

File created: 21-Aug-85 16:52:08 {DSK}<LISPFILS>TESTER>SOURCES>TESTER.;35

changes to: (FNS TEST.EXECUTE-TESTS TEST.RELEASE-LOCK-COMMAND TEST.RELEASE-LOCK-ON-SELECTED-TESTS-COMMAND  
TEST.OBTAIN-LOCK-ON-SELECTED-TESTS-COMMAND TEST.OBTAIN-LOCK-COMMAND TEST.CLEANUP-AFTER-TEST  
TEST.DOCOMMAND TEST.EVAL-BEFORE-TEST TEST.EVALUATE-OUTCOME TEST.EVALUATE-TESTED-EXPR  
TEST.PERFORM-TEST TEST.PRINT-ON-TRACE-FILE TEST.PRINT-TRACE-INFO  
TEST.EXECUTE-SELECTED-TESTS-COMMAND TEST.DETACH-TESTS-MENU TEST.GET-TEST  
TEST.GET-EXECUTION-SPECS TEST.GET-STRONG-LINK-CLOSURE TEST.UPDATE-EXECUTION-SPEC  
TEST.SET-TESTS-BUFFER-SIZE TEST.COMPUTE-AVERAGE-TEST-SIZE TEST.OPENFILE-OR-WAIT  
TEST.TEST-FAULT TEST.TOPOLOGICAL-ORDER)  
(VARS TESTERCOMS)

previous date: 20-Aug-85 13:50:30 {DSK}<LISPFILS>TESTER>SOURCES>TESTER.;31

Read Table: OLD-INTERLISP-FILE

Package: INTERLISP

Format: XCCS

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(RPAQQ **TESTERCOMS**

```
((FNS SHOULDNT TEST.ADD-CONCEPT-AND-SUBCONCEPTS-TO-CONCEPT-LIST TEST.ADD-CONCEPT-COMMAND
TEST.ADD-CONCEPT-SPACE-TO-CONCEPT-SPACES TEST.ADD-ITEM-TO-BACKGROUND-MENU TEST.ADD-LINK-COMMAND
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TEST.REMOVE-SUPERCONCEPT-LINK TEST.REPLACE-INSPECTW-VALUECOMMANDFN TEST.SEND-RELEASE-REQUESTS
TEST.SET-DEFAULT-FIELD-VALUE TEST.SET-TESTS-BUFFER-SIZE TEST.SETIFY TEST.SHADE-TEST
TEST.STORE-CHANGED-TESTS TEST.STORE-CONCEPT-SPACE TEST.STORE-CONCEPT-SPACE-COMMAND TEST.STORE-TEST
TEST.SWITCH-DISPLAY-MODE-COMMAND TEST.TEST-FAULT TEST.TEST-NUMBER-TO-FILE-NAME
TEST.TEST-SELECTED-ON-TEST-MENU-FN TEST.TEST-SINGLE-TIME TEST.TOPOLOGICAL-ORDER TEST.UNION-LIST
TEST.UNMARK-AS-CHANGED TEST.UPDATE-COMMAND TEST.UPDATE-EXECUTION-SPEC TEST.WAIT-FOR-SELECTION)
(VARS (TEST.EXECUTION-SPECS-EVENT (CREATE.EVENT "EXECUTION-SELECTION-ENDED-EVENT"))
(TEST.GLOBAL-CONCEPT-NODE-SELECTED-EVENT (CREATE.EVENT "CONCEPT-NODE-SELECTED-EVENT")))
(BITMAPS TEST.CONCEPT-WINDOW-ICON TEST.CONCEPT-WINDOW-ICON-MASK TEST.INSPECTW.ICON TEST.INSPECTW.MASK)))
```

(DEFINEQ

(**SHOULDNT**

```
[LAMBDA (MESS)
  (ERRORX (LIST 1000 MESS]))
```

(\* sm "10-Jul-85 13:59")

(**TEST.ADD-CONCEPT-AND-SUBCONCEPTS-TO-CONCEPT-LIST**

```
[LAMBDA (NEW-CONCEPT-NAME SOURCE-CONCEPT-LIST TARGET-CONCEPT-LIST)
```

(\* sm "19-Aug-85 14:49")

```
(PROG (LAST-CDR NEW-CONCEPT)
  (if (NOT (FASSOC NEW-CONCEPT-NAME TARGET-CONCEPT-LIST))
    then (SETQ NEW-CONCEPT (COPY (FASSOC NEW-CONCEPT-NAME SOURCE-CONCEPT-LIST)))
    (SETQ LAST-CDR (LAST TARGET-CONCEPT-LIST))
    (RPLACD LAST-CDR (LIST NEW-CONCEPT))
    (RETURN (CONS NEW-CONCEPT-NAME (for c in (fetch SUBCONCEPTS of NEW-CONCEPT)
join (TEST.ADD-CONCEPT-AND-SUBCONCEPTS-TO-CONCEPT-LIST
  C SOURCE-CONCEPT-LIST TARGET-CONCEPT-LIST))
```

(**TEST.ADD-CONCEPT-COMMAND**

```
[LAMBDA (WINDOW)
  (PROG (PARENT-NODE NEW-CONCEPT LAST-CDR)
    (SETQ PARENT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select parent node"))
    [SETQ NEW-CONCEPT (MKATOM (PROMPTFORWARD "Type name for new concept:" NIL NIL (TEST.PROMPT-WINDOW
  WINDOW)
```

```
NIL
(QUOTE TTY)]
```

```

[SETQ LAST-CDR (LAST (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS)
[REPLACD LAST-CDR (LIST (create CONCEPT
                           CONCEPTNAME _ NEW-CONCEPT
                           SUPERCONCEPTS _ (LIST (fetch NODEID of PARENT-NODE]
(pushnew [fetch SUBCONCEPTS of (TEST.GET-CONCEPT PARENT-NODE (WINDOWPROP WINDOW (QUOTE
                                                         TEST.LIST-OF-CONCEPTS
                                                         ]
NEW-CONCEPT)
(TEST.DISPLAY-CONCEPT-GRAPH (TEST.CREATE-CONCEPT-SPACE-GRAPH WINDOW)
WINDOW])

```

**(TEST.ADD-CONCEPT-SPACE-TO-CONCEPT-SPACES**

(\* sm "16-Aug-85 17:13")

```

[LAMBDA (CONCEPTSPACE)
  (if (NOT (BOUNDP (QUOTE TEST.CONCEPT-SPACES)))
    then (SETQ TEST.CONCEPT-SPACES NIL))
  (SETQ TEST.CONCEPT-SPACES (REMOVE (TEST.GET-CONCEPT-SPACE (fetch CONCEPTSPACENAME of CONCEPTSPACE))
                                     TEST.CONCEPT-SPACES))
  (SETQ TEST.CONCEPT-SPACES (CONS CONCEPTSPACE TEST.CONCEPT-SPACES))
  (fetch CONCEPTSPACENAME of CONCEPTSPACE])

```

**(TEST.ADD-ITEM-TO-BACKGROUND-MENU**

(\* edited: " 3-Jun-85 15:59")

```

[LAMBDA (LABEL COMMAND MESSAGE SUBITEMLIST)
  (SETQ BackgroundMenuCommands (REMOVE (SASSOC LABEL BackgroundMenuCommands)
                                       BackgroundMenuCommands))
  (NCONC1 BackgroundMenuCommands (LIST LABEL COMMAND MESSAGE SUBITEMLIST))
  (SETQ BackgroundMenu NIL])

```

**(TEST.ADD-LINK-COMMAND**

(\* sm "19-Aug-85 09:46")

```

[LAMBDA (WINDOW)
  (PROG (SUPERCONCEPT-NODE SUBCONCEPT-NODE CONCEPT-LIST)
    (SETQ CONCEPT-LIST (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS)))
    (SETQ SUPERCONCEPT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select super concept"))
    (SETQ SUBCONCEPT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select sub concept"))
    (pushnew (fetch SUBCONCEPTS of (TEST.GET-CONCEPT SUPERCONCEPT-NODE CONCEPT-LIST))
              (fetch NODEID of SUBCONCEPT-NODE))
    (pushnew (fetch SUPERCONCEPTS of (TEST.GET-CONCEPT SUBCONCEPT-NODE CONCEPT-LIST))
              (fetch NODEID of SUPERCONCEPT-NODE))
    (TEST.DISPLAY-CONCEPT-GRAPH (TEST.CREATE-CONCEPT-SPACE-GRAPH WINDOW)
WINDOW])

```

**(TEST.ADD-NEW-FIELD-TO-TEST-RECORD**

(\* sm "23-Jul-85 16:28")

```

[LAMBDA (NEW-FIELD DEFAULT-VALUE)
  (PROG (OLD-DEC)
    (if (NOT (TEST.OBTAIN-DATABASE-WRITE-LOCK (QUOTE DATABASE)))
      then (RINGBELLS)
            (PROMPTPRINT "Can not obtain lock on the data base.")
            (if (MENU (create MENU
                            ITEMS _ (QUOTE (("Send release requests" T)
                                           ("Don't send requests" NIL)))
                            MENUFONT _ BIGFONT))
              then (TEST.SEND-RELEASE-REQUESTS (QUOTE DATABASE)))
      else [SETQ OLD-DEC (COPY (RECLOOK (QUOTE TEST)
            (if (FMEMB NEW-FIELD (CADDR OLD-DEC))
              then (PRINTOUT T T NEW-FIELD " IS ALREADY A FIELD IN TEST RECORD. ")
              (RETURN NIL))
            (NCONC1 (CADDR OLD-DEC)
NEW-FIELD)
            (if (AND TEST.LIST-OF-MODIFIED-TESTS (MENU (create MENU
                                                            ITEMS _ (QUOTE (("Store current changes first"
                                                                    T)
                                                                    ("Ignore current changes."
                                                                    NIL)))
                                                            MENUFONT _ BIGFONT)))
              then (TEST.STORE-CHANGED-TESTS))
            (EVAL OLD-DEC)
            (SETQ TEST.LIST-OF-TESTS NIL)
            (for TEST from 1 to (SUB1 (TEST.GET-NEXT-AVAILABLE-TESTID)) do (SETQ CURRENT-TEST (TEST.GET-TEST
                                                                    TEST))
                                (NCONC1 TEST DEFAULT-VALUE)
                                (TEST.STORE-TEST TEST)
                                (PRINTOUT T "... " TEST))

            (SET (PACK* (QUOTE TEST.DEFAULT.)
NEW-FIELD)
DEFAULT-VALUE])

```

**(TEST.ADD-TEST**

(\* sm "22-Jul-85 14:52")

```

[LAMBDA (TEST-RECORD)
  (replace TESTID of TEST-RECORD with (TEST.GET-AND-INCREASE-NEXT-TESTID))
  (push TEST.LIST-OF-TESTS TEST-RECORD)
  (fetch TESTID of TEST-RECORD])

```

**(TEST.ADD-TEST-COMMAND**

```

[LAMBDA (WINDOW) (* sm "19-Aug-85 15:38")
  (PROG (CONCEPT-NODE CONCEPT-LIST TEST-NUMBER TESTS)
    (SETQ CONCEPT-LIST (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS)))
    (SETQ CONCEPT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select the concept to which the test should be
      added"))
    (PRINTOUT (TEST.PROMPT-WINDOW WINDOW)
      T)
    [SETQ TESTS (MKLIST (CAR (TTYINEDIT NIL (TEST.PROMPT-WINDOW WINDOW)
      NIL "Enter a test id or a list of test ids: ")]
    (for TEST in TESTS when (FIXP TEST) do (pushnew (fetch TESTS of (TEST.GET-CONCEPT CONCEPT-NODE
      CONCEPT-LIST))
      TEST))
    (if (WINDOWPROP WINDOW (QUOTE TEST.DISPLAY-TEST-MODE))
      then (TEST.DISPLAY-CONCEPT-GRAPH (TEST.CREATE-CONCEPT-SPACE-GRAPH CONCEPT-LIST T)
        WINDOW])

```

**(TEST.ALL-COMBINATIONS**

```

[LAMBDA (SET-OF-SETS) (* sm "9-Jul-85 17:00")
  (if (NULL SET-OF-SETS)
    then (LIST NIL)
    else (for ELEMENT in (CAR SET-OF-SETS) join (for COMBINATION in (TEST.ALL-COMBINATIONS (CDR SET-OF-SETS))
      collect (CONS ELEMENT COMBINATION])

```

**(TEST.ATTACH-TESTS-MENU**

```

[LAMBDA (WINDOW TEST-LIST) (* sm "24-Jul-85 13:40")
  (PROG (MENU-WINDOW)
    (SETQ MENU-WINDOW (ATTACHMENU (create MENU
      ITEMS _ TEST-LIST
      WHENSELECTEDFN _ (QUOTE TEST.TEST-SELECTED-ON-TEST-MENU-FN)
      MENUROWS _ [ADD1 (IQUOTIENT (FLENGTH TEST-LIST)
        (MAX 1 (IQUOTIENT (CAR (WINDOWSIZE WINDOW)
          ))
          30])
      MENUFONT _ BIGFONT
      CENTERFLG _ T)
      WINDOW
      (if (GREATERP (IPLUS (fetch BOTTOM of (WINDOWREGION WINDOW))
        (IQUOTIENT (CDR (WINDOWSIZE WINDOW))
          2))
        (IQUOTIENT SCREENHEIGHT 2))
        then (QUOTE BOTTOM)
        else (QUOTE TOP))
        (QUOTE JUSTIFY)))
    (WINDOWPROP WINDOW (QUOTE TEST.TESTS-MENU-WINDOW)
      MENU-WINDOW)
    (WINDOWPROP MENU-WINDOW (QUOTE TEST.DETACH)
      T)
    (RETURN MENU-WINDOW])

```

**(TEST.BROWSE-CONCEPT-SPACE-COMMAND**

```

[LAMBDA NIL (* sm "19-Aug-85 10:00")
  (PROG (CONCEPT-SPACE-NAME CONCEPT-SPACE)
    (if (NULL TEST.CONCEPT-SPACES)
      then (RETURN NIL))
    (if (GREATERP (LENGTH TEST.CONCEPT-SPACES)
      1)
      then (SETQ CONCEPT-SPACE-NAME (TEST.POP-UP-CONCEPT-SPACES-MENU))
        (if CONCEPT-SPACE-NAME
          then (SETQ CONCEPT-SPACE (TEST.GET-CONCEPT-SPACE CONCEPT-SPACE-NAME)))
          else (SETQ CONCEPT-SPACE (CAR TEST.CONCEPT-SPACES)))
      (TEST.DISPLAY-CONCEPT-SPACE-BROWSER CONCEPT-SPACE])

