```
;;
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(RPAQQ NCGUIDEDTOURCARDCOMS
        ((DECLARE%: DONTCOPY (PROPS (NCGUIDEDTOURCARD MAKEFILE-ENVIRONMENT)
                                    (NCGUIDEDTOURCARD FILETYPE)))
        [DECLARE%: COPY FIRST (P (NC.LoadFileFromDirectories 'NCBROWSERCARD)
                                 (NC.LoadFileFromDirectories 'NCTABLETOPCARD]
```

;;; This library package contains the card type definition and accompanying software for the guided tour module. This provides support for creation and
;;; use of browser-based guided tours, which are basically just branching paths formed by linking together TableTop cards with global GuidedTour links.

;;; Hooks for hackers:

;;; GuidedTourBringUpFn. If this prop is on a card type's atom, then cards of that type when encountered in guided tours are brought up by calling this
;;; function.

;;; GuidedTourCloseDownFn. If this prop is on a card type's atom, then cards of that type when encountered in guided tours are closed down by calling
;;; this function.

```
        (FNS NCGT.MakeGuidedTourCard NCGT.EditGuidedTourCard NCGT.GuidedTourCardQuitFn)
        (FNS NCGT.SetUpGraphEditMenus NCGT.CreateTableTopFn NCGT.CreateTableTop NCGT.CreateGuidedTourLinkFn
            NCGT.CreateGuidedTourLink NCGT.CloseLinksLegendMenuWin)
        (FNS NCGT.AttachOperationsMenu NCGT.OperationsMenuWhenSelectedFn)
        (FNS NCGT.StartTourAtRoot NCGT.NextTourStop NCGT.PreviousTourStop NCGT.JumpToTourStop NCGT.ResetTour
            NCGT.SetGTState NCGT.FetchGTState NCGT.NextTTOrCard NCGT.CloseDownTTOrCard NCGT.BringUpTTOrCard
            NCGT.HighlightEdge NCGT.UnHighlightEdge NCGT.HighlightNode NCGT.UnHighlightNode
            NCGT.FlipNodeIfWinOpen NCGT.MarkWindowDirty NCGT.MarkGraphNodeDirty
            NCGT.RecomputeAndRedisplayWindow NCGT.RedisplayAffectedNodes NCGT.RedisplayAffectedLinks
            NCGT.CloseOrUndisplayCards)
        (FNS NCGT.GuidedTourBeforeRepaintFn NCGT.GuidedTourAfterRepaintFn NCGT.GuidedTourExpandFn
            NCGT.ShrunkenWinButtonEventFn)
```

```
        ;; No longer used

        (FNS NCGT.GuidedTourShrinkFn)
        ;;
        (RECORDS GTState)
        (BITMAPS NCGT.LinkIconBitmap NCGT.ShrunkenIconBitmap)
        (GLOBALVARS NCGT.GuidedTourLinkTypes NCGT.OperationsMenuItems NCGT.GraphEditMenuItems
            NCGT.GraphEditUnfixedMenuItems NCGT.HighlightLineWidth NCGT.VisitedNodesBorderWidthIncrement
            NCGT.ShrunkenIconTemplate NCGT.ShrunkenIconControlFlg)
        [INITVARS (NCGT.HighlightLineWidth 3)
            (NCGT.VisitedNodesBorderWidthIncrement 2)
            (NCGT.ShrunkenIconControlFlg T)

            ;; No longer used

            [NCGT.ShrunkenIconTemplate (create TITLEDICON ICON _ NCGT.ShrunkenIconBitmap MASK _ NIL TITLEREG
                                            _ '(5 2 50 30]
            ;;
            (NCGT.GuidedTourLinkTypes 'GuidedTour)
            [NCGT.OperationsMenuItems '((START (FUNCTION NCGT.StartTourAtRoot)
                                            "Start the tour at a root of the browser.")
                                        (NEXT (FUNCTION NCGT.NextTourStop)
                                            "Shut down current TableTop and move to the next.")
                                        (PREVIOUS (FUNCTION NCGT.PreviousTourStop)
                                            "Shut down current TableTop and move to some previous one.")
                                        (JUMP (FUNCTION NCGT.JumpToTourStop)
                                            "Shut down current TableTop and jump to some other one.")
                                        (RESET (FUNCTION NCGT.ResetTour)
                                            "Shut down current TableTop and reset the browser."]
            [NCGT.GraphEditMenuItems '((|Create TT Card| NCGT.CreateTableTopFn "Create a new TableTop card
                                            and add to browser." (SUBITEMS (|Create card of type|
```

```
                                                                     NC.BrowserCreateCardFn
                                                                     "Create a new card of a
                                                                     given type and add to
                                                                     browser.")))
                                        (Create% Link NCGT.CreateGuidedTourLinkFn "Create a new GuidedTour
                                             link between cards in the browser.")
                                        (Delete% Card NC.BrowserDeleteCardFn "Delete one of the cards
                                             appearing in the browser.")
                                        (Delete% Link NC.BrowserDeleteLinkFn "Delete one of the GuidedTour
                                             links appearing in the browser.")
                                        (Add% Label NC.BrowserAddLabelFn "Annotate graph with a label.")
                                        (Add% Node NC.BrowserAddNodeFn "Add a card to the browser.")
                                        (Add% Edge NC.BrowserAddEdgeFn "Annotate graph with a line.")
                                        (Remove% Node NC.BrowserRemoveNodeFn "Remove a node from graph
                                             (doesn't delete the corresponding card).")
                                        (Remove% Edge NC.BrowserRemoveEdgeFn "Remove a line from the graph
                                             (doesn't delete the link).")
                                        (Move% Node NC.BrowserMoveNodeFn "Move a guided tour node."
                                             (SUBITEMS (|Move Single Node| NC.BrowserMoveNodeFn "Move a
                                                              guided tour node.")
                                                       (|Move Node & Subtree| NC.BrowserMoveSubtreeFn "Move a
                                                              subtree of nodes following the movement of the
                                                              root.")
                                                       (Move% Region NC.BrowserMoveNodesInRegionFn "Move all
                                                              nodes within a specified region to another
                                                              region.")))
                                        (Label% Smaller NC.BrowserShrinkLabelFn "Reduce font size for a guided
                                             tour label.")
                                        (Label% Larger NC.BrowserGrowLabelFn "Increase font size for a guided
                                             tour label.")
                                        ("<-> Shade" EDITTOGGLELABEL "Inverts label shade for a guided tour
                                             label."]
                    (NCGT.GraphEditUnfixedMenuItems (APPEND NCGT.GraphEditMenuItems '((FIX% MENU
                                                                                       NC.BrowserFixGraphEditMenuFn
                                                                                       "Attach this menu to
                                                                                       edge of browser
                                                                                       window."]
```

        ;; Stuff that supports the shapeable shrunken icon, which displays the guided tour scaled to fit inside the "icon".

```
        (FNS NCGT.MarkDirtyFn NCGT.GuidedTourIconFn NCGT.RedrawShrunkenIconWindow NCGT.ShrunkenWinRepaintFn
             NCGT.ShrunkenWinReshapeFn NCGT.ShrunkenWinExpandFn NCGT.AttachShrunkenIconMenus
             NCGT.ShrunkenIconOperationsMenuWhenSelectedFn NCGT.ShrinkGraphToWindow)
        (GLOBALVARS NCGT.ShrunkenIconDefaultWidth NCGT.ShrunkenIconDefaultHeight NCGT.HashArraySize
             NCGT.ScaledGraphNodeHashArray NCGT.ShrunkenOperationsMenuItems)
        [INITVARS (NCGT.ShrunkenIconDefaultWidth 147)
                  (NCGT.ShrunkenIconDefaultHeight 20)
                  (NCGT.ShrunkenIconMenu NIL)
                  (NCGT.HashArraySize 500)
                  (NCGT.ScaledGraphNodeHashArray (HASHARRAY NCGT.HashArraySize))
                  (NCGT.ShrunkenOperationsMenuItems '((START (FUNCTION NCGT.StartTourAtRoot)
                                                             "Start the tour at a root of the browser.")
                                                      (NEXT (FUNCTION NCGT.NextTourStop)
                                                            "Shut down current TableTop and move to the next.")
                                                      (PREV. (FUNCTION NCGT.PreviousTourStop)
                                                             "Shut down current TableTop and move to some previous
                                                             one.")
                                                      (JUMP (FUNCTION NCGT.JumpToTourStop)
                                                            "Shut down current TableTop and jump to some other
                                                            one.")
                                                      (RESET (FUNCTION NCGT.ResetTour)
                                                             "Shut down current TableTop and reset the browser."]
```

        ;; Add this card type

```
        (FNS NCGT.AddGuidedTourCard)
        (P (NCGT.AddGuidedTourCard)))))

(DECLARE%: DONTCOPY

(PUTPROPS NCGUIDEDTOURCARD MAKEFILE-ENVIRONMENT (:PACKAGE "INTERLISP" :READTABLE "INTERLISP"))

(PUTPROPS NCGUIDEDTOURCARD FILETYPE :TCOMPL)
)

(DECLARE%: COPY FIRST

(NC.LoadFileFromDirectories 'NCBROWSERCARD)

(NC.LoadFileFromDirectories 'NCTABLETOPCARD)
)
```

;;; This library package contains the card type definition and accompanying software for the guided tour module. This provides support for creation and
;;; use of browser-based guided tours, which are basically just branching paths formed by linking together TableTop cards with global GuidedTour links.

;;; Hooks for hackers:

;;; GuidedTourBringUpFn. If this prop is on a card type's atom, then cards of that type when encountered in guided tours are brought up by calling this
;;; function.

```
;;; GuidedTourCloseDownFn.  If this prop is on a card type's atom, then cards of that type when encountered in guided tours are closed down by calling
;;; this function.

(DEFINEQ
```

(**NCGT.MakeGuidedTourCard**
```
  [LAMBDA (Card Title NoDisplayFlg ParamList InterestedWindow RegionOrPosition)
                                                             ; Edited 27-Mar-89 15:25 by pmi
```

    ;; Create a new GuidedTour card - basically just wraps a call to NC.MakeBrowserCard.

