATA POSITIONS
SKETCH])

```

(TALK.SKETCH.POSITION.ELEMENTS
[LAMBDA (SKETCH SYMBOLS POSITION)

; Edited 19-Jun-87 09:17 by cdl

(LET ((ELEMENTS (TALK.SKETCH.FIND.ELEMENT SKETCH SYMBOLS)))
(SKETCH.MOVE.ELEMENTS ELEMENTS (with POSITION (GETSKETCHELEMENTPROP (CAR ELEMENTS)
'1STCONTROLPT)

(create POSITION
XCOORD ← (DIFFERENCE (fetch (POSITION XCOORD) of
POSITION
)
XCOORD)
YCOORD ← (DIFFERENCE (fetch (POSITION YCOORD) of
POSITION
)
YCOORD)))

SKETCH])

)

(RPAQQ TALK.SKETCH.ACTIONS ((ADD TALK.SKETCH.ADD.ELEMENT)
(DELETE TALK.SKETCH.DELETE.ELEMENTS)
(MOVE TALK.SKETCH.MOVE.ELEMENTS)
(CHANGE TALK.SKETCH.CHANGE.ELEMENT)
(POSITION TALK.SKETCH.POSITION.ELEMENTS)))

(* * TALK Sketch Data)

(RPAQQ TALK.SKETCH.DELETE.ITEMS (Group UnGroup Put "Move view"))

(RPAQ? TALK.SKETCH.TRACK NIL)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS TALK.SKETCH.ACTIONS TALK.TO.SKETCH.PROPS TALK.SKETCH.REDISPLAY.PROPS TALK.SKETCH.DELETE.ITEMS
TALK.SKETCH.TRACK)
)

(* * etc)

(FILESLOAD TALK SKETCH)

(APPENDTOVAR GAP.SERVICETYPES (7 Sketch TALK.NS.SERVER))

(APPENDTOVAR TALK.SERVICETYPES (Sketch TALK.SKETCH.DISPLAY TALK.SKETCH.LISTEN))

(* * Sketch Bug Fixes)

(DEFINEQ

(TALK.SKETCH.NOP
[LAMBDA (X)
X])

; Edited 19-Jun-87 07:50 by cdl

)

(CHANGENAME 'SK.PUT.FONT 'SK.INSURE.TEXT 'TALK.SKETCH.NOP)

[XCL:REINSTALL-ADVICE 'BITMAPELT.CHANGEFN :AFTER '(:LAST (RPLACA (CDDAR (CADAR !VALUE))
(CADDAR (CAAR !VALUE))

[XCL:REINSTALL-ADVICE 'SK.IMAGEOBJ.CHANGEFN :AFTER '(:LAST (RPLACA (CDDAR (CADAR !VALUE))
(CADDAR (CAAR !VALUE))

[XCL:REINSTALL-ADVICE '(TEXTUREP :IN SKFILLINGP)
:BEFORE
'(:LAST (IF (NULL OBJECT)
THEN (RETURN T)

(READWISE BITMAPELT.CHANGEFN SK.IMAGEOBJ.CHANGEFN (TEXTUREP :IN SKFILLINGP))

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VARIABLE INDEX

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ADVICE INDEX

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