```

**(TEST.BROWSE-SUBTREE-COMMAND**

```

[LAMBDA (WINDOW) (* sm "20-Aug-85 13:35")
  (PROG (SUBSPACE ROOT-NAME CONCEPT-NODE)
    (SETQ CONCEPT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select concept to browse"))
    (SETQ ROOT-NAME (fetch NODEID of CONCEPT-NODE))
    [SETQ SUBSPACE (create CONCEPTSPACE
      CONCEPTSPACENAME _ ROOT-NAME
      ROOTCONCEPT _ ROOT-NAME
      CONCEPTLIST _ (TEST.SETIFY (TEST.COLLECT-SUBCONCEPTS-CLOSURE
        ROOT-NAME
        (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS)]
      (TEST.DISPLAY-CONCEPT-SPACE-BROWSER SUBSPACE])

```

**(TEST.CANONICAL-CONCEPT-SPACE-FILE-NAME**

```

[LAMBDA (CONCEPT-SPACE-NAME) (* sm "19-Aug-85 12:11")
  (PACK* CONCEPT-SPACE-NAME (QUOTE .CONCEPTSPACE])

```

**(TEST.CHANGE-DEPTH-COMMAND**

```

[LAMBDA (WINDOW) (* sm "20-Aug-85 13:08")
  (PROG (NEW-DEPTH)
    (SETQ NEW-DEPTH
      (MENU (create MENU
        ITEMS _
          (QUOTE ((Quit NIL)
            Inf 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20))
        MENUROWS _ 5
        MENUFONT _ BIGFONT
        CENTERFLG _ T)))
    (if (NULL NEW-DEPTH)
      then (RETURN NIL)
      else (WINDOWPROP WINDOW (QUOTE TEST.DEPTH)
        (if (FIXP NEW-DEPTH)
          then NEW-DEPTH
          else NIL))
      (TEST.DISPLAY-CONCEPT-GRAPH (TEST.CREATE-CONCEPT-SPACE-GRAPH WINDOW)
        WINDOW]))

```

**(TEST.CLEANUP-AFTER-TEST**

```

[LAMBDA (TEST RESULT ACTUAL-ARGUMENTS LOCATION) (* sm "21-Aug-85 14:00")
  (PROG (FORMTOEVAL)
    (SETQ FORMTOEVAL (TEST.GET-FIELD-VALUE (QUOTE EVALAFTER)
      TEST))
    (if FORMTOEVAL
      then [if (EQ (CAR FORMTOEVAL)
        (QUOTE LAMBDA))
        then (SETQ FORMTOEVAL (LIST (QUOTE APPLY)
          (KWOTE FORMTOEVAL)
          (KWOTE (LIST RESULT ACTUAL-ARGUMENTS)
            (if (EQ LOCATION (QUOTE Remote))
              then (TEST.REMOTE-EVAL-FORM FORMTOEVAL)
              else (TEST.LOCAL-EVAL-FORM FORMTOEVAL))
            )
          )
        ]
      ]

```

**(TEST.COLLECT-ALL-TESTS**

```

[LAMBDA (CONCEPT-NAME CONCEPT-LIST) (* sm "2-Jul-85 16:50")
  (PROG (CONCEPT)
    (RETURN (UNION (fetch TESTS of (SETQ CONCEPT (FASSOC CONCEPT-NAME CONCEPT-LIST)))
      (TEST.UNION-LIST (for SUBCONCEPT in (fetch SUBCONCEPTS of CONCEPT)
        collect (TEST.COLLECT-ALL-TESTS SUBCONCEPT CONCEPT-LIST))
      )

```

**(TEST.COLLECT-SUBCONCEPTS-CLOSURE**

```

[LAMBDA (CONCEPT-NAME CONCEPT-LIST) (* sm "20-Aug-85 11:12")
  (PROG (CONCEPT)
    (SETQ CONCEPT (FASSOC CONCEPT-NAME CONCEPT-LIST))
    (SETQ SUBTREE (for SUBCONCEPT in (fetch SUBCONCEPTS of CONCEPT) join (TEST.COLLECT-SUBCONCEPTS-CLOSURE
      SUBCONCEPT CONCEPT-LIST)))
    (if (FASSOC CONCEPT-NAME SUBTREE)
      then (RETURN SUBTREE)
      else (RETURN (CONS CONCEPT SUBTREE))

```

**(TEST.COMPUTE-AVERAGE-TEST-SIZE**

```

[LAMBDA NIL (* sm "20-Aug-85 16:02")
  (PROG (LENGTH-SUM NUMBER-OF-FILES)
    (SETQ LENGTH-SUM (DIRECTORY (PACK* TEST.TEST-DATA-BASE-DIRECTORY (QUOTE TEST)
      (QUOTE *.;))
      (QUOTE COUNTSIZE)))
    [SETQ NUMBER-OF-FILES (FLENGTH (DIRECTORY (PACK* TEST.TEST-DATA-BASE-DIRECTORY (QUOTE TEST)
      (QUOTE *.;]
    (SETQ TEST.AVERAGE-TEST-SIZE (FQUOTIENT LENGTH-SUM NUMBER-OF-FILES))
    (RETURN TEST.AVERAGE-TEST-SIZE)]

```

**(TEST.COPY-SUBTREE-COMMAND**

```

[LAMBDA (WINDOW) (* sm "19-Aug-85 15:18")
  (PROG (PARENT-NODE NEW-CONCEPT-NAME NEW-CONCEPTS TARGET-CONCEPT-LIST SOURCE-CONCEPT-LIST SOURCE-ROOT-NODE)
    (SETQ PARENT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select target parent node "))
    (SETQ SOURCE-ROOT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select root of source subtree." T))
    (SETQ SOURCE-WINDOW TEST.WINDOW-OF-LAST-SELECTION)
    (SETQ SOURCE-CONCEPT-LIST (WINDOWPROP SOURCE-WINDOW (QUOTE TEST.LIST-OF-CONCEPTS)))
    (SETQ TARGET-CONCEPT-LIST (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS)))
    (SETQ NEW-CONCEPT-NAME (fetch NODEID of SOURCE-ROOT-NODE))
    (pushnew (fetch SUBCONCEPTS of (TEST.GET-CONCEPT PARENT-NODE TARGET-CONCEPT-LIST))
      NEW-CONCEPT-NAME)
    (SETQ NEW-CONCEPTS (TEST.ADD-CONCEPT-AND-SUBCONCEPTS-TO-CONCEPT-LIST NEW-CONCEPT-NAME
      SOURCE-CONCEPT-LIST TARGET-CONCEPT-LIST))
    (pushnew (fetch SUPERCONCEPTS of (FASSOC NEW-CONCEPT-NAME TARGET-CONCEPT-LIST))
      (fetch NODEID of PARENT-NODE))
    (for C in NEW-CONCEPTS bind SUPERCONCEPTS do (SETQ SUPERCONCEPTS (fetch SUPERCONCEPTS
      of (FASSOC C TARGET-CONCEPT-LIST)))
      (for S in SUPERCONCEPTS when (NOT (FASSOC S
        TARGET-CONCEPT-LIST
        ))

```

```

do (DREMOVE S SUPERCONCEPTS)))
(TEST.DISPLAY-CONCEPT-GRAPH (TEST.CREATE-CONCEPT-SPACE-GRAPH WINDOW)
WINDOW])

```

**(TEST.COPYBUTTONEVENTFN**

```

[LAMBDA (WINDOW) (* sm "19-Jul-85 16:54")
  (PROG (CURSOR-POS SELECTED-NODE NODE-REGION RELEASED)
    (SETQ CURSOR-POS (CURSORPOSITION NIL WINDOW))
    [SETQ RELEASED (MOUSESTATE (AND (NOT LEFT)
                                    (NOT MIDDLE)
                                    (NOT RIGHT)
    (if (SETQ SELECTED-NODE (for NODE in (fetch GRAPHNODES of (WINDOWPROP WINDOW (QUOTE GRAPH)))
                              thereis (INSIDE (SETQ NODE-REGION (NODEREGION NODE))
                              CURSOR-POS)))
      then (FLIPNODE SELECTED-NODE WINDOW)
      else (GRAPHERCOPYBUTTONEVENTFN WINDOW))
    (if (AND RELEASED SELECTED-NODE)
      then (BKSYSEBUF (TEST.COLLECT-ALL-TESTS (fetch NODEID of SELECTED-NODE)
        (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS]))

```

**(TEST.CREATE-CONCEPT-SPACE-GRAPH**

```

[LAMBDA (CONCEPT-LIST INCLUDE-TESTS ROOT-CONCEPT DEPTH) (* sm "20-Aug-85 12:21")
  (PROG (GRAPH NODE-LIST TESTS-SET TEST.COLLECTED-GRAPH-NODES)
    [if (WINDOWP CONCEPT-LIST)
      then (SETQ INCLUDE-TESTS (WINDOWPROP CONCEPT-LIST (QUOTE TEST.DISPLAY-TEST-MODE)))
      (SETQ CONCEPT-LIST (WINDOWPROP CONCEPT-LIST (QUOTE TEST.LIST-OF-CONCEPTS)))
      (SETQ ROOT-CONCEPT (WINDOWPROP WINDOW (QUOTE TEST.ROOT-CONCEPT)))
      (SETQ DEPTH (WINDOWPROP WINDOW (QUOTE TEST.DEPTH)))
    [if INCLUDE-TESTS
      then [SETQ TESTS-SET (for CONCEPT in CONCEPT-LIST join (COPY (fetch TESTS of CONCEPT)
        (SETQ TESTS-SET (TEST.SETIFY TESTS-SET))
        (SETQ NODE-LIST (for TEST in TESTS-SET collect (create GRAPHNODE
          NODELABEL _ TEST
          NODEID _ TEST]
      [SETQ NODE-LIST (APPEND NODE-LIST
        (if DEPTH
          then (TEST.CREATE-GRAPH-NODES ROOT-CONCEPT CONCEPT-LIST INCLUDE-TESTS
            DEPTH)
            TEST.COLLECTED-GRAPH-NODES
          else (for CONCEPT in CONCEPT-LIST
            collect (create GRAPHNODE
              NODELABEL _ (fetch CONCEPTNAME of CONCEPT)
              NODEID _ (fetch CONCEPTNAME of CONCEPT)
              TONODES _ (APPEND (fetch SUBCONCEPTS of CONCEPT)
                (if INCLUDE-TESTS
                  then (fetch TESTS of CONCEPT]
        (SETQ GRAPH (LAYOUTGRAPH NODE-LIST (LIST ROOT-CONCEPT)
          (QUOTE LATTICE)))
      (RETURN GRAPH])

```

**(TEST.CREATE-CONCEPT-WINDOW-MENU**

```

[LAMBDA (WINDOW) (* sm "19-Aug-85 14:14")
  (create MENU
    ITEMS _ TEST.CONCEPT-WINDOW-MENU-ITEMS
    WHENSELECTEDFN _ (QUOTE TEST.DOCOMMAND])

```

**(TEST.CREATE-GRAPH-NODES**

```

[LAMBDA (ROOT-NAME CONCEPT-LIST INCLUDE-TESTS DEPTH) (* sm "20-Aug-85 13:48")
  (PROG (ROOT-CONCEPT NEW-NODE)
    (if (NOT (FASSOC ROOT-NAME TEST.COLLECTED-GRAPH-NODES))
      then (SETQ ROOT-CONCEPT (FASSOC ROOT-NAME CONCEPT-LIST))
      (if (EQP DEPTH 1)
        then (SETQ NEW-NODE (create GRAPHNODE
          NODELABEL _ ROOT-NAME
          NODEID _ ROOT-NAME
          TONODES _ (if INCLUDE-TESTS
            then (TEST.COLLECT-ALL-TESTS ROOT-NAME
              CONCEPT-LIST))
          NODEBORDER _ (if (fetch SUBCONCEPTS of ROOT-CONCEPT)
            then 1)))
        (SETQ TEST.COLLECTED-GRAPH-NODES (CONS NEW-NODE TEST.COLLECTED-GRAPH-NODES))
      else [SETQ NEW-NODE (create GRAPHNODE
        NODELABEL _ ROOT-NAME
        NODEID _ ROOT-NAME
        TONODES _ (APPEND (fetch SUBCONCEPTS of ROOT-CONCEPT)
          (if INCLUDE-TESTS
            then (fetch TESTS of ROOT-CONCEPT]
        (SETQ TEST.COLLECTED-GRAPH-NODES (CONS NEW-NODE TEST.COLLECTED-GRAPH-NODES))
        (for S in (fetch SUBCONCEPTS of ROOT-CONCEPT) do (TEST.CREATE-GRAPH-NODES S CONCEPT-LIST
          INCLUDE-TESTS (SUB1 DEPTH]))

```

**(TEST.CREATE-ICON-WINDOW**

```

[LAMBDA (WINDOW ICON)                                     (* sm "19-Aug-85 10:13")
  [COND
    ((NULL ICON)
      (SETQ ICON (TITLEDICONW (create TITLEDICON
                                     ICON _ TEST.CONCEPT-WINDOW-ICON
                                     MASK _ TEST.CONCEPT-WINDOW-ICON-MASK
                                     TITLEREG _ (CREATEREGION 4 6 65 14))
                             (fetch (CONCEPTSPACE CONCEPTSPACENAME) of (WINDOWPROP WINDOW (QUOTE TEST.CONCEPT-SPACE)
                                     ))
                             (FONTCREATE (QUOTE GACHA)
                                     8]
      ICON))
  ]

```

**(TEST.CREATE-INTERRUPT-MENU**

```

[LAMBDA (WINDOW)                                         (* sm "28-Jun-85 16:24")
  (create MENU
    ITEMS _ [SUBST WINDOW (QUOTE WINDOW)
              (QUOTE (" I n t e r r u p t" (TEST.KILL-PROCESS WINDOW)
              "Will kill the current process. ")
            ]
    CENTERFLG _ T])