    ;; pmi 2/26/88: Added InterestedWindow argument which is passed to NC.MakeBrowserCard. Also checks that NC.MakeBrowserCard doesn't
    ;; return NIL (as when the user cancels out of selecting TableTop cards).

    ;; 14-jun-88 jrc. Fixed bug setting ParamList (old version SETQ ParamList to result of LISTPUT, which doesn't return new list).

    ;; rht 7/13/88: Now handles NCGT.GuidedTourLinkTypes, a list of link types.

    ;; rht 8/1/88: Now hangs both NCGT.GuidedTourBeforeRepaintFn and NCGT.GuidedTourAfterRepaintFn as REPAINTFNs.

    ;; rht 8/5/88: Added RegionOrPosition arg and passed to NC.MakeBrowserCard.

    ;; jrc 29-sep-88: if there are multiple NCGT.GuidedTourLinkTypes, don't omit the links legend.

    ;; pmi 3/27/89: Changed window props to use new shrunken icon.

```
        (DECLARE (GLOBALVARS NCGT.GuidedTourLinkTypes NCGT.ShrunkenIconTemplate))
        (LET ((NoteFile (NCP.CardNoteFile Card))
             (GTLinkTypes (MKLIST NCGT.GuidedTourLinkTypes))
            CardOrWindow)                                      ; Should only follow forward GuidedTour links.
           (for LinkType in GTLinkTypes unless (NCP.ValidLinkTypeP LinkType NoteFile) do (NCP.CreateLinkType
                                                                                       LinkType NoteFile))
          [if ParamList
             then (LISTPUT ParamList 'LINKTYPES GTLinkTypes)
            else (SETQ ParamList `(LINKTYPES ,GTLinkTypes]  ; Forget links legend and link labels in browser specs.
          (NCP.CardUserDataProp Card 'OmitLinksLegendFlg (NOT (CDR GTLinkTypes)))
          (NCP.CardUserDataProp Card 'OmitLinkLabelsFromBrowserSpecsFlg T)
                                                             ; Build a browser card
          (if (SETQ CardOrWindow (NC.MakeBrowserCard Card Title NoDisplayFlg ParamList InterestedWindow
                                    RegionOrPosition))
             then (if (WINDOWP CardOrWindow)
                     then (NCGT.SetUpGraphEditMenus CardOrWindow)
                          (NCGT.AttachOperationsMenu CardOrWindow)
                          (WINDOWADDPROP CardOrWindow 'REPAINTFN (FUNCTION NCGT.GuidedTourBeforeRepaintFn)
                              T)
                          (WINDOWADDPROP CardOrWindow 'REPAINTFN (FUNCTION NCGT.GuidedTourAfterRepaintFn))
                          (WINDOWPROP CardOrWindow 'ShrunkenIconTemplate NCGT.ShrunkenIconTemplate)
                                                             ; (WINDOWADDPROP CardOrWindow 'SHRINKFN (FUNCTION
                                                             ; NCGT.GuidedTourShrinkFn))
                          (WINDOWDELPROP CardOrWindow 'SHRINKFN (FUNCTION NC.GraphCardShrinkFn))
                          (WINDOWPROP CardOrWindow 'ICONFN (FUNCTION NCGT.GuidedTourIconFn))
                          (WINDOWADDPROP CardOrWindow 'EXPANDFN (FUNCTION NCGT.GuidedTourExpandFn))
                          (WINDOWADDPROP CardOrWindow 'EXPANDFN (FUNCTION NCGT.ShrunkenWinExpandFn)))
                 (NCGT.SetGTState Card (create GTState))
                 CardOrWindow])
```

(**NCGT.EditGuidedTourCard**
```
  [LAMBDA (Card Substance Region/Position)                   ; Edited 27-Mar-89 15:26 by pmi
```

    ;; Bring up a guided tour card - basically just wraps a call to NC.BringUpBrowserCard.

    ;; rht 8/1/88: Now hangs both NCGT.GuidedTourBeforeRepaintFn and NCGT.GuidedTourAfterRepaintFn as REPAINTFNs.
                                      ; Forget links legend and link labels in browser specs.

    ;; jrc 29-sep-88. Don't omil links legend if there are multiple NCGT.GuidedTourLinkTypes.

    ;; pmi 3/27/89: Changed window props to use new shrunken icon.

```
        (DECLARE (GLOBALVARS NCGT.GuidedTourLinkTypes))
        [NCP.CardUserDataProp Card 'OmitLinksLegendFlg (OR (ATOM NCGT.GuidedTourLinkTypes)
                                                           (NOT (CDR NCGT.GuidedTourLinkTypes]
        (NCP.CardUserDataProp Card 'OmitLinkLabelsFromBrowserSpecsFlg T)
        (LET ((Window (NC.BringUpBrowserCard Card Substance Region/Position)))
           (if (WINDOWP Window)
              then (NCGT.SetUpGraphEditMenus Window)
                   (NCGT.AttachOperationsMenu Window)
                   (WINDOWADDPROP Window 'REPAINTFN (FUNCTION NCGT.GuidedTourBeforeRepaintFn)
                       T)
                   (WINDOWADDPROP Window 'REPAINTFN (FUNCTION NCGT.GuidedTourAfterRepaintFn))
                   (WINDOWPROP Window 'ShrunkenIconTemplate NCGT.ShrunkenIconTemplate)
                                                             ; (WINDOWADDPROP Window 'SHRINKFN (FUNCTION
                                                             ; NCGT.GuidedTourShrinkFn))
                   (WINDOWDELPROP Window 'SHRINKFN (FUNCTION NC.GraphCardShrinkFn))
                   (WINDOWPROP Window 'ICONFN (FUNCTION NCGT.GuidedTourIconFn))
                   (WINDOWADDPROP Window 'EXPANDFN (FUNCTION NCGT.GuidedTourExpandFn))
                   (WINDOWADDPROP Window 'EXPANDFN (FUNCTION NCGT.ShrunkenWinExpandFn)))
           (NCGT.SetGTState Card (create GTState))
           Window])
```

(**NCGT.GuidedTourCardQuitFn**
```
  [LAMBDA (Card)                                             ; Edited 21-Sep-88 15:05 by jrc
```

;; Need to reset tour if we were in the middle of one before closing.

;; pmi 2/5/88: Added check for card being deleted.

;; jrc 20-sep-88 added call to GuidedTourCachingFn

```
[if (NOT (NCP.CardBeingDeletedP Card))
    then (LET ((GTState (NCGT.FetchGTState Card)))
             (if (AND GTState (fetch (GTState CurrentNode) of GTState))
                 then (NCGT.ResetTour Card T]
  (IF (NCP.ValidCardP Card)
      THEN (LET [(cachingfn (NCP.CardUserDataProp Card 'GTCleanUpCachingFn]
               (if cachingfn
                   then (APPLY* cachingfn Card])
)
```

```
(DEFINEQ
```

(**NCGT.SetUpGraphEditMenus**
```
[LAMBDA (Window)                                                    ; Edited 14-Jan-88 21:13 by Trigg
```
;; Create the "fixed" and "unfixed" menus for guided tour cards and set them up on the window so that NC.GetGraphEditMenu will find them.

```
    (DECLARE (GLOBALVARS NCGT.GraphEditMenuItems NCGT.GraphEditUnfixedMenuItems NC.MenuFont))
    (LET [(Menu (create MENU
                    ITEMS _ NCGT.GraphEditMenuItems
                    TITLE _ "Editor Menu"
                    WHENSELECTEDFN _ (FUNCTION NC.GraphEditMenuWhenSelectedFn)
                    CHANGEOFFSETFLG _ T
                    CENTERFLG _ T
                    MENUOFFSET _ (CONS -1 0)
                    MENUFONT _ NC.MenuFont
                    ITEMHEIGHT _ (IPLUS (FONTPROP NC.MenuFont 'HEIGHT)
                                        1]
        (WINDOWPROP Window 'GRAPHEDITUNFIXABLEMENU Menu)
        (WINDOWPROP Window 'GRAPHEDITFIXABLEMENU (create MENU using Menu ITEMS _ NCGT.GraphEditUnfixedMenuItems])
```

(**NCGT.CreateTableTopFn**
```
[LAMBDA (Window)                                                    ; Edited 14-Jan-88 23:35 by Trigg
```
;; Called from graph edit menu to create TableTop card and node. Just sets up the proper ADDNODEFN in graph record and invokes grapher
;; editor.

```
    (replace (GRAPH GRAPH.ADDNODEFN) of (WINDOWPROP Window 'GRAPH) with (FUNCTION NCGT.CreateTableTop))
    (EDITADDNODE Window])
```

(**NCGT.CreateTableTop**
```
[LAMBDA (Graph Window)                                              ; Edited 24-Mar-89 15:58 by pmi
```
;; Called from grapher ADDNODE fn. Used to create a new Tabletop card and corresponding browser node. Note kludge of passing WIndow as
;; NoDisplayFlg argument to NCP.CreateCard. This allows interaction over creating tabletop to happen using the guided tour window as
;; InterestedWindow.