```

**(TEST.CREATE-NEW-CONCEPT-SPACE**

```

[LAMBDA (CONCEPT-SPACE-NAME ROOT-CONCEPT-NAME)      (* sm "19-Aug-85 13:10")
  (create CONCEPTSPACE
    CONCEPTSPACENAME _ CONCEPT-SPACE-NAME
    ROOTCONCEPT _ ROOT-CONCEPT-NAME
    CONCEPTLIST _ (LIST (create CONCEPT
                                CONCEPTNAME _ ROOT-CONCEPT-NAME])
  )

```

**(TEST.CREATE-NEW-TEST**

```

[LAMBDA NIL                                             (* sm " 3-Jul-85 11:59")
  (PROG (NEW-TEST-RECORD)
    (SETQ NEW-TEST-RECORD (create TEST))
    [for F in (RECORDFIELDNAMES (QUOTE TEST)) do (RECORDACCESS F NEW-TEST-RECORD NIL (QUOTE REPLACE)
                                                            (COPY (TEST.GET-DEFAULT-FILED-VALUE F]
    (TEST.ADD-TEST NEW-TEST-RECORD)
    (TEST.EDIT-TEST NEW-TEST-RECORD])

```

**(TEST.DELETE-CONCEPT**

```

[LAMBDA (CONCEPT-NAME LIST-OF-CONCEPTS)            (* sm " 2-Jul-85 11:04")
  (PROG (CONCEPT)
    (SETQ CONCEPT (FASSOC CONCEPT-NAME LIST-OF-CONCEPTS))
    (if CONCEPT
      then (for SUBCONCEPT-NAME in (fetch SUBCONCEPTS of CONCEPT) bind SUBCONCEPT
        do (SETQ SUBCONCEPT (FASSOC SUBCONCEPT-NAME LIST-OF-CONCEPTS))
        (if SUBCONCEPT
          then (TEST.REMOVE-SUPERCONCEPT-LINK SUBCONCEPT CONCEPT-NAME LIST-OF-CONCEPTS)))
      (for SUPERCONCEPT-NAME in (fetch SUPERCONCEPTS of CONCEPT) bind SUPERCONCEPT
        do (SETQ SUPERCONCEPT (FASSOC SUPERCONCEPT-NAME LIST-OF-CONCEPTS))
        (if SUPERCONCEPT
          then (TEST.REMOVE-SUBCONCEPT-LINK SUPERCONCEPT CONCEPT-NAME)))
    (DREMOVE CONCEPT LIST-OF-CONCEPTS])

```

**(TEST.DELETE-CONCEPT-COMMAND**

```

[LAMBDA (WINDOW)                                       (* sm "19-Aug-85 09:46")
  (PROG (DELETED-CONCEPT-NODE DELETED-CONCEPT)
    (SETQ DELETED-CONCEPT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select concept to be deleted ."))
    (TEST.DELETE-CONCEPT (fetch NODEID of DELETED-CONCEPT-NODE)
      (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS)))
    (TEST.DISPLAY-CONCEPT-GRAPH (TEST.CREATE-CONCEPT-SPACE-GRAPH WINDOW)
      WINDOW])

```

**(TEST.DELETE-LINK-COMMAND**

```

[LAMBDA (WINDOW)                                       (* sm "19-Aug-85 09:46")
  (PROG (SUPERCONCEPT-NODE SUBCONCEPT-NODE CONCEPT-LIST SUPERCONCEPT SUPERCONCEPT)
    (SETQ CONCEPT-LIST (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS)))
    (SETQ SUPERCONCEPT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select super concept"))
    (SETQ SUBCONCEPT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select sub concept"))
    (SETQ SUPERCONCEPT (TEST.GET-CONCEPT SUPERCONCEPT-NODE CONCEPT-LIST))
    (SETQ SUBCONCEPT (TEST.GET-CONCEPT SUBCONCEPT-NODE CONCEPT-LIST))
    (TEST.REMOVE-SUBCONCEPT-LINK SUPERCONCEPT (fetch CONCEPTNAME of SUBCONCEPT))
    (TEST.REMOVE-SUPERCONCEPT-LINK SUBCONCEPT (fetch CONCEPTNAME of SUPERCONCEPT)
      CONCEPT-LIST)
    (TEST.DISPLAY-CONCEPT-GRAPH (TEST.CREATE-CONCEPT-SPACE-GRAPH WINDOW)
      WINDOW])

```

**(TEST.DELETE-TEST-COMMAND**

```

[LAMBDA (WINDOW)                                       (* sm "19-Aug-85 16:05")
  (PROG (CONCEPT-NODE CONCEPT-LIST CURRENT-TESTS TEST-LIST TEST-SELECTED)
    (SETQ CONCEPT-LIST (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS)))
  )

```

```

(SETQ CONCEPT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select the concept from which the test should be
deleted"))
(SETQ TEST-LIST (TEST.GET-TEST-SELECTION WINDOW CONCEPT-NODE T))
(SETQ CURRENT-TESTS (fetch TESTS of (TEST.GET-CONCEPT CONCEPT-NODE CONCEPT-LIST)))
(SETQ CURRENT-TESTS (LDIFFERENCE CURRENT-TESTS TEST-LIST))
(replace TESTS of (TEST.GET-CONCEPT CONCEPT-NODE CONCEPT-LIST) with CURRENT-TESTS)
(if (WINDOWPROP WINDOW (QUOTE TEST.DISPLAY-TEST-MODE))
    then (TEST.DISPLAY-CONCEPT-GRAPH (TEST.CREATE-CONCEPT-SPACE-GRAPH CONCEPT-LIST T)
        WINDOW])

```

**(TEST.DETACH-TESTS-MENU**

```

[LAMBDA (WINDOW) (* sm "21-Aug-85 13:09")
  (if (WINDOWPROP WINDOW (QUOTE TEST.TESTS-MENU-WINDOW))
      then (DETACHWINDOW (WINDOWPROP WINDOW (QUOTE TEST.TESTS-MENU-WINDOW)))
          (CLOSEW (WINDOWPROP WINDOW (QUOTE TEST.TESTS-MENU-WINDOW)))
          (WINDOWPROP WINDOW (QUOTE TEST.TESTS-MENU-WINDOW)
              NIL))

```

**(TEST.DISPLAY-CONCEPT-GRAPH**

```

[LAMBDA (GRAPH WINDOW) (* sm "19-Jul-85 16:58")
  (SHOWGRAPH GRAPH WINDOW (QUOTE TEST.LEFT-BUTTON-SELECTION))
  (WINDOWPROP WINDOW (QUOTE COPYBUTTONEVENTFN)
      (QUOTE TEST.COPYBUTTONEVENTFN))

```

**(TEST.DISPLAY-CONCEPT-SPACE-BROWSER**

```

[LAMBDA (CONCEPT-SPACE REGION/POSITION DEPTH INCLUDE-TESTS) (* sm "20-Aug-85 13:39")
  (PROG (GRAPH WINDOW GRAPH-REGION CONCEPT-LIST ROOT-CONCEPT GRAPH-WINDOW-WIDTH GRAPH-WINDOW-HEIGHT)
    (if (NULL CONCEPT-SPACE)
        then (SETQ CONCEPT-SPACE (TEST.GET-CONCEPT-SPACE TEST.DEFAULT-CONCEPT-SPACE-NAME)))
    (SETQ GRAPH (TEST.CREATE-CONCEPT-SPACE-GRAPH (fetch CONCEPTLIST of CONCEPT-SPACE)
        INCLUDE-TESTS
        (fetch ROOTCONCEPT of CONCEPT-SPACE)
        (OR DEPTH TEST.DEFAULT-DEPTH)))
    [SETQ GRAPH-WINDOW-WIDTH (MAX 250 (MIN (IDIFFERENCE SCREENWIDTH 200)
        (fetch WIDTH of (SETQ GRAPH-REGION (GRAPHREGION GRAPH))
            (IDIFFERENCE SCREENHEIGHT 200)
            (IPLUS 15 (fetch HEIGHT of GRAPH-REGION))
        ]
    [SETQ GRAPH-WINDOW-HEIGHT (MAX 120 (MIN (IDIFFERENCE SCREENHEIGHT 200)
        (IPLUS 15 (fetch HEIGHT of GRAPH-REGION))
    [SETQ REGION (if (REGIONP REGION/POSITION)
        then REGION/POSITION
        elseif (POSITIONP REGION/POSITION)
        then (CREATEREGION (fetch XCOORD of REGION/POSITION)
            (fetch YCOORD of REGION/POSITION)
            GRAPH-WINDOW-WIDTH GRAPH-WINDOW-HEIGHT)
        else (GETBOXREGION GRAPH-WINDOW-WIDTH GRAPH-WINDOW-HEIGHT NIL NIL NIL
            (CONCAT "Specify position for " (fetch CONCEPTSPACENAME of CONCEPT-SPACE)
                " browser.")
        (SETQ WINDOW (CREATEW REGION (CONCAT (fetch CONCEPTSPACENAME of CONCEPT-SPACE)
            " Concept Space"))))
    (WINDOWPROP WINDOW (QUOTE TEST.ROOT-CONCEPT)
        (fetch ROOTCONCEPT of CONCEPT-SPACE))
    (WINDOWPROP WINDOW (QUOTE TEST.CONCEPT-SPACE)
        CONCEPT-SPACE)
    (TEST.DISPLAY-CONCEPT-GRAPH GRAPH WINDOW)
    (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS)
        (fetch CONCEPTLIST of CONCEPT-SPACE))
    (WINDOWPROP WINDOW (QUOTE TEST.PROCESS)
        NIL)
    (WINDOWPROP WINDOW (QUOTE TEST.TEST-SELECTION-ENDED-EVENT)
        (CREATE.EVENT))
    (WINDOWPROP WINDOW (QUOTE TEST.NODE-SELECTED-EVENT)
        (CREATE.EVENT "TEST:NODE-SELECTED-EVENT"))
    (WINDOWPROP WINDOW (QUOTE ICONFN)
        (QUOTE TEST.CREATE-ICON-WINDOW))
    (GETPROMPTWINDOW WINDOW 3)
    (ATTACHMENU (TEST.CREATE-CONCEPT-WINDOW-MENU WINDOW)
        WINDOW
        (QUOTE RIGHT)
        (QUOTE JUSTIFY))
    (ATTACHMENU (TEST.CREATE-INTERRUPT-MENU WINDOW)
        WINDOW
        (QUOTE BOTTOM)
        (QUOTE JUSTIFY))
    (RETURN WINDOW])

```

**(TEST.DOCOMMAND**

```

[LAMBDA (ITEM MENU KEY) (* sm "21-Aug-85 13:10")
  (PROG (WINDOW)
    (SETQ WINDOW (MAINWINDOW (WFROMMENU MENU)))
    (SETQ PARENT-ITEM (TEST.FIND-MENU-ITEM ITEM (fetch ITEMS of MENU)))
    (WINDOWPROP WINDOW (QUOTE TEST.PROCESS)
        (ADD.PROCESS [SUBPAIR (QUOTE (WINDOW MENU ITEM PARENT-ITEM))
            (LIST WINDOW MENU ITEM PARENT-ITEM)
            (QUOTE (PROGN (TTYDISPLAYSTREAM (TEST.PROMPT-WINDOW WINDOW))

```

```

(SHADEITEM (QUOTE PARENT-ITEM)
  MENU GRAYSHADE)
(WINDOWPROP WINDOW (QUOTE TEST.UNSHADE-IF-SHADED)
  (QUOTE (SHADEITEM (QUOTE PARENT-ITEM)
    MENU WHITESHADE)))
(CLEARW (TEST.PROMPT-WINDOW WINDOW))
(APPLY* (CADR (QUOTE ITEM))
  WINDOW)
(PRINTOUT (TEST.PROMPT-WINDOW WINDOW)
  T
  (CAR (QUOTE PARENT-ITEM))
  " Completed. ")
(WINDOWPROP WINDOW (QUOTE TEST.UNSHADE-IF-SHADED)
  NIL)
(TEST.DETACH-TESTS-MENU WINDOW)
(SHADEITEM (QUOTE PARENT-ITEM)
  MENU WHITESHADE)
(WINDOWPROP WINDOW (QUOTE TEST.PROCESS)
  NIL)

```

```

(QUOTE WINDOW)
(TEST.PROMPT-WINDOW WINDOW)
(QUOTE NAME)
(CAR ITEM)]

```

**(TEST.EDIT-TEST**

```

[LAMBDA (TEST LOCK/NOLOCK) (* sm "26-Jul-85 15:00")
  (PROG (INSPECTW)
    (if (FIXP TEST)
      then (SETQ TEST (TEST.GET-TEST TEST)))
    (TEST.MARK-AS-CHANGED (fetch TESTID of TEST))
    (if (AND TEST.OBTAIN-LOCK-WHEN-EDIT (NEQ LOCK/NOLOCK (QUOTE NOLOCK)))
      then (if [NOT (TEST.OBTAIN-DATABASE-WRITE-LOCK (LIST (fetch TESTID of TEST)
        then (PRINTOUT T "Can not obtain lock on test number " (fetch TESTID of TEST))
        (RETURN NIL)))
      (SETQ INSPECTW (INSPECT TEST (QUOTE TEST)
        (GETBOXREGION 700 (ITIMES 15 (LENGTH (RECORDFIELDNAMES (QUOTE TEST)
(WINDOWPROP INSPECTW (QUOTE TITLE)
  (CONCAT "TEST " (fetch TESTID of TEST)))
(WINDOWPROP INSPECTW (QUOTE ICONFN)
  (QUOTE TEST.INSPECTW.ICONFN))
(WINDOWPROP INSPECTW (QUOTE STOREFN)
  (LIST (QUOTE LAMBDA)
    (QUOTE (I F N))
    (LIST (QUOTE TEST.MARK-AS-CHANGED)
      (fetch TESTID of TEST))
    (LIST (QUOTE APPLY)
      (KWOTE (WINDOWPROP INSPECTW (QUOTE STOREFN)))
      (QUOTE (LIST I F N))
    (TEST.REPLACE-INSEPECTW-VALUECOMMANDFN INSPECTW)
    (RETURN (fetch TESTID of TEST]))

```

**(TEST.EDIT-TEST-COMMAND**

```

[LAMBDA (WINDOW) (* sm "19-Aug-85 15:00")
  (PROG (TEST-SELECTED TEST-NUMBER CONCEPT-NODE)
    (if (WINDOWPROP WINDOW (QUOTE TEST.DISPLAY-TEST-MODE))
      then (SETQ TEST-SELECTED (TEST.WAIT-FOR-SELECTION WINDOW "Select the test you want to edit"))
      (SETQ TEST-NUMBER (fetch NODEID of TEST-SELECTED)))
    else (SETQ CONCEPT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select a concept which contains the test you
      want to edit."))
      (SETQ TEST-NUMBER (TEST.POP-UP-TESTS-MENU WINDOW CONCEPT-NODE "Select the test that you want to
        edit.")))
    (if (FIXP TEST-NUMBER)
      then (TEST.EDIT-TEST (TEST.GET-TEST TEST-NUMBER]))

```

**(TEST.ERRORP**

```

[LAMBDA (EXPR) (* sm "27-Jun-85 10:25")
  (AND EXPR (LISTP EXPR)
    (EQ (CAR EXPR)
      (QUOTE ERROR!))

```

**(TEST.EVAL-BEFORE-TEST**

```

[LAMBDA (TEST LOCATION) (* sm "21-Aug-85 13:50")
  (if (EQ LOCATION (QUOTE Remote))
    then (TEST.REMOTE-EVAL-FORM (TEST.GET-FIELD-VALUE (QUOTE EVALBEFORE)
      TEST))
    else (TEST.LOCAL-EVAL-FORM (TEST.GET-FIELD-VALUE (QUOTE EVALBEFORE)
      TEST]))

```

**(TEST.EVALUATE-OUTCOME**

```

[LAMBDA (TEST RESULT ACTUAL-ARGUMENTS LOCATION) (* sm "21-Aug-85 13:55")
  (PROG (FORMTOEVAL)
    [SETQ FORMTOEVAL (LIST (QUOTE APPLY)

```



```

(KWOTE (TEST.GET-FIELD-VALUE (QUOTE SUCCESSPREDICATE)
                             TEST))
(KWOTE (LIST RESULT ACTUAL-ARGUMENTS])
(RETURN (if (EQ LOCATION (QUOTE Remote))
            then (TEST.REMOTE-EVAL-FORM FORMTOEVAL)
            else (TEST.LOCAL-EVAL-FORM FORMTOEVAL]))

```

**(TEST.EVALUATE-TESTED-EXPR**

```

[LAMBDA (TEST ACTUAL-ARGUMENTS LOCATION) (* sm "21-Aug-85 13:53")
  (PROG (RESULT EXPRESSION-TO-EVALUATE TIMEOUT.ms)
    (SETQ EXPRESSION-TO-EVALUATE (TEST.GET-FIELD-VALUE (QUOTE EVAEXPR)
                                                         TEST))
    (if [OR (GETD EXPRESSION-TO-EVALUATE)
            (AND (LISTP EXPRESSION-TO-EVALUATE)
                 (EQ (CAR EXPRESSION-TO-EVALUATE)
                     (QUOTE LAMBDA))
                then (SETQ EXPRESSION-TO-EVALUATE (LIST (QUOTE APPLY)
                                                         (KWOTE EXPRESSION-TO-EVALUATE)
                                                         (KWOTE (COPY ACTUAL-ARGUMENTS]
            (SETQ TIMEOUT.ms (TEST.GET-FIELD-VALUE (QUOTE TIMEOUT)
                                                    TEST))
            (if (AND TIMEOUT.ms (EQ (CAR TIMEOUT.ms)
                                     (QUOTE LAMBDA)))
                then (SETQ TIMEOUT.ms (APPLY TIMEOUT.ms ACTUAL-ARGUMENTS)))
            (RETURN (if (EQ LOCATION (QUOTE Remote))
                        then (TEST.REMOTE-EVAL-FORM EXPRESSION-TO-EVALUATE TIMEOUT.ms)
                        else (TEST.PERFORM-TIMED-EVALUATION EXPRESSION-TO-EVALUATE TIMEOUT.ms]))

```

**(TEST.EXECUTE-SELECTED-TESTS-COMMAND**

```

[LAMBDA (WINDOW) (* sm "21-Aug-85 14:11")
  (TEST.EXECUTE-TESTS WINDOW T))

```

**(TEST.EXECUTE-TESTS**

```

[LAMBDA (WINDOW SELECTED-TESTS?) (* sm "21-Aug-85 14:45")
  (PROG (CONCEPT-NODE TEST-LIST TRACE-FILE HARDCOPY-FILE SPECS HARDCOPY-MODE PRETEST-MODE TRACE-MODE LOCATION)
    (SETQ CONCEPT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select concept whoes tests should be executed.))
    (if (NOT SELECTED-TESTS?)
        then [SETQ TEST-LIST (TEST.COLLECT-ALL-TESTS (fetch NODEID of CONCEPT-NODE)
                                                       (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS]
                                                       (TEST.ATTACH-TESTS-MENU WINDOW TEST-LIST)
                                                       (for TEST in TEST-LIST do (TEST.SHADE-TEST TEST WINDOW BLACKSHADE))
            else (SETQ TEST-LIST (TEST.GET-TEST-SELECTION WINDOW CONCEPT-NODE)))
    (SETQ SPECS (TEST.GET-EXECUTION-SPECS))
    (SETQ HARDCOPY-MODE (CAR SPECS))
    (SETQ PRETEST-MODE (CADR SPECS))
    (SETQ TRACE-MODE (CADDR SPECS))
    (SETQ LOCATION (CADDRR SPECS))
    (SETQ TRACE-FILE (OPENFILE TEST,TRACE-FILE-NAME (QUOTE OUTPUT)
                               (QUOTE NEW)))
    (CLOSEF TRACE-FILE)
    (if (EQ PRETEST-MODE (QUOTE Strong-Links))
        then (SETQ TEST-LIST (TEST.GET-STRONG-LINK-CLOSURE TEST-LIST))
              (TEST.DETACH-TESTS-MENU WINDOW)
              (TEST.ATTACH-TESTS-MENU WINDOW TEST-LIST)
              (for TEST in TEST-LIST do (TEST.SHADE-TEST TEST WINDOW BLACKSHADE)))
    (if (NEQ PRETEST-MODE (QUOTE No-Pretests))
        then (SETQ TEST-LIST (TEST.TOPOLOGICAL-ORDER TEST-LIST)))
    (for TEST in TEST-LIST do (TEST.SHADE-TEST TEST WINDOW GRAYSHADE)
                              (PRINTOUT (TEST.PROMPT-WINDOW WINDOW)
                                         T "Performing test number : " TEST T)
                              (TEST.PERFORM-TEST (TEST.GET-TEST TEST)
                                                  NIL LOCATION TRACE-FILE TRACE-MODE))
    (CLOSEF? TRACE-FILE)
    (if (NEQ HARDCOPY-MODE (QUOTE No-Hardcopy))
        then (PRINTOUT (TEST.PROMPT-WINDOW WINDOW)
                       T "Hardcopying outcome of tests.")
             [SETQ HARDCOPY-FILE (TEST.HARDCOPY-TRACE-FILE TRACE-FILE NIL (EQ HARDCOPY-MODE (QUOTE
                                                                                               Failures-Only
                                                                                               ]
             (PRINTOUT (TEST.PROMPT-WINDOW WINDOW)
                       T "Outcomes hardcopy on " HARDCOPY-FILE))
             (PRINTOUT (TEST.PROMPT-WINDOW WINDOW)
                       T "Test trace on file " TRACE-FILE]))

```

**(TEST.FIND-MENU-ITEM**

```

[LAMBDA (ITEM ITEM-LIST) (* sm "19-Jul-85 15:37")
  (COND
    ((NULL ITEM-LIST)
     NIL)
    ((ATOM ITEM-LIST)
     NIL)
    ((FMEMB ITEM ITEM-LIST)
     ITEM)

```

```

([AND (CDDDR (CAR ITEM-LIST))
  (EQ (CAR (CADDR (CAR ITEM-LIST)))
    (QUOTE SUBITEMS))
  (TEST.FIND-MENU-ITEM ITEM (CDR (CADDR (CAR ITEM-LIST)
    (CAR ITEM-LIST)))
  (T (TEST.FIND-MENU-ITEM ITEM (CDR ITEM-LIST)))

```

**(TEST.GENERATE-COMPARE-FUNCTION**

```

[LAMBDA (VAL) (* sm "15-Jun-85 23:33")
  (LIST (QUOTE LAMBDA)
    (QUOTE (RES ARGS))
    (LIST (QUOTE EQUAL)
      (QUOTE RES)
      VAL))

```

**(TEST.GENERATE-INPUT**

```

[LAMBDA (TEST) (* sm "25-Jul-85 17:53")
  (PROG (CURRENT-INPUT)
    (SETQ CURRENT-INPUT (TEST.GET-FIELD-VALUE (QUOTE INPUT)
      TEST))
    (if (EQ (CAR CURRENT-INPUT)
      (QUOTE SYSTEMATIC))
      then [RETURN (TEST.ALL-COMBINATIONS (for ARG-SPEC in (CDR CURRENT-INPUT) collect (
        TEST.LOCAL-EVAL-FORM
        ARG-SPEC]
      else (RETURN (LIST (TEST.LOCAL-EVAL-FORM CURRENT-INPUT))

```

**(TEST.GET-AND-INCREASE-NEXT-TESTID**

```

[LAMBDA NIL (* sm "17-Jul-85 15:12")
  (PROG (FNAME NEXTID)
    (SETQ FNAME (TEST.OPENFILE-OR-WAIT TEST.NAME-OF-FILE-HOLDING-NEXT-TESTID (QUOTE BOTH)))
    (SETQ NEXTID (READ FNAME))
    (if (NOT (FIXP NEXTID))
      then (CLOSEF FNAME)
        (RETURN NIL))
    (SETFILEPTR FNAME 0)
    (PRIN1 (ADD1 NEXTID)
      FNAME)
    (CLOSEF FNAME)
    (RETURN NEXTID))

```

**(TEST.GET-CONCEPT**

```

[LAMBDA (GRAPHNODE CONCEPT-LIST) (* sm "28-Jun-85 18:12")
  (FASSOC (fetch NODEID of GRAPHNODE)
    CONCEPT-LIST))

```

**(TEST.GET-CONCEPT-SPACE**

```

[LAMBDA (NAME) (* sm "16-Aug-85 16:54")
  (if (NULL NAME)
    then (SETQ NAME TEST.DEFAULT-CONCEPT-SPACE-NAME))
  (if (NOT (BOUNDP (QUOTE TEST.CONCEPT-SPACES)))
    then NIL
    else (FASSOC NAME TEST.CONCEPT-SPACES))

```

**(TEST.GET-DEFAULT-FILED-VALUE**

```

[LAMBDA (FIELD-NAME) (* sm "3-Jul-85 09:59")
  (GETTOPVAL (PACK* (QUOTE TEST.DEFAULT.)
    FIELD-NAME))

```

**(TEST.GET-EXECUTION-SPECS**

```

[LAMBDA NIL (* sm "21-Aug-85 12:48")
  (PROG (WINDOW WINDOW1)
    (SETQ TEST.GLOBAL-EXECUTION-SPECS (LIST TEST.DEFAULT-HARDCOPY-MODE TEST.DEFAULT-PRETEST-MODE
      TEST.DEFAULT-TRACE-MODE TEST.DEFAULT-LOCATION))
    (SETQ WINDOW (ADDMENU (create MENU
      ITEMS _ (QUOTE (No-Hardcopy Failures-Only Hardcopy-All))
      WHENSELECTEDFN _ (QUOTE TEST.UPDATE-EXECUTION-SPEC)
      TITLE _ "Hardcopy Mode"
      MENUFONT _ BOLDFONT)
      NIL
      (create POSITION
        XCOORD _ 300
        YCOORD _ 300)))
    (WINDOWPROP WINDOW (QUOTE TEST.SELECTION)
      TEST.DEFAULT-HARDCOPY-MODE)
    (SHADEITEM TEST.DEFAULT-HARDCOPY-MODE (CAR (WINDOWPROP WINDOW (QUOTE MENU)))
      BLACKSHADE WINDOW)
    (SETQ WINDOW1 (ATTACHMENU (create MENU
      ITEMS _ (QUOTE (No-Pretests Weak-Links Strong-Links))
      WHENSELECTEDFN _ (QUOTE TEST.UPDATE-EXECUTION-SPEC)

```

```

                                TITLE _ "Pretests Mode"
                                MENUFONT _ BOLDFONT)
                                WINDOW
                                (QUOTE RIGHT)
                                (QUOTE JUSTIFY)))
(WINDOWPROP WINDOW1 (QUOTE TEST.SELECTION)
  TEST.DEFAULT-PRETEST-MODE)
(SHADEITEM TEST.DEFAULT-PRETEST-MODE (CAR (WINDOWPROP WINDOW1 (QUOTE MENU))))
  BLACKSHADE WINDOW1)
(SETQ WINDOW1 (ATTACHMENU (create MENU
  ITEMS _ (QUOTE (On Off))
  WHENSELECTEDFN _ (QUOTE TEST.UPDATE-EXECUTION-SPEC)
  TITLE _ "Trace mode"
  MENUFONT _ BOLDFONT)

  WINDOW
  (QUOTE RIGHT)
  (QUOTE JUSTIFY)))
(WINDOWPROP WINDOW1 (QUOTE TEST.SELECTION)
  TEST.DEFAULT-TRACE-MODE)
(SHADEITEM TEST.DEFAULT-TRACE-MODE (CAR (WINDOWPROP WINDOW1 (QUOTE MENU))))
  BLACKSHADE WINDOW1)
(SETQ WINDOW1 (ATTACHMENU (create MENU
  ITEMS _ (QUOTE (Local Remote))
  WHENSELECTEDFN _ (QUOTE TEST.UPDATE-EXECUTION-SPEC)
  TITLE _ "Location"
  MENUFONT _ BOLDFONT)

  WINDOW
  (QUOTE RIGHT)
  (QUOTE JUSTIFY)))
(WINDOWPROP WINDOW1 (QUOTE TEST.SELECTION)
  TEST.DEFAULT-LOCATION)
(SHADEITEM TEST.DEFAULT-LOCATION (CAR (WINDOWPROP WINDOW1 (QUOTE MENU))))
  BLACKSHADE WINDOW1)
(ATTACHMENU [create MENU
  ITEMS _ (QUOTE ((" O K")))
  CENTERFLG _ T
  WHENSELECTEDFN _ (QUOTE (LAMBDA (ITEM MENU KEY)
    (SETQ TEST.GLOBAL-EXECUTION-SPECS
      (for W in [CONS (MAINWINDOW (WFROMMENU MENU))
        (ATTACHEDWINDOWS
          (MAINWINDOW (WFROMMENU MENU)
            bind DEFAULT when (SETQ
              DEFAULT
              (WINDOWPROP
                W
              (QUOTE TEST.SELECTION
                )))
        collect DEFAULT)))
    (CLOSEW (MAINWINDOW (WFROMMENU MENU)))
    (NOTIFY.EVENT TEST.EXECUTION-SPECS-EVENT T]

  WINDOW
  (QUOTE BOTTOM)
  (QUOTE JUSTIFY))
(AWAIT.EVENT TEST.EXECUTION-SPECS-EVENT 600000)
(RETURN TEST.GLOBAL-EXECUTION-SPECS])