;; pmi 2/18/88: Added check for non-NIL card returned by NCP.CreateCard, in case user cancels out of creating a tabletop card

;; pmi 2/26/88: Added InterestedWindow argument to NCP.CreateCard, so kludge to pass it as NoDisplayFlg no longer needed.

```
    (LET ((GraphCard (NC.CoerceToCard Window))
          Link GraphNodeID Card)
        (NC.ProtectedCardOperation GraphCard "Create card from browser" Window
             (if (NCP.AskYesOrNo "Use a template? " NIL "" T Window)
                 then
               else (SETQ Card (NCP.CreateCard 'TableTop (NCP.CardNoteFile GraphCard)
                                    (OR (NC.AskUser "Title of new TableTop card: " NIL "" T Window)
                                        "Untitled")
                                    T NIL NIL NIL Window)))
             (if (SETQ Link (AND Card (NC.MakeLink Window NC.BrowserContentsLinkLabel Card GraphCard)))
                 then (ALLOW.BUTTON.EVENTS)                         ; Create hash array if haven't already.
                      (NC.GetBrowserHashArray GraphCard Graph)
                      (SETQ GraphNodeID (NC.GetBrowserNodeID GraphCard Card))
                      (NC.MarkCardDirty GraphCard)
                      (NODECREATE GraphNodeID (NC.MakeLinkIcon Link)
                           (CURSORPOSITION NIL Window))
               else NIL])
```

(**NCGT.CreateGuidedTourLinkFn**
```
[LAMBDA (Window)                                                    ; Edited  8-Sep-88 11:55 by jrc
```
;; Called from graph edit menu to create a GuidedTour global link and edge.

;; jrc 7-sep-88. Added call to GETPROP GTCreateGuidedTourLinkFn

```
    (LET [(Graph (WINDOWPROP Window 'GRAPH]
        (if (fetch (GRAPH GRAPHNODES) of Graph)
            then (EDITAPPLYTOLINK (OR (GETPROP (NCP.CardType (NCP.CardFromWindow Window))
                                          'GTCreateGuidedTourLinkFn)
                                      (FUNCTION NCGT.CreateGuidedTourLink))
                     'added
                     (WINDOWPROP Window 'GRAPH)
                     Window)
```

```
          else (FLASHW PROMPTWINDOW)
               (NC.PrintMsg NIL T "Can't create global links: graph has no nodes."])
```

(**NCGT.CreateGuidedTourLink**
```
  [LAMBDA (FromNode ToNode Win Graph)                              ; Edited 13-Jul-88 10:55 by Trigg
```
    ;; This function just allows us to get a GlobalLinkFlg and proper linktype into NC.BrowserAddLink.

    ;; rht 7/13/88: Now handles case when there are multiple possible guided tour link types.

```
    (DECLARE (GLOBALVARS NCGT.GuidedTourLinkTypes))
    (LET ((GTLinkTypes (MKLIST NCGT.GuidedTourLinkTypes))
          LinkType)
        (if (SETQ LinkType (if (CDR GTLinkTypes)
                               then (MENU (create MENU
                                                    ITEMS _ GTLinkTypes
                                                    TITLE _ "Link Type?"))
                            else (CAR GTLinkTypes)))
            then (NC.BrowserAddLink FromNode ToNode Win Graph T LinkType])
```

(**NCGT.CloseLinksLegendMenuWin**
```
  [LAMBDA (BrowserWindow)                                          ; Edited 16-Jan-88 15:33 by Trigg
```
    ;; Close any links legend menu window attached to this browser window.

```
    (for AttachedWin in (ATTACHEDWINDOWS BrowserWindow) when (WINDOWPROP AttachedWin 'LINKSLEGENDWINP)
       do (REMOVEWINDOW AttachedWin])
)
```

```
(DEFINEQ
```

(**NCGT.AttachOperationsMenu**
```
  [LAMBDA (Window)                                                ; Edited 18-Jan-88 18:07 by Trigg
```
    ;; Build a menu of guided tour operations and attach to top of Window.

```
    (DECLARE (GLOBALVARS NCGT.OperationsMenuItems))
    (if (for Win in (ATTACHEDWINDOWS Window) never (WINDOWPROP Win 'GUIDEDTOUROPSMENUFLG))
        then (WINDOWPROP (ATTACHMENU (create MENU
                                               ITEMS _ NCGT.OperationsMenuItems
                                               WHENSELECTEDFN _ (FUNCTION NCGT.OperationsMenuWhenSelectedFn)
                                               MENUROWS _ 1
                                               CENTERFLG _ T
                                               MENUBORDERSIZE _ 1)
                                      Window
                                      'TOP
                                      'JUSTIFY)
                          'GUIDEDTOUROPSMENUFLG T])
```

(**NCGT.OperationsMenuWhenSelectedFn**
```
  [LAMBDA (Item Menu MouseKey)                                    ; Edited 19-Jan-88 15:04 by Trigg
```
    ;; User selected some operation from the menu. Just apply the appropriate function.

```
    (APPLY* (EVAL (CADR Item))
            (NCP.CardFromWindow (MAINWINDOW (WFROMMENU Menu)))
)
```

```
(DEFINEQ
```

(**NCGT.StartTourAtRoot**
```
  [LAMBDA (GTCard)                                                ; Edited 27-Mar-89 15:33 by pmi
```
    ;; Probably in a brand new guided tour browser. Need to start tour off at one of its roots. If browser hasn't been recomputed, then any node
    ;; without "fromnodes" is considered a root.

    ;; rht 8/4/88: No longer puts label nodes on menu of choices of starting card.

    ;; jrc 6-sep-88: added GTCard as arg to NCGT.BringUpTTOrCard

    ;; jrc 22-sep-88 moved BringUpTT to last call in fn so Immediately going to next node doesn't screw up gtstate.

    ;; pmi 3/27/89: Now inverts start node in shrunken icon as well.

```
    (DECLARE (GLOBALVARS NCGT.ScaledGraphNodeHashArray))
    (PROG ((Window (NCP.CardWindow GTCard))
           (ShrunkenWindow (NC.GetShrunkenWin GTCard))
           (InterestedWindow (NCP.CoerceToInterestedWindow GTCard))
           (GTState (NCGT.FetchGTState GTCard))
           (Graph (NCP.CardSubstance GTCard))
           CurrentNode RootPairs RootPair GraphNodes)
        (SETQ CurrentNode (fetch (GTState CurrentNode) of GTState))
        (SETQ GraphNodes (fetch (GRAPH GRAPHNODES) of Graph))
        (if CurrentNode
            then (NC.PrintMsg InterestedWindow T "You are in the middle of a tour." (CHARACTER 13))
                 (if (NC.AskYesOrNo "Want to reset tour first?" NIL 'Yes NIL InterestedWindow)
                     then (NCGT.ResetTour GTCard)
                   else (RETURN NIL)))
        [SETQ RootPairs (OR (for RootCard in (NC.FetchBrowserRoots GTCard) bind StartNodeID
                                 when (SETQ StartNodeID (NC.GetBrowserNodeID GTCard RootCard))
```

```
                                        collect (LIST (FASSOC StartNodeID GraphNodes)
                                                      RootCard))
                                  (for Node in GraphNodes bind Card when (AND (NULL (fetch (GRAPHNODE FROMNODES)
                                                                                       of Node))
                                                                              (SETQ Card (NC.CardFromBrowserNode Node)
                                                                                    ))
                                        collect (LIST Node Card]
             [SETQ RootPair (SELECTQ (LENGTH RootPairs)
                                (0 (NC.PrintMsg InterestedWindow T (if GraphNodes
                                                                       then "No cards in this browser."
                                                                       else (CONCAT "No roots in this browser."
                                                                                    (CHARACTER 13)
                                                                                    "You should do JUMP to get
                                                                                    started.")))
                                   NIL)
                                (1 (CAR RootPairs))
                                (* ;; "Multiple roots.  User needs to help by choosing among them.")
                                (MENU (create MENU
                                              ITEMS _ [for Pair in RootPairs
                                                        collect `(,(NCP.CardTitle (CADR Pair))
                                                                  ',Pair]
                                              TITLE _ "Where to start?"]
             (if RootPair
                 then (replace (GTState CurrentNode) of GTState with (CAR RootPair))
                      (replace (GTState NodesVisited) of GTState with NIL)
                      (replace (GTState EdgesVisited) of GTState with NIL)
                      (NCGT.FlipNodeIfWinOpen (CAR RootPair)
                              Window)
                      (NCGT.FlipNodeIfWinOpen (GETHASH (CAR RootPair)
                                                       NCGT.ScaledGraphNodeHashArray)
                              ShrunkenWindow)
                      (NCGT.BringUpTTOrCard (CADR RootPair)
                              GTCard])
```

(**NCGT.NextTourStop**
```
  [LAMBDA (GTCard Don'tCloseCurrentFlg)                                   ; Edited  6-Apr-89 14:05 by pmi
```

;; Move along path in guided tour from current card to next card. Add the link followed to Path and stick current card on to CardsVisited stack.

;; pmi 2/11/88: Changed REDISPLAYW to NCGT.RecomputeAndRedisplayWindow, which is smarter about recalculating the contents of the
;; window.

;; rht 8/1/88: No longer calls NCGT.HighlightEdge - taken care of when window is redisplayed.

;; jrc 6-sep-88: added GTCard as arg to NCGT.NextTTOrCard.

;; Also, changed the call from (SETQ GTNextTourStopFn (GETPROP (NCP.CardType GTCard) 'GTNextTourStopFn)) to get the
;; GTNextTourStopFn from the current node (card) first, then from the GTCard

;; jrc 16-sep-88 replaced call to NCGT.RecomputeAndRedisplayWindow with call to NCGT.RedisplayAffectedNodes

;; jrc 22-sep-88 put call to NextTTOrCard last so that Immediatelygotonextnode works w/o screwing up gtstate.