```

**(TEST.GET-FIELD-VALUE**

```

[LAMBDA (FIELD DATUM DEC)                                     (* sm "3-Jul-85 09:40")
  (PROG (F-VALUE)
    (SETQ F-VALUE (RECORDACCESS FIELD DATUM DEC))
    (if (AND F-VALUE (LISTP F-VALUE)
      (EQ (CAR F-VALUE)
        (QUOTE &))
      (FIXP (CADR F-VALUE)))
      then (RETURN (TEST.GET-FIELD-VALUE FIELD (TEST.GET-TEST (CADR F-VALUE))
        DEC))
      else (RETURN F-VALUE]))

```

**(TEST.GET-LOCKING-USERS**

```

[LAMBDA (TEST-LIST)                                           (* sm "23-Jul-85 13:41")
  (PROG (LOCK-FILE LOCK-INFO USER-LIST INTERSECT-INFO)
    (SETQ LOCK-FILE (TEST.OPENFILE-OR-WAIT TEST.NAME-OF-LOCK-FILE (QUOTE INPUT)))
    (if (NOT (EOFP LOCK-FILE))
      then (SETQ LOCK-INFO (READ LOCK-FILE)))
    (if (EQ TEST-LIST (QUOTE DATABASE))
      then (SETQ USER-LIST (for K in LOCK-INFO collect (CAR K)))
      else (SETQ USER-LIST (for USER-INFO in LOCK-INFO
        when [CDR (SETQ INTERSECT-INFO (CONS (CAR USER-INFO)
          (if (EQ (CADR USER-INFO)
            (QUOTE DATABASE))
            then TEST-LIST
            else (INTERSECTION TEST-LIST
              (CDR USER-INFO)
            collect INTERSECT-INFO)))
        (CLOSEF LOCK-FILE)

```

(RETURN USER-LIST))

**(TEST.GET-NEXT-AVAILABLE-TESTID**

(\* sm "17-Jul-85 14:51")

```
[LAMBDA NIL
  (PROG (FNAME NEXTID)
    (SETQ FNAME (TEST.OPENFILE-OR-WAIT TEST.NAME-OF-FILE-HOLDING-NEXT-TESTID (QUOTE INPUT)
                                         (QUOTE OLD)))
    (SETQ NEXTID (READ FNAME))
    (CLOSEF FNAME)
    (if (FIXP NEXTID)
        then (RETURN NEXTID)
        else (RETURN NIL)))
```

**(TEST.GET-STRONG-LINK-CLOSURE**

(\* sm "21-Aug-85 10:07")

```
[LAMBDA (TEST-SET)
  (PROG (OLD NEW LAST)
    (SETQ OLD TEST-SET)
    (SETQ LAST TEST-SET)
  LOOP
    (SETQ NEW NIL)
    [for TEST in LAST do (for STRONG-PRETEST in [CDR (FASSOC (QUOTE STRONG)
                                                              (TEST.GET-FIELD-VALUE (QUOTE PRETESTS)
                                                              (TEST.GET-TEST TEST]
                                                              when (AND (NOT (FMEMB STRONG-PRETEST NEW))
                                                              (NOT (FMEMB STRONG-PRETEST OLD)))
                                                              do (SETQ NEW (CONS STRONG-PRETEST NEW]
    (if NEW
        then (SETQ OLD (APPEND OLD NEW))
              (SETQ LAST NEW)
              (GO LOOP)
        else (RETURN OLD)])
```

**(TEST.GET-TEST**

(\* sm "21-Aug-85 09:45")

```
[LAMBDA (TEST-NUMBER)
  (if (AND TEST-NUMBER (FIXP TEST-NUMBER)
          (GREATERP TEST-NUMBER 0))
      then (PROG (TEST TEMP-LIST-OF-TESTS TEST-POINTER)
                (TEST.MAKE-BOUND (QUOTE TEST.LIST-OF-TESTS))
                (SETQ TEMP-LIST-OF-TESTS TEST.LIST-OF-TESTS)
                (while (AND TEMP-LIST-OF-TESTS (NOT TEST-POINTER))
                  do (if (EQ (CAAR TEMP-LIST-OF-TESTS)
                              TEST-NUMBER)
                      then (SETQ TEST-POINTER TEMP-LIST-OF-TESTS)
                      else (pop TEMP-LIST-OF-TESTS)))
                (if (NULL TEST-POINTER)
                    then (RETURN (TEST.TEST-FAULT TEST-NUMBER))
                    else (SETQ TEST (CAR TEST-POINTER))
                       (RPLACA TEST-POINTER (CAR TEST.LIST-OF-TESTS))
                       (RPLACA TEST.LIST-OF-TESTS TEST)
                       (RETURN TEST]))
```

**(TEST.GET-TEST-SELECTION**

(\* sm "19-Aug-85 15:54")

```
[LAMBDA (WINDOW CONCEPT-NODE NODE-ONLY-FLAG)
  (PROG (MENU TEST-LIST MENU-WINDOW)
    (SETQ TEST-LIST (SORT [if NODE-ONLY-FLAG
                             then [fetch TESTS of (FASSOC (fetch NODEID of CONCEPT-NODE)
                                                            (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS)
                                                            else (TEST.COLLECT-ALL-TESTS (fetch NODEID of CONCEPT-NODE)
                                                            (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS)
                                                            (QUOTE ILESSP)))]
                             (WINDOWPROP WINDOW (QUOTE TEST.SELECTED-TESTS)
                             NIL)
    (SETQ MENU-WINDOW (TEST.ATTACH-TESTS-MENU WINDOW (CONS (QUOTE OK)
                                                            TEST-LIST)))
    (PRINTOUT (TEST.PROMPT-WINDOW WINDOW)
              T "Select tests from menu. when done select <ok> . ")
    (AWAIT.EVENT (WINDOWPROP WINDOW (QUOTE TEST.TEST-SELECTION-ENDED-EVENT)))
    (RETURN (WINDOWPROP WINDOW (QUOTE TEST.SELECTED-TESTS)
                            NIL]))
```

**(TEST.HARDCOPY-ALL-TESTS-COMMAND**

(\* sm "25-Jul-85 16:30")

```
[LAMBDA (WINDOW)
  (PROG (CONCEPT-NODE)
    (SETQ CONCEPT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select concept of which tests will be hardcopied")
    (TEST.HARDCOPY-TESTS TEST.DEFAULT-HARDCOPY-DEVICE (TEST.COLLECT-ALL-TESTS (fetch NODEID of
                                                                                  CONCEPT-NODE
                                                                                  )
                                                                                  (WINDOWPROP WINDOW (QUOTE
                                                                                  TEST.LIST-OF-CONCEPTS
                                                                                  )))
    NIL TEST.NEWPAGE-BEFORE-HARDCOPY-TEST])
```

**(TEST.HARDCOPY-ONE-TEST**

```

[LAMBDA (TEST FILE NEW-PAGE)                                (* sm "18-Jul-85 12:16")
  (if NEW-PAGE
    then (PRINTOUT FILE .PAGE))
  (PRINTOUT FILE T "===== " T .FONT
    BIGFONT "Test number " (fetch TESTID of TEST)
    T)
  (for F in (RECORDFIELDNAMES (QUOTE TEST)) do (PRINTOUT FILE .FONT BIGFONT F " : " .FONT SYSTEMFONT .PPF
    (RECORDACCESS F TEST)
    T))

```

**(TEST.HARDCOPY-SELECTED-TESTS-COMMAND**

```

[LAMBDA (WINDOW)                                            (* sm "25-Jul-85 16:31")
  (PROG (CONCEPT-NODE TEST-LIST)
    (SETQ CONCEPT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select concept of which tests will be hardcopied")
    )
    (SETQ TEST-LIST (TEST.GET-TEST-SELECTION WINDOW CONCEPT-NODE))
    (if TEST-LIST
      then (TEST.HARDCOPY-TESTS TEST.DEFAULT-HARDCOPY-DEVICE TEST-LIST NIL
        TEST.NEWPAGE-BEFORE-HARDCOPY-TEST))

```

**(TEST.HARDCOPY-TESTS**

```

[LAMBDA (FILE-NAME TESTS-LIST-OR-LOW-LIMIT HIGH-LIMIT NEW-PAGE) (* sm "24-Jul-85 14:46")
  (PROG (F LOW HIGH THERMOMETER)
    (SETQ F (OPENFILE FILE-NAME (QUOTE OUTPUT)
      (QUOTE NEW)))
    (if (AND TESTS-LIST-OR-LOW-LIMIT (LISTP TESTS-LIST-OR-LOW-LIMIT))
      then (if (AND TEST.DISPLAY-THERMOMETERS (CDR TESTS-LIST-OR-LOW-LIMIT))
        then (SETQ THERMOMETER (CREATE-THERMOMETER (FLENGTH TESTS-LIST-OR-LOW-LIMIT)
          NIL
          (CREATEREGION 900 0 100 750)
          (for TEST-NUMBER in (SORT TESTS-LIST-OR-LOW-LIMIT) as COUNTER from 1
            do (UPDATE-THERMOMETER COUNTER THERMOMETER)
              (TEST.HARDCOPY-ONE-TEST (TEST.GET-TEST TEST-NUMBER)
                F NEW-PAGE))
          else (if (NULL TESTS-LIST-OR-LOW-LIMIT)
            then (SETQ LOW 1)
              (SETQ HIGH (SUB1 (TEST.GET-NEXT-AVAILABLE-TESTID)))
            else (SETQ LOW TESTS-LIST-OR-LOW-LIMIT)
              (SETQ HIGH HIGH-LIMIT))
          (if (AND TEST.DISPLAY-THERMOMETERS (GREATERP HIGH LOW))
            then (SETQ THERMOMETER (CREATE-THERMOMETER HIGH LOW (CREATEREGION 900 0 100 750)
              (for I from LOW to HIGH as COUNTER from 1 do (UPDATE-THERMOMETER COUNTER THERMOMETER)
                (TEST.HARDCOPY-ONE-TEST (TEST.GET-TEST TEST-NUMBER
                  I)
                  F NEW-PAGE)))
            (if THERMOMETER
              then (CLOSEW THERMOMETER))
            (CLOSEF F])

```

**(TEST.HARDCOPY-TRACE-FILE**

```

[LAMBDA (TRACE-FILE OUTPUT-FILE FAILURES-ONLY)            (* sm "24-Jul-85 16:53")
  (PROG (OUT-FILE IN-FILE TEST-INFO TRACE-THERMOMETER)
    (SETQ OUT-FILE (OPENFILE (OR OUTPUT-FILE TEST.DEFAULT-HARDCOPY-DEVICE)
      (QUOTE OUTPUT)
      (QUOTE NEW)))
    (SETQ IN-FILE (OPENFILE (OR TRACE-FILE TEST.TRACE-FILE-NAME)
      (QUOTE INPUT)
      (QUOTE OLD)))
    (if TEST.DISPLAY-THERMOMETERS
      then (SETQ TRACE-THERMOMETER (CREATE-THERMOMETER (GETEOFPTR IN-FILE)
        0
        (CREATEREGION 900 0 100 750)
        "Trace hardcopy")))
    [while (NOT (EOFP IN-FILE)) do (SETQ TEST-INFO (READ IN-FILE))
      (UPDATE-THERMOMETER (GETFILEPTR IN-FILE)
        TRACE-THERMOMETER)
      (if (OR (NOT FAILURES-ONLY)
        (EQ (CAR (CDDDDR TEST-INFO))
          (QUOTE FAILURE)))
        then (PRINTOUT OUT-FILE T
          "-----" T .FONT BIGFONT "OUTCOME OF EXPERIMENT NUMBER : " (CAR TEST-INFO)
          T .FONT BIGFONT "Time executed : " .FONT SYSTEMFONT
          (GDATE (CAR TEST-INFO))
          T .FONT BIGFONT "Test ID : " .FONT SYSTEMFONT
          (CADR TEST-INFO)
          T .FONT BIGFONT "Actual arguments: " .FONT SYSTEMFONT)
        (for ARG in (CADDR TEST-INFO)
          do (PRINTOUT OUT-FILE T " " .PPF ARG))
        (PRINTOUT OUT-FILE .FONT BIGFONT T "Result : " .FONT

```

```

                                SYSTEMFONT .PPF (CADDR TEST-INFO)
                                T .FONT BIGFONT "Test was " (CAR (CDDDDR TEST-INFO])

    (if TRACE-THERMOMETER
      then (CLOSEW TRACE-THERMOMETER))
    (CLOSEF OUT-FILE)
    (CLOSEF IN-FILE)
    (RETURN OUT-FILE])

```

**(TEST.INIT**

```

[LAMBDA NIL (* sm "19-Aug-85 17:28")
  (TEST.ADD-ITEM-TO-BACKGROUND-MENU "Tester" NIL "Move cursor to the right to select one of the subitems"
    TEST.BACKGROUND-MENU-SUBITEMS)
  (TEST.LOAD-CONCEPT-SPACE (TEST.CANONICAL-CONCEPT-SPACE-FILE-NAME TEST.DEFAULT-CONCEPT-SPACE-NAME)])

```

**(TEST.INSPECTW.ICONFN**

```

[LAMBDA (WINDOW ICON) (* sm "25-Jul-85 14:57")
  [COND
    ((NULL ICON)
     (SETQ ICON (TITLEDICONW (create TITLEDICON
                                   ICON _ TEST.INSPECTW.ICON
                                   MASK _ TEST.INSPECTW.MASK
                                   TITLEREG _ (CREATEREGION 4 6 65 30))
                        (CONCAT (WINDOWPROP WINDOW (QUOTE TITLE))
                               "
                               INSPECTOR")
                        (FONTCREATE (QUOTE GACHA)
                                   8]
     ICON])

```

**(TEST.INSPECTW.VALUECOMMANDFN**

```

[LAMBDA (VALUE PROPERTY DATUM WINDOW) (* sm "26-Jul-85 15:09")
  (if (AND (LISTP VALUE)
           (EQ (CAR VALUE)
               (QUOTE &))
      (FIXP (CADR VALUE)))
    then [MENU (create MENU
                      ITEMS _ (LIST (LIST (CONCAT "Edit test " (CADR VALUE))
                                         (LIST (QUOTE TEST.EDIT-TEST)
                                               (CADR VALUE))
    else (TEST.MARK-AS-CHANGED (fetch TESTID of DATUM))
      (APPLY* (QUOTE DEFAULT.INSPECTW.VALUECOMMANDFN)
              VALUE PROPERTY DATUM WINDOW])

```

**(TEST.KILL-PROCESS**

```

[LAMBDA (WINDOW) (* sm "24-Jul-85 14:25")
  (COND
    ((WINDOWPROP WINDOW (QUOTE TEST.PROCESS))
     (DEL.PROCESS (WINDOWPROP WINDOW (QUOTE TEST.PROCESS)))
     (FLASHWINDOW WINDOW 3)
     (CLEARW (TEST.PROMPT-WINDOW WINDOW))
     (printout (TEST.PROMPT-WINDOW WINDOW)
              "User interrupt. TEST process aborted.")
     (for w in (ATTACHEDWINDOWS WINDOW) when (WINDOWPROP W (QUOTE TEST.DETACH)) do (DETACHWINDOW W)
              (CLOSEW W))
     (WINDOWPROP WINDOW (QUOTE TEST.PROCESS)
                      NIL)
     (WINDOWPROP WINDOW (QUOTE TEST.TESTS-MENU-WINDOW)
                      NIL)
     (EVAL (WINDOWPROP WINDOW (QUOTE TEST.UNSHADE-IF-SHADED]))

```

**(TEST.LEFT-BUTTON-SELECTION**

```

[LAMBDA (SELECTED-OBJ WINDOW) (* sm "19-Aug-85 14:09")
  (WINDOWPROP WINDOW (QUOTE TEST.CONCEPT-SELECTED)
               SELECTED-OBJ)
  (SETQ TEST.WINDOW-OF-LAST-SELECTION WINDOW)
  (NOTIFY.EVENT TEST.GLOBAL-CONCEPT-NODE-SELECTED-EVENT])

```

**(TEST.LOAD-CONCEPT-SPACE**

```

[LAMBDA (CONCEPT-SPACE-FILE-NAME) (* sm "16-Aug-85 17:15")
  (PROG (FULL-NAME CONCEPTSPACE)
    (SETQ FULL-NAME (OPENFILE CONCEPT-SPACE-FILE-NAME (QUOTE INPUT)
                             (QUOTE OLD)))
    (SETQ CONCEPTSPACE (READ FULL-NAME))
    (CLOSEF FULL-NAME)
    (TEST.ADD-CONCEPT-SPACE-TO-CONCEPT-SPACES CONCEPTSPACE)
    [PUTPROP (fetch CONCEPTSPACENAME of CONCEPTSPACE)
             (QUOTE CONCEPTFILE)
             (PACKFILENAME (QUOTE HOST)
                           (FILENAMEFIELD FULL-NAME (QUOTE HOST))
                           (QUOTE DIRECTORY)
                           (FILENAMEFIELD FULL-NAME (QUOTE DIRECTORY))

```

```

      (QUOTE NAME)
      (FILENAMEFIELD FULL-NAME (QUOTE NAME))
      (QUOTE EXTENSION)
      (FILENAMEFIELD FULL-NAME (QUOTE EXTENSION])
    (RETURN FULL-NAME])

```

**(TEST.LOAD-CONCEPT-SPACE-COMMAND**

```

[LAMBDA NIL (* sm "16-Aug-85 17:52")
  (PROG (FNAME)
    [SETQ FNAME (MKATOM (PROMPTFORWORD "Enter concept space file name :
                                " NIL NIL PROMPTWINDOW NIL (QUOTE TTY]
    (TEST.LOAD-CONCEPT-SPACE FNAME])

```

**(TEST.LOCAL-EVAL-FORM**

```

[LAMBDA (FORM) (* sm "10-Jul-85 13:44")
  (PROG (OLD-HELPFLAG RESULT ERR)
    (SETQ OLD-HELPFLAG (GETTOPVAL (QUOTE HELPFLAG)))
    (SETTOPVAL (QUOTE HELPFLAG)
      NIL)
    (SETQ RESULT (ERRORSET FORM (QUOTE NOBREAK)))
    (SETTOPVAL (QUOTE HELPFLAG)
      OLD-HELPFLAG)
    [if (NULL RESULT)
      then (SETQ ERR (ERRORN))
          (SETQ RESULT (LIST (LIST (QUOTE ERROR!)
                                (CAR ERR)
                                (ERRORSTRING (CAR ERR))
                                (CADR ERR))
          (RETURN (CAR RESULT])

```

**(TEST.MAKE-BOUND**

```

[LAMBDA (VARNAME INIT-VALUE) (* sm "18-Jul-85 10:15")
  (if (NOT (BOUNDP VARNAME))
    then (SET VARNAME INIT-VALUE])

```

**(TEST.MARK-AS-CHANGED**

```

[LAMBDA (TEST-NUMBER) (* sm "19-Jul-85 16:24")
  (TEST.MAKE-BOUND (QUOTE TEST.LIST-OF-MODIFIED-TESTS))
  (pushnew TEST.LIST-OF-MODIFIED-TESTS TEST-NUMBER])

```

**(TEST.OBTAIN-DATABASE-WRITE-LOCK**

```

[LAMBDA (TEST-LIST) (* sm "23-Jul-85 12:44")
  (PROG (LOCK-FILE USER-NAME LOCK-INFO RETURN-INFO CURRENT-USER-INFO)
    (SETQ USER-NAME (MKATOM (FULLUSERNAME)))
    (SETQ LOCK-FILE (TEST.OPENFILE-OR-WAIT TEST.NAME-OF-LOCK-FILE (QUOTE BOTH)))
    (if (NULL TEST-LIST)
      then (RETURN NIL))
    (if (NOT (EOFP LOCK-FILE))
      then (SETQ LOCK-INFO (READ LOCK-FILE)))
    [if (EQ TEST-LIST (QUOTE DATABASE))
      then

```

(\* This case is for the option of locking the entire database. The only locking user that is allowed is the current user)

```

      (if (OR (NULL LOCK-INFO)
        (AND (EQP (LENGTH LOCK-INFO)
          1)
          (EQ (CAAR LOCK-INFO)
            USER-NAME)))
        then

```

(\* The current user is the only one who lock tests. We can replace the list of tests that he locked with the single word DATABASE)

```

          [SETQ LOCK-INFO (LIST (LIST USER-NAME (QUOTE DATABASE]
          (SETQ RETURN-INFO (QUOTE DATABASE))
        else (SETQ RETURN-INFO NIL))
      elseif (AND (EQP (LENGTH LOCK-INFO)
        1)
        (EQ (CADAR LOCK-INFO)
          (QUOTE DATABASE)))
        then

```

(\* In this case the user wants to lock some tests, but somebody locked the whole data-base; If this is the user, we can consider all tests as locked; If this is another user we must consider all tests as unlocked;)

```

      (if (EQ (CAAR LOCK-INFO)
        USER-NAME)
        then (SETQ RETURN-INFO TEST-LIST)
        else (SETQ RETURN-INFO NIL))
      else (SETQ TEST-LIST (TEST.SETIFY TEST-LIST))
      [SETQ RETURN-INFO (LDIFFERENCE TEST-LIST (for USER-INFO in LOCK-INFO

```

```

when (NEQ (CAR USER-INFO)
          USER-NAME)
join (COPY (CDR USER-INFO)

```

(\* The return-info will contain all the tests of the test list which can be considered as locked after the return of this function.)

```

(if (SETQ CURRENT-USER-INFO (FASSOC USER-NAME LOCK-INFO))
    then [RPLACD CURRENT-USER-INFO (TEST.SETIFY (APPEND RETURN-INFO (CDR CURRENT-USER-INFO)
    else (SETQ LOCK-INFO (CONS (CONS USER-NAME RETURN-INFO)
                              LOCK-INFO)]

```

(\* At the end of this if clause, the LOCK-INFO variable will contain the current lock information which should be written on the lockfile)

```

(SETFILEPTR LOCK-FILE 0)
(PRIN2 LOCK-INFO LOCK-FILE)
(CLOSEF LOCK-FILE)

```

(\* There can be garbage left at the end, but this doesn't disturb us since it will not be read anyway.)

```

(RETURN RETURN-INFO))

```

## (TEST.OBTAIN-LOCK-COMMAND

(\* sm "21-Aug-85 16:05")

```

[LAMBDA (WINDOW SELECTED)
  (PROG (CONCEPT-NODE TEST-LIST)
    (SETQ CONCEPT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select concept whoes tests should be locked.")
    (if (NOT SELECTED)
        then [SETQ TEST-LIST (TEST.COLLECT-ALL-TESTS (fetch NODEID of CONCEPT-NODE)
              (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS]
        else (SETQ TEST-LIST (TEST.GET-TEST-SELECTION WINDOW CONCEPT-NODE)))
    (SETQ LOCKED-TESTS (TEST.OBTAIN-DATABASE-WRITE-LOCK TEST-LIST))
    (if (ILESSP (FLENGTH LOCKED-TESTS)
              (FLENGTH TEST-LIST))
        then (FLASHWINDOW (TEST.PROMPT-WINDOW WINDOW)
                          2)
              (PRINTOUT (TEST.PROMPT-WINDOW WINDOW)
                        T "Tests " LOCKED-TESTS " are now locked by you. The other tests are locked as
                        followed: " T (TEST.GET-LOCKING-USERS (LDIFFERENCE TEST-LIST LOCKED-TESTS)))
              (if (MENU (create MENU
                              ITEMS _ (QUOTE ("Send Automatic release requests" T)
                              ("Ignore " NIL)))
                  MENUFONT _ BIGFONT))
              then (TEST.SEND-RELEASE-REQUESTS (LDIFFERENCE TEST-LIST LOCKED-TESTS)))
    else (PRINTOUT (TEST.PROMPT-WINDOW WINDOW)
                  T "All requested tests are locked."))

```

## (TEST.OBTAIN-LOCK-ON-SELECTED-TESTS-COMMAND

(\* sm "21-Aug-85 15:48")

```

[LAMBDA (WINDOW)
  (TEST.OBTAIN-LOCK-COMMAND WINDOW T)]

```

## (TEST.OPENFILE-OR-WAIT

[LAMBDA (FILE ACCESS RECOG PARAMETERS OPTIONAL MAX-WAITING-TIME.ms) (\* sm "20-Aug-85 16:54")

```

(PROG (F)
  (if (NULL MAX-WAITING-TIME.ms)
      then (SETQ MAX-WAITING-TIME.ms 5000))
  (for II from 0 to MAX-WAITING-TIME.ms by 1000 while [TEST.ERRORP (SETQ F (TEST.LOCAL-EVAL-FORM
                                                                    (LIST (QUOTE OPENFILE)
                                                                    (KWOTE FILE)
                                                                    (KWOTE ACCESS)
                                                                    (KWOTE RECOG)
                                                                    (KWOTE PARAMETERS)
                                                                    (KWOTE OPTIONAL]

    do (DISMISS 1000))
  (if (NOT (TEST.ERRORP F))
      then (RETURN F))

```

## (TEST.PERFORM-TEST

(\* sm "21-Aug-85 14:01")

```

[LAMBDA (TEST TIMES LOCATION TRACE-FILE TRACE-MODE)
  (PROG (TIMES-THERMOMETER)
    (if (NULL TIMES)
        then (SETQ TIMES (TEST.GET-FIELD-VALUE (QUOTE TIMES)
          TEST)))
    (if (NULL TIMES)
        then (SETQ TIMES 1))
    (if (NULL LOCATION)
        then (SETQ LOCATION TEST.DEFAULT-LOCATION))
    (if (NULL TRACE-FILE)
        then (SETQ TRACE-FILE (OPENFILE TEST.TRACE-FILE-NAME (QUOTE OUTPUT)
          (QUOTE NEW)))
        (CLOSEF TRACE-FILE))
    (if (NULL TRACE-MODE)
        then (SETQ TRACE-MODE TEST.DEFAULT-TRACE-MODE))

```



```

(if (AND (GREATERP TIMES 1)
  TEST.DISPLAY-THERMOMETERS)
  then (SETQ TIMES-THERMOMETER (CREATE-THERMOMETER TIMES 0 (CREATEREGION 900 0 100 750)
    "Iterations"))
[for I1 from 1 to TIMES
  do (if (AND (GREATERP TIMES 1)
    TEST.DISPLAY-THERMOMETERS)
    then (UPDATE-THERMOMETER I1 TIMES-THERMOMETER))
  (PROG (LIST-OF-ACTUAL-ARGUMENTS ARGUMENTS-THERMOMETER)
    (TEST.EVAL-BEFORE-TEST TEST LOCATION)
    (SETQ LIST-OF-ACTUAL-ARGUMENTS (TEST.GENERATE-INPUT TEST))
    (if (AND TEST.DISPLAY-THERMOMETERS (CDR LIST-OF-ACTUAL-ARGUMENTS))
      then (SETQ ARGUMENTS-THERMOMETER (CREATE-THERMOMETER (FLENGTH LIST-OF-ACTUAL-ARGUMENTS
        )
        0
        (CREATEREGION 800 0 100 750)
        "input"))))
    [for ACTUAL-ARGUMENTS in LIST-OF-ACTUAL-ARGUMENTS as INPUT-NUM from 0
      do (if (AND TEST.DISPLAY-THERMOMETERS (CDR LIST-OF-ACTUAL-ARGUMENTS))
        then (UPDATE-THERMOMETER INPUT-NUM ARGUMENTS-THERMOMETER))
        (PROG (RESULT OUTCOME EXPRESSION-TO-EVALUATE)
          (if (EQ TRACE-MODE (QUOTE On))
            then (TEST.PRINT-TRACE-INFO TRACE-FILE (LIST (IDATE)
              (fetch TESTID of TEST)
              ACTUAL-ARGUMENTS)))
            (TEST.PRINT-ON-TRACE-FILE (SETQ RESULT (TEST.EVALUATE-TESTED-EXPR TEST
              ACTUAL-ARGUMENTS LOCATION))
              TRACE-FILE T TRACE-MODE)
            (TEST.PRINT-ON-TRACE-FILE (SETQ OUTCOME (TEST.EVALUATE-OUTCOME TEST RESULT
              ACTUAL-ARGUMENTS LOCATION))
              TRACE-FILE T TRACE-MODE)
            (TEST.CLEANUP-AFTER-TEST TEST RESULT ACTUAL-ARGUMENTS LOCATION)
            (if (EQ TRACE-MODE (QUOTE Off))
              then (if (EQ OUTCOME (QUOTE FAILURE))
                then (TEST.PRINT-TRACE-INFO TRACE-FILE
                  (LIST (IDATE)
                    (fetch TESTID of TEST)
                    ACTUAL-ARGUMENTS RESULT OUTCOME]
                (if ARGUMENTS-THERMOMETER
                  then (CLOSEW ARGUMENTS-THERMOMETER]
            (if TIMES-THERMOMETER
              then (CLOSEW TIMES-THERMOMETER))
            (RETURN TRACE-FILE])