;; pmi 3/27/89: Now inverts current and next nodes in shrunken icon as well.

```
  (DECLARE (GLOBALVARS NCGT.ScaledGraphNodeHashArray))
  (LET ((Window (NCP.CardWindow GTCard))
        (ShrunkenWindow (NC.GetShrunkenWin GTCard))
        (InterestedWindow (NCP.CoerceToInterestedWindow GTCard))
        (GTState (NCGT.FetchGTState GTCard))
        (Graph (NCP.CardSubstance GTCard))
        CurrentNode ShrunkenCurrentNode NodesVisited EdgesVisited Edge NextCards NextCard ToNodes NextNode
        ShrunkenNextNode NextNodeID GTNextTourStopFn CurrentCard NodeAlreadyVisitedFlg EdgeAlreadyVisitedFlg)
    (SETQ CurrentNode (fetch (GTState CurrentNode) of GTState))
    (SETQ CurrentCard (NC.CardFromBrowserNode CurrentNode))
    (SETQ ShrunkenCurrentNode (GETHASH CurrentNode NCGT.ScaledGraphNodeHashArray))
    (if CurrentNode
        then (SETQ NodesVisited (fetch (GTState NodesVisited) of GTState))
             (SETQ EdgesVisited (fetch (GTState EdgesVisited) of GTState))
             (SETQ ToNodes (fetch (GRAPHNODE TONODES) of CurrentNode))
             (SETQ NextCards (for ToNode in ToNodes collect (NC.CardFromBrowserNode ToNode)))
```

;; Run user's GTNextTourStopFn, if any, to filter the candidate next tour stops before putting up a menu.

```
             (if [SETQ GTNextTourStopFn (OR (GETPROP (NCP.CardType CurrentCard)
                                                     'GTNextTourStopFn)
                                            (GETPROP (NCP.CardType GTCard)
                                                     'GTNextTourStopFn]
                 then (SETQ NextCards (APPLY* GTNextTourStopFn GTCard NextCards CurrentCard)))
             [SETQ NextCard (COND
                               ((NC.CardP NextCards)
                                NextCards)
                               ((EQ (LENGTH NextCards)
                                    1)
                                (CAR NextCards))
                               ((ZEROP (LENGTH ToNodes))
                                (NC.PrintMsg InterestedWindow T "You're at the end of the path!")
                                NIL)
                               ((ATOM NextCards)
                                NIL)
                               (T                                        ; Still there are choices.  Ask user.
                                  (MENU (create MENU
```

```
                                                        ITEMS _ [for Card in NextCards
                                                                     collect `(,(NCP.CardTitle Card)
                                                                               ',Card]
                                                        TITLE _ "Which Path?"]
                        (if [AND (NC.CardP NextCard)
                                 (SETQ Edge (for ToNode in ToNodes thereis (NC.SameCardP (NC.CardFromBrowserNode ToNode)
                                                                                          NextCard)))
                                 (SETQ NextNodeID (NC.CoerceToGraphNodeID Edge))
                                 (SETQ NextNode (FASSOC NextNodeID (fetch (GRAPH GRAPHNODES) of Graph]
                            then (replace (GTState CurrentNode) of GTState with NextNode)
                                 (replace (GTState NodesVisited) of GTState with (CONS CurrentNode NodesVisited))
                                 (replace (GTState EdgesVisited) of GTState with (CONS Edge EdgesVisited))
                                 (NCGT.FlipNodeIfWinOpen CurrentNode Window)
                                 (NCGT.HighlightNode CurrentNode Window)
                                                                    ; No longer true with call to NCGT.RedisplayAffectedNodes:
                                                                    ; Note that REDISPLAYW (called from
                                                                    ; NCGT.RecomputeAndRedisplayWindow) will force highlighting
                                                                    ; of new current node through our REPAINTFN.
                            (if (OPENWP Window)
                                then (NCGT.RedisplayAffectedNodes Window Graph CurrentNode NextNode GTState)
                              else (NCGT.MarkWindowDirty Window))
                            (SETQ ShrunkenNextNode (GETHASH NextNode NCGT.ScaledGraphNodeHashArray))
                            (NCGT.FlipNodeIfWinOpen ShrunkenCurrentNode ShrunkenWindow)
                            (NCGT.FlipNodeIfWinOpen ShrunkenNextNode ShrunkenWindow)
                            (NCGT.NextTTOrCard (NC.CardFromBrowserNode CurrentNode)
                                    NextCard Don'tCloseCurrentFlg GTCard))
                else (NC.PrintMsg InterestedWindow T "No current node.  Try START tour first."])
```

(NCGT.PreviousTourStop
```
  [LAMBDA (GTCard Don'tCloseCurrentFlg)                              ; Edited 23-Jan-88 19:45 by Trigg

    ;; Jump to some previously visited stop in guided tour.  Make no change to Path.

    (LET ((Window (NCP.CardWindow GTCard))
          (InterestedWindow (NCP.CoerceToInterestedWindow GTCard))
          (GTState (NCGT.FetchGTState GTCard))
          NodesVisited NextNode)
         (if (SETQ NodesVisited (fetch (GTState NodesVisited) of GTState))
             then (if (SETQ NextNode (MENU (create MENU
                                                   ITEMS _ [for Node in NodesVisited bind Card
                                                                when (SETQ Card (NC.CardFromBrowserNode Node))
                                                                collect `(,(NCP.CardTitle Card)
                                                                          ',Node]
                                                   TITLE _ "Which previous?")))
                      then (NCGT.JumpToTourStop GTCard Don'tCloseCurrentFlg NextNode))
           else (NC.PrintMsg InterestedWindow T "No previous nodes to visit."])
```

(NCGT.JumpToTourStop
```
  [LAMBDA (GTCard Don'tCloseCurrentFlg NextNode)                     ; Edited 27-Mar-89 15:43 by pmi

    ;; Jump to new point in guided tour.  Make no change to Path but stick current card on CardsVisited stack. If NextNode is nil, ask user to select
    ;; from graph.

    ;; pmi 2/5/88: Instead of just redisplaying the window if it is open, we need to recompute the image boxes for the graph nodes that end up having
    ;; their border changed.

    ;; jrc 19-jun-88 IF NC.SelectGraphNode returns NIL, don't call NCGT.FlipNodeIfWinOpen

    ;; jrc 6-sep-88: passed GTCard as arg to NCGT.NextTTOrCard

    ;; jrc 16-sep-88: replaced call to NCGT.RecomputeAndRedisplayWindow with call to NCGT.RedisplayAffectedNodes

    ;; jrc 22-sep-88. Put call to NextTTOrCard last so that GTSTATE isn't crapified if ImmediatelyGoToNextNode is called.

    ;; pmi 3/27/89: Now inverts current and next nodes in shrunken icon as well.

    (DECLARE (GLOBALVARS NCGT.ScaledGraphNodeHashArray))
    (LET ((Window (NCP.CardWindow GTCard))
          (ShrunkenWindow (NC.GetShrunkenWin GTCard))
          (GTState (NCGT.FetchGTState GTCard))
          (Graph (NCP.CardSubstance GTCard))
          CurrentNode ShrunkenCurrentNode ShrunkenNextNode NodesVisited CurrentCard NextCard)
         (SETQ CurrentNode (fetch (GTState CurrentNode) of GTState))
         (SETQ ShrunkenCurrentNode (GETHASH CurrentNode NCGT.ScaledGraphNodeHashArray))
         (SETQ NodesVisited (fetch (GTState NodesVisited) of GTState))
         (if [AND [OR NextNode (PROG2 (if ShrunkenWindow
                                          then (EXPANDW Window))
                                      (SETQ NextNode (NC.SelectGraphNode Window Graph "Select node to jump to."))
                                      (if NextNode
                                          then (SETQ ShrunkenNextNode (GETHASH NextNode
                                                                               NCGT.ScaledGraphNodeHashArray))
                                               (NCGT.FlipNodeIfWinOpen NextNode Window]
                  (NCP.ValidCardP (SETQ NextCard (NC.CardFromBrowserNode NextNode]
             then (replace (GTState CurrentNode) of GTState with NextNode)
                  (if CurrentNode
                      then (replace (GTState NodesVisited) of GTState with (CONS CurrentNode (REMOVE CurrentNode
                                                                                                    NodesVisited)))
                           (NCGT.FlipNodeIfWinOpen CurrentNode Window)
                           (NCGT.HighlightNode CurrentNode Window))
                  (if ShrunkenWindow
```

```
                 then (SHRINKW Window))                             ; No longer true with call to NCGT.RedisplayAffectedNodes:
                                                                    ; Redisplay of window will cause NextNode to get flipped.
           (if (OPENWP Window)
              then (NCGT.RedisplayAffectedNodes Window Graph CurrentNode NextNode NIL)
            else (NCGT.MarkWindowDirty Window))
           (NCGT.NextTTOrCard (NC.CardFromBrowserNode CurrentNode)
                   NextCard Don'tCloseCurrentFlg GTCard])
```

(NCGT.ResetTour
```
  [LAMBDA (GTCard Don'tCloseCurrentFlg)                            ; Edited 27-Mar-89 15:33 by pmi
```
  ;; Reset guided tour by closing any current TT, unhighlighting any paths and nodes and clearing GTState.

  ;; pmi 2/11/88: Changed REDISPLAYW to NCGT.RecomputeAndRedisplayWindow, which is smarter about recalculating the contents of the
  ;; window.

  ;; jrc 12-sep-88: added call to GTResetGuidedTourFn

  ;; jrc 19-sep-88: added GTCard as param to NCGT.CloseDownTTOrCard call.