```

**(TEST.PERFORM-TIMED-EVALUATION**

(\* sm "22-Jul-85 19:24")

```

[LAMBDA (FORM TIMEOUT.ms)
  (if TIMEOUT.ms
    then (PROG (PROCESS EVENT TIMER)
      (SETQ EVENT (CREATE.EVENT))
      (SETQ TEST.GLOBAL-RESULT-OF-TIMED-EVALUATION NIL)
      (SETQ TIMER (SETUPTIMER (IPLUS TIMEOUT.ms 1000)))
      [SETQ PROCESS (ADD.PROCESS (SUBPAIR (QUOTE (FORM EVENT))
        (LIST FORM EVENT)
        (QUOTE (PROGN (SETQ TEST.GLOBAL-RESULT-OF-TIMED-EVALUATION
          (TEST.LOCAL-EVAL-FORM (QUOTE FORM)))
          (NOTIFY.EVENT EVENT]
        (if (EQUAL (AWAIT.EVENT EVENT TIMER T)
          "{time interval expired}")
          then (DEL.PROCESS PROCESS)
            (RETURN (QUOTE (ERROR! TIMEEXPIRED)))
          else (RETURN TEST.GLOBAL-RESULT-OF-TIMED-EVALUATION)))
      else (TEST.LOCAL-EVAL-FORM FORM])

```

**(TEST.POP-UP-CONCEPT-SPACES-MENU**

(\* sm "19-Aug-85 09:36")

```

[LAMBDA NIL
  (MENU (create MENU
    ITEMS _ (CONS (QUOTE ("Quit" NIL))
      (for C in TEST.CONCEPT-SPACES collect (fetch (CONCEPTSPACE CONCEPTSPACENAME)
        of C)))
    MENUFONT _ BIGFONT])

```

**(TEST.POP-UP-TESTS-MENU**

(\* sm "19-Aug-85 10:17")

```

[LAMBDA (WINDOW CONCEPT-NODE MESSAGE LOCAL-TESTS-ONLY)
  (PROG (TEST-LIST MENU)
    [SETQ TEST-LIST (if LOCAL-TESTS-ONLY
      then [fetch TESTS of (FASSOC (fetch NODEID of CONCEPT-NODE)
        (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS]
      else (TEST.COLLECT-ALL-TESTS (fetch NODEID of CONCEPT-NODE)
        (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS]
    (if TEST-LIST
      then (if MESSAGE
        then (PRINTOUT (TEST.PROMPT-WINDOW WINDOW)
          T MESSAGE))
        [SETQ MENU (create MENU

```

```

ITEMS _ (SORT TEST-LIST)
MENUFONT _ BIGFONT
CENTERFLG _ T
MENUROWS _ (FIX (SQRT (FLENGTH TEST-LIST)
(RETURN (MENU MENU])

```

**(TEST.PRINT-ON-TRACE-FILE**

```

[LAMBDA (SEXPR FULLFILENAME RETREAT? TRACE-MODE) (* sm "21-Aug-85 13:43")
  (if (EQ TRACE-MODE (QUOTE On))
    then (OPENFILE FULLFILENAME (QUOTE BOTH))
          (SETFILEPTR FULLFILENAME (if RETREAT?
                                         then (SUB1 (GETEOFPTR FULLFILENAME))
                                         else (GETEOFPTR FULLFILENAME)))
          (PRIN2 SEXPR FULLFILENAME)
          (PRIN1 " ") FULLFILENAME)
    (CLOSEF FULLFILENAME]))

```

**(TEST.PRINT-TEST-OUTCOME**

```

[LAMBDA (TEST-INFO FILE) (* sm "3-Jul-85 12:35")
  (PRINTOUT FILE T "-----" T .FONT
    BIGFONT "OUTCOME OF TEST NUMBER : " (CAR TEST-INFO)
    T .FONT BOLDFONT "Actual arguments: " .FONT SYSTEMFONT)
  (for ARG in (CADR TEST-INFO) do (PRINTOUT FILE T " " .PPF ARG))
  (PRINTOUT FILE .FONT BOLDFONT T "Result : " .FONT SYSTEMFONT .PPF (CADDR TEST-INFO)
    T .FONT BIGFONT "Test was " (CADDRR TEST-INFO))

```

**(TEST.PRINT-TRACE-INFO**

```

[LAMBDA (TRACE-FILE INFO) (* sm "21-Aug-85 13:30")
  (OPENFILE TRACE-FILE (QUOTE APPEND)
    (QUOTE OLD))
  (PRINTOUT TRACE-FILE T INFO)
  (CLOSEF TRACE-FILE])

```

**(TEST.PROMPT-WINDOW**

```

[LAMBDA (WINDOW) (* edited: "29-Mar-85 16:07")
  (CAR (WINDOWPROP WINDOW (QUOTE PROMPTWINDOW]))

```

**(TEST.RELEASE-DATABASE-WRITE-LOCK**

```

[LAMBDA (TEST-LIST) (* sm "23-Jul-85 14:08")
  (PROG (LOCK-FILE USER-NAME LOCK-INFO RETURN-INFO CURRENT-USER-INFO NEW-USER-INFO)
    (SETQ USER-NAME (MKATOM (FULLUSERNAME)))
    (SETQ LOCK-FILE (TEST.OPENFILE-OR-WAIT TEST.NAME-OF-LOCK-FILE (QUOTE BOTH)))
    (if (NULL TEST-LIST)
      then (RETURN NIL))
    (if (NOT (EOF LOCK-FILE))
      then (SETQ LOCK-INFO (READ LOCK-FILE)))
    (if (EQ TEST-LIST (QUOTE DATABASE))
      then

```

(\* This case is for the option of locking the entire database. The only locking user that is allowed is the current user)

```

      (if (OR (NEQ (LENGTH LOCK-INFO)
                  1)
            (NEQ (CAAR LOCK-INFO)
                  USER-NAME)
            (NEQ (CADAR LOCK-INFO)
                  (QUOTE DATABASE)))
        then

```

(\* The Data-base Is Not Locked By The Current User -  
So It Can Not Be Released)

```

      (SETQ RETURN-INFO NIL)
    else (SETQ RETURN-INFO (QUOTE DATABASE))
      (SETQ LOCK-INFO NIL))
    elseif (AND (EQP (LENGTH LOCK-INFO)
                    1)
              (EQ (CADAR LOCK-INFO)
                  (QUOTE DATABASE)))
      then

```

(\* The User Wants To Release A Set Of Tests, But The Whole Database Is Locked, Either By The User Or By Another User;)

```

      (SETQ RETURN-INFO NIL)
    else

```

(\* The Default Case: Return-info Will Contain The List Of Tests That Actually Were Held By The User And Are Now Released %. Lock-info Will Be Updated And Written To The File)

```

      (SETQ TEST-LIST (TEST.SETIFY TEST-LIST))
      (SETQ CURRENT-USER-INFO (FASSOC USER-NAME LOCK-INFO))

```

```

(if (NULL CURRENT-USER-INFO)
  then (SETQ RETURN-INFO NIL)
  else (for TEST in (CDR CURRENT-USER-INFO) do (if (FMEMB TEST TEST-LIST)
    then (push RETURN-INFO TEST)
    else (push NEW-USER-INFO TEST)))
(RPLACD CURRENT-USER-INFO NEW-USER-INFO)))

```

(\* At the end of this if clause, the LOCK-INFO variable will contain the current lock information which should be written on the lockfile)

```

(SETFILEPTR LOCK-FILE 0)
(PRIN2 LOCK-INFO LOCK-FILE)
(PRIN1 " " LOCK-FILE)
(CLOSEF LOCK-FILE)

```

(\* There can be garbage left at the end, but this doesn't disturb us since it will not be read anyway.)

```
(RETURN RETURN-INFO))
```

## (TEST.RELEASE-LOCK-COMMAND

```

[LAMBDA (WINDOW SELECTED) (* sm "21-Aug-85 16:15")
  (PROG (CONCEPT-NODE TEST-LIST)
    (SETQ CONCEPT-NODE (TEST.WAIT-FOR-SELECTION WINDOW "Select concept whoes tests should be released."))
    (if (NOT SELECTED)
      then [SETQ TEST-LIST (TEST.COLLECT-ALL-TESTS (fetch NODEID of CONCEPT-NODE)
        (WINDOWPROP WINDOW (QUOTE TEST.LIST-OF-CONCEPTS)
        else (SETQ TEST-LIST (TEST.GET-TEST-SELECTION WINDOW CONCEPT-NODE)))
    (TEST.RELEASE-DATABASE-WRITE-LOCK TEST-LIST)
    (PRINTOUT (TEST.PROMPT-WINDOW WINDOW)
      T "All requested tests are released.")]

```

## (TEST.RELEASE-LOCK-ON-SELECTED-TESTS-COMMAND

```

[LAMBDA (WINDOW) (* sm "21-Aug-85 16:10")
  (TEST.RELEASE-LOCK-COMMAND WINDOW T)]

```

## (TEST.REMOVE-SUBCONCEPT-LINK

```

[LAMBDA (CONCEPT SUBCONCEPT-NAME) (* sm "2-Jul-85 09:55")
  (replace SUBCONCEPTS of CONCEPT with (REMOVE SUBCONCEPT-NAME (fetch SUBCONCEPTS of CONCEPT))

```

## (TEST.REMOVE-SUPERCONCEPT-LINK

```

[LAMBDA (CONCEPT SUPERCONCEPT-NAME LIST-OF-CONCEPTS) (* sm "2-Jul-85 10:00")
  (replace SUPERCONCEPTS of CONCEPT with (REMOVE SUPERCONCEPT-NAME (fetch SUPERCONCEPTS of CONCEPT)))
  (if (NULL (fetch SUPERCONCEPTS of CONCEPT))
    then (TEST.DELETE-CONCEPT (fetch CONCEPTNAME of CONCEPT)
      LIST-OF-CONCEPTS])

```

## (TEST.REPLACE-INSEPECTW-VALUECOMMANDFN

```

[LAMBDA (W)
  (for ITEM in (WINDOWPROP W (QUOTE SELECTABLEITEMS)) when (NEQ (CADDR ITEM)
    (QUOTE PROPERTY))
    do (RPLACA (CDR ITEM)
      (QUOTE TEST.INSPECTW.VALUECOMMANDFN))

```

## (TEST.SEND-RELEASE-REQUESTS

```

[LAMBDA (TEST-LIST) (* sm "23-Jul-85 15:59")
  (PROG (USER-LIST)
    (SETQ USER-LIST (TEST.GET-LOCKING-USERS TEST-LIST))
    (for USER-INFO in USER-LIST do (LAFITE.SENDMESSAGE (CONCAT "Subject: Locks on test files are needed
      To: " (if (LISTP USER-INFO)
        then (CAR USER-INFO)
        else USER-INFO)
      "
      cc: "
      (FULLUSERNAME)
      "
      You have the locks for tests "
      (if (LISTP USER-INFO)
        then (CDR USER-INFO)
        else " ")
      ". Please release them
      as soon as possible and let me know when you
      are done.
      Thanks ."))
    (PRINTOUT T T (CONCAT "Message was sent to " (CAR USER-INFO))
      T])

```

## (TEST.SET-DEFAULT-FIELD-VALUE

```

[LAMBDA (FIELD-NAME NEW-DEFAULT-VALUE) (* sm "3-Jul-85 09:59")
  (SETTOPVAL (PACK* (QUOTE TEST.DEFAULT.))