  ;; pmi 3/27/89: Now inverts current node in shrunken icon as well.

```
   (DECLARE (GLOBALVARS NCGT.ScaledGraphNodeHashArray))
   (LET ((Window (NCP.CardWindow GTCard))
         (ShrunkenWindow (NC.GetShrunkenWin GTCard))
         (GTState (NCGT.FetchGTState GTCard))
         (Graph (NCP.CardSubstance GTCard))
        CurrentNode EdgesVisited NodesVisited ResetFn)
        (SETQ CurrentNode (fetch (GTState CurrentNode) of GTState))
        (SETQ EdgesVisited (fetch (GTState EdgesVisited) of GTState))
        (SETQ NodesVisited (fetch (GTState NodesVisited) of GTState))
        (if (SETQ ResetFn (GETPROP (NCP.CardType GTCard)
                                   'GTResetGuidedTourFn))
           then (APPLY* ResetFn GTCard))
        (replace (GTState CurrentNode) of GTState with NIL)
        (replace (GTState NodesVisited) of GTState with NIL)
        (replace (GTState EdgesVisited) of GTState with NIL)
        (if CurrentNode
           then (NCGT.FlipNodeIfWinOpen CurrentNode Window)
                (NCGT.FlipNodeIfWinOpen (GETHASH CurrentNode NCGT.ScaledGraphNodeHashArray)
                        ShrunkenWindow)
                (CL:UNLESS Don'tCloseCurrentFlg
                   (NCGT.CloseDownTTOrCard (NC.CardFromBrowserNode CurrentNode)
                           GTCard)))
        (for Edge in EdgesVisited do (NCGT.UnHighlightEdge Edge))
        (for Node in NodesVisited do (NCGT.UnHighlightNode Node Window))
                                                          ; Have to redisplay if any edges got unhighlighted.
        (AND EdgesVisited (if (OPENWP Window)
                                then (NCGT.RecomputeAndRedisplayWindow Window)
                              else (NCGT.MarkWindowDirty Window)])
```

(NCGT.SetGTState
```
  [LAMBDA (GuidedTourCard NewGTState)                              ; Edited 17-Jan-88 15:44 by Trigg
```
  ;; Hang NewGTState off of the card's user data props.

```
   (NCP.CardUserDataProp GuidedTourCard 'GTState NewGTState])
```

(NCGT.FetchGTState
```
  [LAMBDA (GuidedTourCard)                                         ; Edited 17-Jan-88 15:44 by Trigg
```
  ;; Grab GTState off of the card's user data props.

```
   (NCP.CardUserDataProp GuidedTourCard 'GTState])
```

(NCGT.NextTTOrCard
```
  [LAMBDA (CurrentTTOrCard NextTTOrCard Don'tCloseCurrentFlg GTCard)
                                                                  ; Edited 22-Sep-88 10:25 by jrc
```
  ;; Unless Don'tCloseCurrentFlg is non-nil, bring down CurrentTTOrCard and then bring up NextTTOrCard. The trick is to not bother closing those
  ;; cards in CurrentTTOrCard that would just get brought up again by NextTTOrCard. CurrentTTOrCard can be nil in which case we just bring up
  ;; NextTTOrCard.

  ;; pmi 2/3/88: Added checks for valid card before closing cards from previous tabletop.

  ;; jrc 6/27/88: Now works for card types inheriting from TableTop.

  ;; jrc 6-sep-88 added GTCard as parameter and passed it along to NCGT.BringUpTTOrCard

  ;; jrc 20-sep-88. Calls CloseOrUndisplayCards instead of just NCP.CloseCards. No longer attempts to Uncache an undisplayed NextTTOrCard

```
   (LET (CardsToOpen CardsToClose)
        (if (AND (NOT Don'tCloseCurrentFlg)
                 (NCP.ValidCardP CurrentTTOrCard))
           then (SETQ CardsToOpen (if (NCTableTop.TableTopBasedP NextTTOrCard)
                                     then (if (NOT (NCP.CardCachedP NextTTOrCard))
                                             then              ; Cache next TT so we can get at its contents.
                                                (NCP.CacheCards NextTTOrCard))
                                          (for TableTopEntry in (NCP.CardSubstance NextTTOrCard)
                                             collect (fetch (TableTopEntry Card) of TableTopEntry))
                                   else (LIST NextTTOrCard)))
```

```
                        [SETQ CardsToClose (if (NCTableTop.TableTopBasedP CurrentTTOrCard)
                                               then (if (NOT (NCP.CardCachedP CurrentTTOrCard))
                                                       then (NCP.CacheCards CurrentTTOrCard))
                                                    (SETQ CardsToClose (for TableTopEntry CardToClose
                                                                          in (NCP.CardSubstance CurrentTTOrCard)
                                                                        when (NC.ValidCardP (SETQ CardToClose
                                                                                               (fetch (TableTopEntry
                                                                                                        Card)
                                                                                                  of TableTopEntry)))
                                                                     collect CardToClose))
                                                    (if (NOT (FMEMB CurrentTTOrCard CardsToClose))
                                                       then (SETQ CardsToClose (CONS CurrentTTOrCard CardsToClose)))
                                                    (for Cardc in CardsToClose
                                                       when (for Cardo in CardsToOpen never (NC.SameCardP Cardo Cardc))
                                                     collect Cardc)
                                               else (if (for Card in CardsToOpen never (NC.SameCardP CurrentTTOrCard Card))
                                                       then (LIST CurrentTTOrCard]
                        (NCGT.CloseOrUndisplayCards CardsToClose GTCard))
            ;; Bring up the next tabletop.
            (NCGT.BringUpTTOrCard NextTTOrCard GTCard])
```

(**NCGT.CloseDownTTOrCard**

```
  [LAMBDA (Card GTCard)                                          ; Edited 21-Sep-88 14:31 by jrc
```

    ;; If Card is a TableTop, then close its cards down, otherwise just close the card.

    ;; 13-jun-88 or if it inherits from a tabletop

    ;; 20-sep-88 jrc. Call NCGT.CloseOrUndisplayCards instead of NCTableTop.CloseDownTableTop or NCP.CloseCards.

```
    (LET ((CardType (NCP.CardType Card))
          CardsClosed)
         (SETQ CardsClosed (COND
                             ((NCP.IsSubTypeOfP CardType 'TableTop)
                              (SETQ CardsClosed (NCTableTop.CardsInTableTop Card))
                              (NCGT.CloseOrUndisplayCards (IF (FMEMB Card CardsClosed)
                                                             THEN CardsClosed
                                                             ELSE (CONS Card CardsClosed))
                                       GTCard))
                             (T (NCGT.CloseOrUndisplayCards Card GTCard]
```

(**NCGT.BringUpTTOrCard**

```
  [LAMBDA (Card GTCard)                                          ; Edited 30-Sep-88 12:13 by jrc
```

    ;; If Card is a TableTop, then close its cards down, otherwise just close the card.

    ;; jrc 13-jun-88. Now performs GuidedTourBringUpFn if any.

    ;; jrc 20-sep-88. performs ImmediatelyGoToNextFn and BringUpCachingFn, looks at UndisplayFlg to decide whether or not to uncache Card, no
    ;; longer uncaches undisplayed Card

```
    (LET ((CardType (NCP.CardType Card))
          (cachingfn (NCP.CardUserDataProp GTCard 'GTBringUpCachingFn))
          GuidedTourBringUpFn GoToNextFn CardsBroughtUp)
         [SETQ CardsBroughtUp (COND
                                ((SETQ GuidedTourBringUpFn (GETPROP CardType 'GuidedTourBringUpFn))
```

                                 ;; assumes GuidedTourBringUpFn returns all cards brought up or cached.

```
                                 (APPLY* GuidedTourBringUpFn Card GTCard))
                                ((NCTableTop.TableTopBasedP CardType)
                                 (SETQ CardsBroughtUp (NCTableTop.BringUpTableTop Card T))
                                 (IF (NOT (FMEMB Card CardsBroughtUp))
                                    THEN (CONS Card CardsBroughtUp)
                                    ELSE CardsBroughtUp))
                                (T                              ; Case of single card.  Cache before displaying so as to get the
                                                                ; region.
                                 (if (NOT (NCP.CardCachedP Card))
                                    then (NCP.CacheCards Card))
                                 (NCP.OpenCard Card (NC.FetchRegion Card))
                                 (LIST Card]
         (if cachingfn
            then (APPLY* cachingfn GTCard CardsBroughtUp))
         (if (AND (SETQ GoToNextFn (GETPROP CardType 'ImmediatelyGoToNextGTStopFn))
                  (APPLY* GoToNextFn Card GTCard))
            then (NCGT.NextTourStop GTCard NIL]))
```

(**NCGT.HighlightEdge**

```
  [LAMBDA (GraphToNode)                                          ; Edited 17-Jan-88 19:01 by Trigg
```

    ;; Change the LINEWIDTH field of this linkparameters thingie.

```
    (if (EQ LINKPARAMS (CAR GraphToNode))
       then (LISTPUT (CDDR GraphToNode)
                     'LINEWIDTH NCGT.HighlightLineWidth])
```

(**NCGT.UnHighlightEdge**

```
  [LAMBDA (GraphToNode)                                          ; Edited 17-Jan-88 19:02 by Trigg
```

```
        (if (EQ LINKPARAMS (CAR GraphToNode))
            then (if (LISTGET (CDDR GraphToNode)
                           'LINEWIDTH)
                     then (LISTPUT (CDDR GraphToNode)
                                 'LINEWIDTH NIL])
```

(**NCGT.HighlightNode**
```
    [LAMBDA (GraphNode Window)                                            ; Edited  5-Feb-88 18:29 by pmi
```
  ;; Increase the border width of the link icon imageobj for this graphnode.

  ;; pmi 2/5/88: Added call to NCGT.MarkGraphNodeDirty.
```
       (DECLARE (GLOBALVARS NCGT.VisitedNodesBorderWidthIncrement))
       (LET ((NodeLabel (fetch (GRAPHNODE NODELABEL) of GraphNode)))
            (if (NC.LinkIconImageObjP NodeLabel)
                then (IMAGEOBJPROP NodeLabel 'BorderWidthIncrement NCGT.VisitedNodesBorderWidthIncrement)
```
           ;; This node needs to be recalculated, so mark it (and its window) as dirty.
```
                     (NCGT.MarkGraphNodeDirty GraphNode Window])
```

(**NCGT.UnHighlightNode**
```
    [LAMBDA (GraphNode Window)                                            ; Edited  5-Feb-88 18:29 by pmi
```
  ;; Reset the border width increment of the link icon imageobj to zippo.