```

```

FIELD-NAME)
NEW-DEFAULT-VALUE])

```

**(TEST.SET-TESTS-BUFFER-SIZE**

```

[LAMBDA NIL (* sm "20-Aug-85 16:05")
  (PROG (STORGE-LEFT)
    (SETQ STORAGE-LEFT (IDIFFERENCE \LASTVMEMFILEPAGE (VMEMSIZE)))
    (RETURN (SETQ TEST.TESTS-BUFFER-SIZE (MAX TEST.MIN-TESTS-BUFFER-SIZE (MIN TEST.MAX-TESTS-BUFFER-SIZE
      (FIX (FQUOTIENT STORAGE-LEFT
        TEST.AVERAGE-TEST-SIZE
      ))))

```

**(TEST.SETIFY**

```

[LAMBDA (L)
  (PROG (NEW-SET)
    (for ONE-ELEMENT in L when (NOT (MEMBER ONE-ELEMENT NEW-SET)) do (SETQ NEW-SET (CONS ONE-ELEMENT
      NEW-SET)))
    (RETURN NEW-SET))

```

**(TEST.SHADE-TEST**

```

[LAMBDA (TEST-NUMBER WINDOW SHADE) (* sm "24-Jul-85 16:36")
  (PROG (MENU-WINDOW)
    (SETQ SHADE (OR SHADE BLACKSHADE))
    (if (SETQ MENU-WINDOW (WINDOWPROP WINDOW (QUOTE TEST.TESTS-MENU-WINDOW)))
      then (SHADEITEM TEST-NUMBER (CAR (WINDOWPROP MENU-WINDOW (QUOTE MENU)))
        SHADE MENU-WINDOW])

```

**(TEST.STORE-CHANGED-TESTS**

```

[LAMBDA NIL (* sm "19-Jul-85 16:33")
  (for TEST in TEST.LIST-OF-MODIFIED-TESTS do (PRINT (TEST.STORE-TEST TEST))

```

**(TEST.STORE-CONCEPT-SPACE**

```

[LAMBDA (CONCEPTSPACENAME) (* sm "19-Aug-85 12:13")
  (PROG (FULL-NAME FILENAME CONCEPTSPACE CANDIDATE-FILE)
    (SETQ CONCEPTSPACE (TEST.GET-CONCEPT-SPACE CONCEPTSPACENAME))
    (SETQ CONCEPTSPACENAME (fetch CONCEPTSPACENAME of CONCEPTSPACE))
    (SETQ CANDIDATE-FILE (OR (GETPROP CONCEPTSPACENAME (QUOTE CONCEPTFILE))
      (TEST.CANONICAL-CONCEPT-SPACE-FILE-NAME CONCEPTSPACENAME)))
    (CLRPROMPT)
    [SETQ FILENAME (MKATOM (PROMPTFORWARD (CONCAT "Name of file for storing " CONCEPTSPACENAME ":
      ")
      (FULLNAME (MKSTRING CANDIDATE-FILE)
        (QUOTE NEW))
      NIL PROMPTWINDOW NIL (QUOTE TTY)
    (SETQ FULL-NAME (OPENFILE FILENAME (QUOTE OUTPUT)
      (QUOTE NEW)))
    (PRIN2 CONCEPTSPACE FULL-NAME)
    (CLOSEF FULL-NAME)
    (RETURN FULL-NAME))

```

**(TEST.STORE-CONCEPT-SPACE-COMMAND**

```

[LAMBDA NIL (* sm "16-Aug-85 17:55")
  (PROG (CNAME)
    (SETQ CNAME (TEST.POP-UP-CONCEPT-SPACES-MENU))
    (TEST.STORE-CONCEPT-SPACE CNAME])

```

**(TEST.STORE-TEST**

```

[LAMBDA (TEST-NUMBER) (* sm "18-Jul-85 09:33")
  (PROG (FULL-FILE-NAME TEST)
    (SETQ TEST (TEST.GET-TEST TEST-NUMBER))
    (if TEST
      then (SETQ FULL-FILE-NAME (OPENFILE (TEST.TEST-NUMBER-TO-FILE-NAME TEST-NUMBER)
        (QUOTE OUTPUT)
        (QUOTE NEW)))
      (PRIN2 TEST FULL-FILE-NAME)
      (CLOSEF FULL-FILE-NAME)
      (TEST.UNMARK-AS-CHANGED TEST-NUMBER)
      (RETURN FULL-FILE-NAME))

```

**(TEST.SWITCH-DISPLAY-MODE-COMMAND**

```

[LAMBDA (WINDOW) (* sm "19-Aug-85 09:46")
  [WINDOWPROP WINDOW (QUOTE TEST.DISPLAY-TEST-MODE)
    (NOT (WINDOWPROP WINDOW (QUOTE TEST.DISPLAY-TEST-MODE)
      (TEST.DISPLAY-CONCEPT-GRAPH (TEST.CREATE-CONCEPT-SPACE-GRAPH WINDOW)
        WINDOW])

```

**(TEST.TEST-FAULT**

```

[LAMBDA (TEST-NUMBER)                                     (* sm "20-Aug-85 16:57")
  (PROG (FILE-NAME FULL-FILE-NAME TEST CURRENT-LENGTH)
    (SETQ FILE-NAME (TEST.TEST-NUMBER-TO-FILE-NAME TEST-NUMBER))
    (SETQ FULL-FILE-NAME (TEST.OPENFILE-OR-WAIT FILE-NAME (QUOTE INPUT)
      (QUOTE OLD)))
    (if FULL-FILE-NAME
      then (SETQ TEST (READ FULL-FILE-NAME))
            (CLOSEF FULL-FILE-NAME)
            (TEST.SET-TESTS-BUFFER-SIZE)
            (push TEST.LIST-OF-TESTS TEST)
            (if (GREATERP (SETQ CURRENT-LENGTH (FLENGTH TEST.LIST-OF-TESTS))
              TEST.TESTS-BUFFER-SIZE)
              then (RPLACD (NLEFT TEST.LIST-OF-TESTS (ADD1 (IDIFFERENCE TEST.TESTS-BUFFER-SIZE
                CURRENT-LENGTH))))
              NIL))
            (RETURN TEST)
      else (PROMPTPRINT (CONCAT "TESTER: File " FILE-NAME " not found. ")))

```

## (TEST.TEST-NUMBER-TO-FILE-NAME

```

[LAMBDA (TEST-NUMBER)                                     (* sm "22-Jul-85 14:24")
  (PACK (APPEND (LIST TEST.TEST-DATA-BASE-DIRECTORY (QUOTE TEST))
    (from 1 to (IDIFFERENCE 5 (NCHARS TEST-NUMBER)) collect 0)
    (LIST TEST-NUMBER]))

```

## (TEST.TEST-SELECTED-ON-TEST-MENU-FN

```

[LAMBDA (ITEM MENU KEY)                                   (* sm "19-Jul-85 14:59")
  (PROG (WINDOW MAIN-WINDOW)
    (SETQ WINDOW (WFROMMENU MENU))
    (SETQ MAIN-WINDOW (MAINWINDOW WINDOW))
    (COND
      [(EQ ITEM (QUOTE OK))
        (NOTIFY.EVENT (WINDOWPROP MAIN-WINDOW (QUOTE TEST.TEST-SELECTION-ENDED-EVENT)
          (ITEM (COND
            ((FMEMB ITEM (WINDOWPROP MAIN-WINDOW (QUOTE TEST.SELECTED-TESTS)))
              (WINDOWDELPROP MAIN-WINDOW (QUOTE TEST.SELECTED-TESTS)
                ITEM)
              (SHADEITEM ITEM MENU WHITESHAD WINDOW))
            (T (WINDOWADDPROP MAIN-WINDOW (QUOTE TEST.SELECTED-TESTS)
              ITEM)
              (SHADEITEM ITEM MENU BLACKSHAD WINDOW))

```

## (TEST.TEST-SINGLE-TIME

```

[LAMBDA (TEST-NUMBER)                                     (* sm "24-Jul-85 15:50")
  (PROG (TEST-COPY TEST-INPUT LIST-OF-SETS SHORT-INPUT TRACE-FILE TEST-OUTCOME)
    (SETQ TEST-COPY (COPY (TEST.GET-TEST TEST-NUMBER)))
    (SETQ TEST-INPUT (TEST.GET-FIELD-VALUE (QUOTE INPUT)
      TEST-COPY))
    (if (EQ (CAR TEST-INPUT)
      (QUOTE SYSTEMATIC))
      then (EVAL (TEST.GET-FIELD-VALUE (QUOTE EVALBEFORE)
        TEST-COPY))
        (SETQ LIST-OF-SETS (for ONE-SET in (CDR TEST-INPUT) collect (EVAL ONE-SET)))
        (if (for ONE-SET in LIST-OF-SETS thereis (NOT (LISTP ONE-SET)))
          then (RETURN (QUOTE (FAILURE "SYSTEMATIC TEST WITH NON-LIST ARGUMENT"))))
          else (SETQ SHORT-INPUT (for ONE-SET in LIST-OF-SETS collect (CAR ONE-SET)))
          (replace INPUT of TEST-COPY with (KWOTE SHORT-INPUT)
            (replace TIMES of TEST-COPY with 1)
            (SETQ TRACE-FILE (OPENFILE TEST.TRACE-FILE-NAME (QUOTE OUTPUT)
              (QUOTE NEW)))
            (CLOSEF TRACE-FILE)
            (SETQ TRACE-FILE (TEST.PERFORM-TEST TEST-COPY 1 T TRACE-FILE))
            (OPENFILE TRACE-FILE (QUOTE INPUT)
              (QUOTE OLD))
            (SETQ TEST-OUTCOME (READ TRACE-FILE))
            (CLOSEF TRACE-FILE)
            (if (LESSP (LENGTH TEST-OUTCOME)
              5)
              then [RETURN (LIST (QUOTE FAILURE)
                (CONCAT "TEST WAS NOT FINISHED. ONLY " (MKSTRING (LENGTH TEST-OUTCOME))
                  "ITEMS WERE WRITTEN. TRACE FILE FULL NAME IS : "
                  (MKSTRING TRACE-FILE))
              else (if [NOT (FMEMB (CAR (CDDDDR TEST-OUTCOME))
                (QUOTE (SUCCESS FAILURE)
                  then (RETURN (LIST (QUOTE FAILURE)
                    (CONCAT "OUTCOME WAS " (CAR (CDDDDR TEST-OUTCOME))
                      "INSTEAD OF SUCCESS OR FAILURE. ")))
                  else (RETURN (QUOTE (SUCCESS))

```

## (TEST.TOPOLOGICAL-ORDER

```

[LAMBDA (SET-OF-TESTS)                                   (* sm "20-Aug-85 17:58")
  (PROG (TEST-LINKS ORDERED-LIST)
    [SETQ TEST-LINKS (for TEST in SET-OF-TESTS bind PRETESTS
      collect (CONS TEST (PROGN (SETQ PRETESTS (TEST.GET-FIELD-VALUE (QUOTE PRETESTS)

```

```

                                (TEST.GET-TEST TEST)))
      (TEST.SETIFY (for PRETEST
                    in (APPEND (FASSOC (QUOTE WEAK)
                                       PRETESTS)
                               (FASSOC (QUOTE STRONG)
                                       PRETESTS))
                    when (FMEMB PRETEST SET-OF-TESTS)
                        collect PRETEST]
    (while TEST-LINKS bind TEMP-LIST do (for T1 in TEST-LINKS when (for PRE in (CDR T1)
                                always (FMEMB PRE ORDERED-LIST))
                                do (SETQ TEMP-LIST (CONS T1 TEMP-LIST))
                                (SETQ ORDERED-LIST (CONS (CAR T1)
                                                         ORDERED-LIST)))
      (SETQ TEST-LINKS (LDIFFERENCE TEST-LINKS TEMP-LIST)))

    (RETURN (REVERSE ORDERED-LIST]))

```

**(TEST.UNION-LIST**

```

[LAMBDA (L) (* sm "2-Jul-85 12:36")
  (COND
    ((NULL L)
     NIL)
    (T (UNION (CAR L)
               (TEST.UNION-LIST (CDR L))

```

**(TEST.UNMARK-AS-CHANGED**

```

[LAMBDA (TEST-NUMBER) (* sm "18-Jul-85 10:13")
  (TEST.MAKE-BOUND (QUOTE TEST.LIST-OF-MODIFIED-TESTS))
  (SETQ TEST.LIST-OF-MODIFIED-TESTS (REMOVE TEST-NUMBER TEST.LIST-OF-MODIFIED-TESTS))

```

**(TEST.UPDATE-COMMAND**

```

[LAMBDA (WINDOW) (* sm "20-Aug-85 11:25")
  (TEST.DISPLAY-CONCEPT-GRAPH (TEST.CREATE-CONCEPT-SPACE-GRAPH WINDOW)
    WINDOW])

```

**(TEST.UPDATE-EXECUTION-SPEC**

```

[LAMBDA (ITEM MENU KEY) (* sm "21-Aug-85 12:03")
  (SHADEITEM (WINDOWPROP (WFROMMENU MENU)
                        (QUOTE TEST.SELECTION))
    MENU WHITESHADE)
  (WINDOWPROP (WFROMMENU MENU)
    (QUOTE TEST.SELECTION)
    ITEM)
  (SHADEITEM ITEM MENU BLACKSHADE])

```

**(TEST.WAIT-FOR-SELECTION**

```

[LAMBDA (WINDOW MESSAGE ALLOW-GLOBAL-SELECTION) (* sm "19-Aug-85 14:42")
  (PROG (WAITS)
    (WINDOWPROP WINDOW (QUOTE TEST.CONCEPT-SELECTED)
      NIL)
    (SETQ WAITS 0)
    (SETQ TEST.WINDOW-OF-LAST-SELECTION NIL)
    (printout (TEST.PROMPT-WINDOW WINDOW)
      T MESSAGE)
    WAIT-AGAIN
    (SETQ WAITS (ADD1 WAITS))
    (AWAIT.EVENT TEST.GLOBAL-CONCEPT-NODE-SELECTED-EVENT 1000)
    (COND
      ([OR (NULL TEST.WINDOW-OF-LAST-SELECTION)
        (AND (NOT ALLOW-GLOBAL-SELECTION)
              (NEQ TEST.WINDOW-OF-LAST-SELECTION WINDOW))
        (NULL (WINDOWPROP TEST.WINDOW-OF-LAST-SELECTION (QUOTE TEST.CONCEPT-SELECTED))
      [COND
        ((GREATERP WAITS 50)
         (RETURN NIL))
        ((ZEROP (IMOD WAITS 10))
         (FLASHWINDOW (TEST.PROMPT-WINDOW WINDOW))
         (PLAYTUNE (LIST (CONS (ITIMES 100 (IQUOTIENT WAITS 10))
                               10000)
                         (CONS (ITIMES 100 (ADD1 (IQUOTIENT WAITS 10)))
                               10000)
                         (CONS (ITIMES 100 (IQUOTIENT WAITS 10))
                               10000))
         (GO WAIT-AGAIN)))
      (RETURN (WINDOWPROP TEST.WINDOW-OF-LAST-SELECTION (QUOTE TEST.CONCEPT-SELECTED))

```

```

(RPAQ TEST.EXECUTION-SPECS-EVENT (CREATE.EVENT "EXECUTION-SELECTION-ENDED-EVENT"))

```

```

(RPAQ TEST.GLOBAL-CONCEPT-NODE-SELECTED-EVENT (CREATE.EVENT "CONCEPT-NODE-SELECTED-EVENT"))

```

```

(RPAQ TEST.CONCEPT-WINDOW-ICON (READBITMAP))

```

```
(PUTPROPS TESTER COPYRIGHT ("Xerox Corporation" 1985))
```

---

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