  ;; pmi 2/5/88: Added call to NCGT.MarkGraphNodeDirty.
```
       (LET ((NodeLabel (fetch (GRAPHNODE NODELABEL) of GraphNode)))
            (if (NC.LinkIconImageObjP NodeLabel)
                then (IMAGEOBJPROP NodeLabel 'BorderWidthIncrement NIL)
```
           ;; This node needs to be recalculated, so mark it (and its window) as dirty.
```
                     (NCGT.MarkGraphNodeDirty GraphNode Window])
```

(**NCGT.FlipNodeIfWinOpen**
```
    [LAMBDA (GraphNode Window)                                            ; Edited 23-Jan-88 20:14 by Trigg
```
  ;; Do a FLIPNODE if the window is open. We might be running the tour from a shrunken icon.
```
       (if (OPENWP Window)
           then (FLIPNODE GraphNode Window)
         else (NCGT.MarkWindowDirty Window])
```

(**NCGT.MarkWindowDirty**
```
    [LAMBDA (Window)                                                      ; Edited 23-Jan-88 20:04 by Trigg
```
  ;; Mark the window as being in need of repainting.
```
       (WINDOWPROP Window 'GuidedTourNeedsRepainting T])
```

(**NCGT.MarkGraphNodeDirty**
```
    [LAMBDA (GraphNode Window)                                            ; Edited 11-Feb-88 11:02 by pmi
```
  ;; Mark this window as needing repainting, as well as keeping a list of the nodes that need recomputing.
```
       (NCGT.MarkWindowDirty Window)
       (WINDOWADDPROP Window 'GraphNodesToBeRecomputed GraphNode])
```

(**NCGT.RecomputeAndRedisplayWindow**
```
    [LAMBDA (Window)                                                      ; Edited  5-Feb-88 18:40 by pmi
```
  ;; Recompute the link icons for all dirty graph nodes on this window
```
       (for GraphNode in (WINDOWPROP Window 'GraphNodesToBeRecomputed) do (NC.GraphNodeLinkIconUpdate Window
                                                                                        GraphNode))
       (REDISPLAYW Window)
```
  ;; Reset the nodes needing recomputing.
```
       (WINDOWPROP Window 'GraphNodesToBeRecomputed NIL])
```

(**NCGT.RedisplayAffectedNodes**
```
    [LAMBDA (Window Graph FromNode ToNode GTState)                        ; Edited 21-Sep-88 16:29 by jrc
```
  ;; Recompute the link icons for all dirty graph nodes on this window

  ;; This function supercedes the function NCGT.RecomputeAndRedisplayWindow wich forced the whole graph to redisplay --
  ;; NCGT.RedisplayAffectedNodes only redisplays selected nodes. The call to NCGT.RecomputeAndRedisplayWindow was changed in
  ;; NCGT.JumpToTourStop and NCGT.NextTourStop
```
       (LET ((trans (create POSITION
                         XCOORD _ 0
                         YCOORD _ 0))
            (clip (DSPCLIPPINGREGION NIL Window))
             NodeLabel NodePos NodeXLoc NodeYLoc NodeWidth NodeHeight)
            (if GTState
                then (NCGT.RedisplayAffectedLinks Window Graph FromNode ToNode GTState)
              else (NC.GraphNodeLinkIconUpdate Window FromNode))
            (if FromNode
```

```
            then (SETQ NodeWidth (fetch (GRAPHNODE NODEWIDTH) of FromNode))
                 (SETQ NodeHeight (fetch (GRAPHNODE NODEHEIGHT) of FromNode))
                 [SETQ NodeXLoc (fetch (POSITION XCOORD) of (SETQ NodePos (fetch (GRAPHNODE NODEPOSITION)
                                                                                 of FromNode]
                 (SETQ NodeYLoc (fetch (POSITION YCOORD) of NodePos))
                 (SETQ NodeLabel (fetch (GRAPHNODE NODELABEL) of FromNode))
                 (BLTSHADE WHITESHADE Window (IDIFFERENCE NodeXLoc (RSH NodeWidth 1))
                        (IDIFFERENCE NodeYLoc (RSH NodeHeight 1))
                        NodeWidth NodeHeight 'REPLACE)
                 (PRINTDISPLAYNODE FromNode trans Window clip))
          (NCGT.FlipNodeIfWinOpen ToNode Window))
    ;; Reset the nodes needing recomputing.

    (WINDOWPROP Window 'GraphNodesToBeRecomputed NIL])
```

(**NCGT.RedisplayAffectedLinks**
```
  [LAMBDA (Window Graph FromNode ToNode GTState trans clip)        ; Edited 29-Sep-88 11:59 by jrc
    (LET (EdgesVisited NodesVisited OldOp KludgeOldOp)             (* erase old link and draw new link)
         (SETQ EdgesVisited (fetch (GTState EdgesVisited) of GTState))
         (if (NOT (FMEMB (CAR EdgesVisited)
                         (CDR EdgesVisited)))
             then                                                  (* edge must be redrawn)

             (* change dspoperation kludge because there's a bug in DRAWLINE s.t.
             lines drawn w/ width > 1 and dashing in windows with DSPOPERATION = INVERT don't work)

                 (CL:UNWIND-PROTECT
                     [PROGN (SETQ KludgeOldOp (DSPOPERATION 'REPLACE Window))
                            (if (NOT trans)
                                then (SETQ trans (create POSITION
                                                         XCOORD _ 0
                                                         YCOORD _ 0)))
                            (if (NOT clip)
                                then (SETQ clip (DSPCLIPPINGREGION NIL Window)))
                            (SETQ NodesVisited (fetch (GTState NodesVisited) of GTState))
                            (if (FMEMB (CAR NodesVisited)
                                       (CDR NodesVisited))
                                then                               (* node already has border -- redraw single link)
                                    (CL:UNWIND-PROTECT
                                        (PROGN (SETQ OldOp (DSPOPERATION 'ERASE Window))
                                               (DISPLAYLINK FromNode ToNode trans Window Graph NIL
                                                   (LINKPARAMETERS FromNode ToNode)))
                                        (DSPOPERATION OldOp Window))
                                    (NC.GraphNodeLinkIconUpdate Window FromNode)
                                    (CL:UNWIND-PROTECT
                                        (PROGN (NCGT.HighlightEdge (CAR EdgesVisited))
                                               (DISPLAYLINK FromNode ToNode trans Window Graph NIL
                                                   (LINKPARAMETERS FromNode ToNode)))
                                        (NCGT.UnHighlightEdge (CAR EdgesVisited)))
                                else                               (* node will get new border -- redraw all links from ToNode)
                                    (CL:UNWIND-PROTECT
                                        (PROGN (NCGT.GuidedTourBeforeRepaintFn Window)
                                               (NCGT.UnHighlightEdge (CAR EdgesVisited))
                                               (CL:UNWIND-PROTECT
                                                   (PROGN (SETQ OldOp (DSPOPERATION 'ERASE Window))
                                                          (DISPLAYNODELINKS FromNode trans Window Graph))
                                                   (DSPOPERATION OldOp Window))
                                               (NCGT.HighlightEdge (CAR EdgesVisited))
                                               (NC.GraphNodeLinkIconUpdate Window FromNode)
                                               (DISPLAYNODELINKS FromNode trans Window Graph))
                                        (NCGT.GuidedTourAfterRepaintFn Window)
                                                                   (* unflips node flipped by NCGT.GuidedTourAfterRepaintFn)
                                        (NCGT.FlipNodeIfWinOpen ToNode Window))]
                     (DSPOPERATION KludgeOldOp Window))])
```

(**NCGT.CloseOrUndisplayCards**
```
  [LAMBDA (Cards GTCard)                                           ; Edited 22-Sep-88 13:40 by jrc
    ;; Undisplays rather than closes Cards if UserDataProp set.  This is mostly for use in conjunction with some kind of caching scheme.

    (LET [[(cachingfn (NCP.CardUserDataProp GTCard 'GTCloseDownCachingFn]
         (SETQ Cards (MKLIST Cards))
         (if cachingfn
             then (NCP.UndisplayCards Cards)
                  (APPLY* cachingfn GTCard Cards)
           else (NCP.CloseCards Cards))
         Cards])
```

)

(DEFINEQ

(**NCGT.GuidedTourBeforeRepaintFn**
```
  [LAMBDA (Window)                                                 ; Edited  1-Aug-88 15:55 by Trigg
    ;; Highlight the edges visited in the graph for upcoming call to REDISPLAYGRAPH.  They'll be unhighlighted afterwards by
    ;; NCGT.GuidedTourAfterRepaintFn.
```

```
(LET ((Card (NCP.CardFromWindow Window))
      GTState)
     (if (AND (NCP.ValidCardP Card)
              (SETQ GTState (NCGT.FetchGTState Card)))
         then (for Edge in (fetch (GTState EdgesVisited) of GTState) do (NCGT.HighlightEdge Edge])
```

(**NCGT.GuidedTourAfterRepaintFn**
```
  [LAMBDA (Window)                                            ; Edited  1-Aug-88 15:51 by Trigg
```
;; Be sure the CurrentNode goes inverse-video. Also unhighlight edges visited.
```
    (WINDOWPROP Window 'GuidedTourNeedsRepainting NIL)
    (LET ((Card (NCP.CardFromWindow Window))
          GTState CurrentNode)
         (if (AND (NCP.ValidCardP Card)
                  (SETQ GTState (NCGT.FetchGTState Card)))
             then (if (SETQ CurrentNode (fetch (GTState CurrentNode) of GTState))
                      then (NCGT.FlipNodeIfWinOpen CurrentNode Window))
                  (for Edge in (fetch (GTState EdgesVisited) of GTState) do (NCGT.UnHighlightEdge Edge])
```

(**NCGT.GuidedTourExpandFn**
```
  [LAMBDA (Window)                                            ; Edited  5-Feb-88 18:46 by pmi
```
;; If Window got dirtied while shrunk, then redisplay it.

;; pmi 2/5/88: Changed REDISPLAYW TO NCGT.RecomputeAndRedisplayWindow.
```
    (if (WINDOWPROP Window 'GuidedTourNeedsRepainting)
        then (NCGT.RecomputeAndRedisplayWindow Window])
```

(**NCGT.ShrunkenWinButtonEventFn**
```
  [LAMBDA (ShrunkenWin)                                       ; Edited 23-Jan-88 19:34 by Trigg
```
;; Our BUTTONEVENTFN for shrunken guided tour windows. Allows running the guided tour to happen from the middle button from the icon.
```
    (DECLARE (GLOBALVARS NCGT.OperationsMenuItems NCGT.ShrunkenIconControlFlg))
    (if (AND NCGT.ShrunkenIconControlFlg (LASTMOUSESTATE MIDDLE))
        then [LET [(Selection (MENU (create MENU
                                           ITEMS _ '(,@NCGT.OperationsMenuItems (----- NIL NIL)
                                                      (ExpandW (FUNCTION EXPANDW)
                                                               "Expand the window for which this is the
                                                                icon."]
                   (SELECTQ Selection
                       (EXPANDW (EXPANDW ShrunkenWin))
                       (NIL NIL)
                       (APPLY* Selection (NCP.CardFromWindow (WINDOWPROP ShrunkenWin 'ICONFOR]
        else (ICONBUTTONEVENTFN ShrunkenWin])
)
```

;; No longer used

```
(DEFINEQ
```

(**NCGT.GuidedTourShrinkFn**
```
  [LAMBDA (Window OldIcon)                                    ; Edited 23-Jan-88 19:34 by Trigg
```
;; Take this function off of ICONFN windowprop and call SHRINKW (recursively). Replace the BUTTONEVENTFN of the shrunken win icon with
;; our own.
```
    (WINDOWDELPROP Window 'SHRINKFN (FUNCTION NCGT.GuidedTourShrinkFn))
    (LET ((ShrunkenWin (WINDOWPROP Window 'ICON))
          CurButtonEventFn)
         (if (NEQ (SETQ CurButtonEventFn (WINDOWPROP ShrunkenWin 'BUTTONEVENTFN))
                  (FUNCTION NCGT.ShrunkenWinButtonEventFn))
             then (WINDOWPROP ShrunkenWin 'BUTTONEVENTFN (FUNCTION NCGT.ShrunkenWinButtonEventFn])
)
```

;;

```
(DECLARE%: EVAL@COMPILE

(DATATYPE GTState (CurrentNode NodesVisited EdgesVisited UserData))
)

(/DECLAREDATATYPE 'GTState '(POINTER POINTER POINTER POINTER)
        ;; ---field descriptor list elided by lister---
        '8)

(RPAQQ NCGT.LinkIconBitmap
```
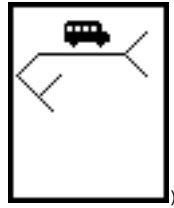
```
)

(RPAQQ NCGT.ShrunkenIconBitmap
```

)

```
(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS NCGT.GuidedTourLinkTypes NCGT.OperationsMenuItems NCGT.GraphEditMenuItems
        NCGT.GraphEditUnfixedMenuItems NCGT.HighlightLineWidth NCGT.VisitedNodesBorderWidthIncrement
        NCGT.ShrunkenIconTemplate NCGT.ShrunkenIconControlFlg)
)
```

(RPAQ? **NCGT.HighlightLineWidth** 3)

(RPAQ? **NCGT.VisitedNodesBorderWidthIncrement** 2)

(RPAQ? **NCGT.ShrunkenIconControlFlg** T)

(RPAQ? **NCGT.ShrunkenIconTemplate** (create TITLEDICON ICON _ NCGT.ShrunkenIconBitmap MASK _ NIL TITLEREG _
                                       '(5 2 50 30)))

(RPAQ? **NCGT.GuidedTourLinkTypes** 'GuidedTour)

(RPAQ? **NCGT.OperationsMenuItems**
```
        '((START (FUNCTION NCGT.StartTourAtRoot)
                "Start the tour at a root of the browser.")
          (NEXT (FUNCTION NCGT.NextTourStop)
                "Shut down current TableTop and move to the next.")
          (PREVIOUS (FUNCTION NCGT.PreviousTourStop)
                "Shut down current TableTop and move to some previous one.")
          (JUMP (FUNCTION NCGT.JumpToTourStop)
                "Shut down current TableTop and jump to some other one.")
          (RESET (FUNCTION NCGT.ResetTour)
                "Shut down current TableTop and reset the browser.")))
```

(RPAQ? **NCGT.GraphEditMenuItems**
```
        '((|Create TT Card| NCGT.CreateTableTopFn "Create a new TableTop card and add to browser."
                (SUBITEMS (|Create card of type| NC.BrowserCreateCardFn "Create a new card of a given type and
                          add to browser.")))
          (Create% Link NCGT.CreateGuidedTourLinkFn "Create a new GuidedTour link between cards in the browser.")
          (Delete% Card NC.BrowserDeleteCardFn "Delete one of the cards appearing in the browser.")
          (Delete% Link NC.BrowserDeleteLinkFn "Delete one of the GuidedTour links appearing in the browser.")
          (Add% Label NC.BrowserAddLabelFn "Annotate graph with a label.")
          (Add% Node NC.BrowserAddNodeFn "Add a card to the browser.")
          (Add% Edge NC.BrowserAddEdgeFn "Annotate graph with a line.")
          (Remove% Node NC.BrowserRemoveNodeFn "Remove a node from graph (doesn't delete the corresponding
                card).")
          (Remove% Edge NC.BrowserRemoveEdgeFn "Remove a line from the graph (doesn't delete the link).")
          (Move% Node NC.BrowserMoveNodeFn "Move a guided tour node." (SUBITEMS (|Move Single Node|
                                                                                NC.BrowserMoveNodeFn
                                                                                "Move a guided tour
                                                                                node.")
                                                                    (|Move Node & Subtree|
                                                                        NC.BrowserMoveSubtreeFn
                                                                        "Move a subtree of nodes
                                                                        following the movement of the
                                                                        root.")
                                                                    (Move% Region
                                                                        NC.BrowserMoveNodesInRegionFn
                                                                        "Move all nodes within a
                                                                        specified region to another
                                                                        region.")))
          (Label% Smaller NC.BrowserShrinkLabelFn "Reduce font size for a guided tour label.")
          (Label% Larger NC.BrowserGrowLabelFn "Increase font size for a guided tour label.")
          ("<-> Shade" EDITTOGGLELABEL "Inverts label shade for a guided tour label.")))
```

(RPAQ? **NCGT.GraphEditUnfixedMenuItems** [APPEND NCGT.GraphEditMenuItems '((FIX% MENU NC.BrowserFixGraphEditMenuFn
                                                                            "Attach this menu to edge of
                                                                            browser window.")])

```
;; Stuff that supports the shapeable shrunken icon, which displays the guided tour scaled to fit inside the "icon".
```

(DEFINEQ

(**NCGT.MarkDirtyFn**
```
  [LAMBDA (Card ResetFlg)                                           ; Edited 27-Mar-89 15:45 by pmi

    ;; Need to recompute the shrunken icon if the graph is dirtied.

    (NCP.CardUserDataProp Card 'GuidedTourShrunkenIconNeedsRepainting T)
    (NCP.ApplySuperTypeFn MarkDirtyFn Card ResetFlg])
```

(**NCGT.GuidedTourIconFn**
```
[LAMBDA (Window OldIcon)                                        ; Edited 27-Mar-89 15:51 by pmi
```
  ;; For the guided tour shrunken icon, make a shapeable window containing a shrunken bitmap of the entire guided tour .

```
  (DECLARE (GLOBALVARS NCGT.ShrunkenIconDefaultWidth NCGT.ShrunkenIconDefaultHeight
                  NC.ShrunkenIconDefaultPosition NC.OffScreenPosition))
  (LET ((Card (NC.CoerceToCard Window)))
      (NC.ProtectedCardOperation Card "Build Guided Tour Shrunken Icon" NIL
            (LET (ShrunkenIconWindow ShrunkenIconRegion)
                (SETQ ShrunkenIconWindow (WINDOWPROP Window 'ICON))
                (if (WINDOWP ShrunkenIconWindow)
                    else ;; Make a new shrunken icon window.

                        (if (SETQ ShrunkenIconRegion (WINDOWPROP Window 'ShrunkenIconRegion))
                            else ;; Ask user for a region.

                                (SETQ ShrunkenIconRegion (GETREGION NCGT.ShrunkenIconDefaultWidth
                                                                NCGT.ShrunkenIconDefaultHeight))
                                (WINDOWPROP Window 'ShrunkenIconRegion ShrunkenIconRegion))
                        (SETQ ShrunkenIconWindow (CREATEW ShrunkenIconRegion))
                        (NCP.CardUserDataProp Card 'GuidedTourShrunkenIconNeedsRepainting T))
                (NCGT.AttachShrunkenIconMenus ShrunkenIconWindow)
                (NCGT.RedrawShrunkenIconWindow ShrunkenIconWindow Window]))
```

(**NCGT.RedrawShrunkenIconWindow**
```
[LAMBDA (ShrunkenWindow GTWindow)                              ; Edited 27-Mar-89 15:56 by pmi
```
  ;; Recompute the shrunken graph for the guided tour shrunken icon. Turn off any highlighted nodes or edges while shrinking. Inverted the current
  ;; node when finished.

```
  (DECLARE (GLOBALVARS NCGT.ScaledGraphNodeHashArray))
  (LET ((Card (NCP.CardFromWindow GTWindow))
        GTState EdgesVisited NodesVisited CurrentNode InvertedNode)
      (if (AND (NCP.ValidCardP Card)
              (SETQ GTState (NCGT.FetchGTState Card)))
          then (SETQ CurrentNode (fetch (GTState CurrentNode) of GTState))
              (SETQ InvertedNode (NCP.CardUserDataProp Card 'GuidedTourInvertedNode))
              (if (NCP.CardUserDataProp Card 'GuidedTourShrunkenIconNeedsRepainting)
                  then ;; Re-shrink the graph for the shrunken icon.

                      (SETQ EdgesVisited (fetch (GTState EdgesVisited) of GTState))
                      (SETQ NodesVisited (fetch (GTState NodesVisited) of GTState))
                      (for Edge in EdgesVisited do (NCGT.UnHighlightEdge Edge))
                      (for Node in NodesVisited do (NCGT.UnHighlightNode Node GTWindow))
                      (NCGT.ShrinkGraphToWindow (WINDOWPROP GTWindow 'GRAPH)
                              ShrunkenWindow)
                      (for Edge in EdgesVisited do (NCGT.HighlightEdge Edge))
                      (for Node in NodesVisited do (NCGT.HighlightNode Node GTWindow))
                      (NCP.CardUserDataProp Card 'GuidedTourShrunkenIconNeedsRepainting NIL)
                  else ;; Clear the node currently inverted.

                      (if InvertedNode
                          then (FLIPNODE (GETHASH InvertedNode NCGT.ScaledGraphNodeHashArray)
                                      ShrunkenWindow)))
              ;; Invert the current node.

              (if CurrentNode
                  then (FLIPNODE (GETHASH CurrentNode NCGT.ScaledGraphNodeHashArray)
                              ShrunkenWindow))
              ;; Update the card with the currently inverted node.

              (NCP.CardUserDataProp Card 'GuidedTourInvertedNode CurrentNode)
              ;; Fix up window.

              (WINDOWPROP ShrunkenWindow 'REPAINTFN (FUNCTION NCGT.ShrunkenWinRepaintFn))
              (WINDOWPROP ShrunkenWindow 'RESHAPEFN (FUNCTION NCGT.ShrunkenWinReshapeFn))
              (WINDOWPROP ShrunkenWindow 'SCROLLFN NIL)
              (WINDOWDELPROP ShrunkenWindow 'BUTTONEVENTFN (FUNCTION APPLYTOSELECTEDNODE))
              (WINDOWPROP ShrunkenWindow 'BUTTONEVENTFN (FUNCTION ICONBUTTONEVENTFN))
              (WINDOWPROP GTWindow 'ICON ShrunkenWindow)
              ShrunkenWindow])
```

(**NCGT.ShrunkenWinRepaintFn**
```
[LAMBDA (ShrunkenIconWindow Region)                           ; Edited  1-Feb-89 15:11 by pmi
```
  ;; Recompute the GT shrunken icon.

```
  (NCGT.RedrawShrunkenIconWindow ShrunkenIconWindow (WINDOWPROP ShrunkenIconWindow 'ICONFOR))
```

(**NCGT.ShrunkenWinReshapeFn**
```
[LAMBDA (ShrunkenIconWindow OldWinBitmap OldWinRegion)        ; Edited 22-Mar-89 12:32 by pmi
```
  ;; When GT shrunken icon is reshaped, we need to recompute its contents from scratch.

```
  (LET [(GTWindow (WINDOWPROP ShrunkenIconWindow 'ICONFOR]
      (WINDOWPROP GTWindow 'ShrunkenIconRegion (WINDOWREGION ShrunkenIconWindow))
```

```
        (NCP.CardUserDataProp (NCP.CardFromWindow GTWindow)
                'GuidedTourShrunkenIconNeedsRepainting T)
        (NCGT.RedrawShrunkenIconWindow ShrunkenIconWindow GTWindow])
```

(**NCGT.ShrunkenWinExpandFn**

```
  [LAMBDA (GTWindow)                                                ; Edited 27-Mar-89 16:20 by pmi
```

  ;; Need to remember which node was inverted when we expanded, so we can un-invert it when we shrink again.

```
  (LET ((Card (NCP.CardFromWindow GTWindow)))
       (NCP.CardUserDataProp Card 'GuidedTourInvertedNode (fetch (GTState CurrentNode) of (NCGT.FetchGTState
                                                                                              Card)))

       (DETACHALLWINDOWS (WINDOWPROP GTWindow 'ICON])
```

(**NCGT.AttachShrunkenIconMenus**

```
  [LAMBDA (ShrunkenIconWindow)                                      ; Edited 27-Mar-89 16:21 by pmi
```

  ;; Attach the guided tour operations buttons to the top of the shrunken icon.

```
  (ATTACHMENU (create MENU
                      ITEMS _ NCGT.ShrunkenOperationsMenuItems
                      MENUFONT _ (FONTCREATE '(MODERN 8 STANDARD))
                      WHENSELECTEDFN _ (FUNCTION NCGT.ShrunkenIconOperationsMenuWhenSelectedFn)
                      MENUBORDERSIZE _ 1
                      CENTERFLG _ T)
              ShrunkenIconWindow
              'TOP
              'JUSTIFY)
    ShrunkenIconWindow])
```

(**NCGT.ShrunkenIconOperationsMenuWhenSelectedFn**

```
  [LAMBDA (Item Menu MouseKey)                                      ; Edited  2-Feb-89 16:10 by pmi
```

  ;; User selected some operation from the menu. Just apply the appropriate function.

```
  (APPLY* (EVAL (CADR Item))
          (NCP.CardFromWindow (WINDOWPROP (MAINWINDOW (WFROMMENU Menu))
                                          'ICONFOR])
```

(**NCGT.ShrinkGraphToWindow**

```
  [LAMBDA (Graph Window)                                            ; Edited 27-Mar-89 17:07 by pmi
```

  ;; Bitblt's into Window a shrunken bitmap of the graph just big enough to fit.

```
  (DECLARE (GLOBALVARS NCGT.ScaledGraphNodeHashArray))
  (LET ((GraphWindow (MAINWINDOW Window))
        (ShrunkenGraph (create GRAPH using Graph))
        Scales Scale XScale YScale)
```

    ;; Don't try to calculate the scale of an empty graph.

```
    [if (fetch (GRAPH GRAPHNODES) of Graph)
        then (SETQ Scales (NC.ComputeOverviewScale Graph Window))
             [SETQ Scale (SETQ XScale (SETQ YScale (FMIN (CAR Scales)
                                                         (CDR Scales]
      else (SETQ Scale (SETQ XScale (SETQ YScale 1]             ; Shrink the graphnodes.
    [replace (GRAPH GRAPHNODES) of ShrunkenGraph with (for GraphNode in (fetch (GRAPH GRAPHNODES) of
                                                                                  ShrunkenGraph
                                                                                  )
                                                          eachtime (BLOCK) bind ScaledGraphNode
                                                          collect (PROG1 (SETQ ScaledGraphNode
                                                                           (NC.ScaleGraphNode (create GRAPHNODE
                                                                                                 using GraphNode)
                                                                                Scale XScale YScale GraphWindow
                                                                                ))
                                                                         (PUTHASH GraphNode ScaledGraphNode
                                                                                  NCGT.ScaledGraphNodeHashArray]
        (SHOWGRAPH ShrunkenGraph Window)
        (WINDOWPROP Window 'Scale Scale)
        (WINDOWPROP Window 'XScale XScale)
        (WINDOWPROP Window 'YScale YScale)
        (WINDOWPROP Window 'GRAPH ShrunkenGraph])
)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS NCGT.ShrunkenIconDefaultWidth NCGT.ShrunkenIconDefaultHeight NCGT.HashArraySize
      NCGT.ScaledGraphNodeHashArray NCGT.ShrunkenOperationsMenuItems)
)

(RPAQ? NCGT.ShrunkenIconDefaultWidth 147)

(RPAQ? NCGT.ShrunkenIconDefaultHeight 20)

(RPAQ? NCGT.ShrunkenIconMenu NIL)

(RPAQ? NCGT.HashArraySize 500)
```

(RPAQ? **NCGT.ScaledGraphNodeHashArray** (HASHARRAY NCGT.HashArraySize))

(RPAQ? **NCGT.ShrunkenOperationsMenuItems**
        '((START (FUNCTION NCGT.StartTourAtRoot)
                "Start the tour at a root of the browser.")
         (NEXT (FUNCTION NCGT.NextTourStop)
                "Shut down current TableTop and move to the next.")
         (PREV. (FUNCTION NCGT.PreviousTourStop)
                "Shut down current TableTop and move to some previous one.")
         (JUMP (FUNCTION NCGT.JumpToTourStop)
                "Shut down current TableTop and jump to some other one.")
         (RESET (FUNCTION NCGT.ResetTour)
                "Shut down current TableTop and reset the browser.")))

;; Add this card type

(DEFINEQ

(**NCGT.AddGuidedTourCard**
  [LAMBDA NIL   ; Edited 27-Mar-89 19:05 by pmi

    ;; Make the GuidedTour card type. Inherits from BrowserCard.

    ;; pmi 3/27/89: Added MarkDirtyFn for the new shrunken icon.

    (**DECLARE** (GLOBALVARS NCGT.LinkIconBitmap))
    (NC.AddCardType 'GuidedTour 'Browser '[(MakeFn ,(FUNCTION NCGT.MakeGuidedTourCard))
                                           (EditFn ,(FUNCTION NCGT.EditGuidedTourCard))
                                           (QuitFn ,(FUNCTION NCGT.GuidedTourCardQuitFn))
                                           (MarkDirtyFn ,(FUNCTION NCGT.MarkDirtyFn]
              '((LinkDisplayMode Title)
                (DefaultHeight 300)
                (DefaultWidth 350)
                (DisplayedInMenuFlg ,T)
                (LinkIconAttachedBitMap ,NCGT.LinkIconBitmap])
)

(NCGT.AddGuidedTourCard)

(PUTPROPS **NCGUIDEDTOURCARD COPYRIGHT** ("Xerox Corporation" 1988 1989))

FUNCTION INDEX

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