

File created: 14-Jun-90 21:03:42 {DSK}<usr>local>lde>lispcore>internal>library>CONDITIONGRAPH.;2

changes to: (VARS CONDITIONGRAPHCOMS)

previous date: 9-Dec-87 16:48:03 {DSK}<usr>local>lde>lispcore>internal>library>CONDITIONGRAPH.;1

Read Table: XCL

Package: INTERLISP

Format: XCCS

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```
(RPAQQ CONDITIONGRAPHCOMS ((DECLARE\ : DOEVAL@LOAD DOEVAL@COMPILE DONTCOPY (XCL:FILE-ENVIRONMENTS
                                     :CONDITIONGRAPH))
 (VARIABLES *CONDITION-GRAPH-WINDOW* *CONDITION-GRAPH-SEXPR*)
 (FUNCTIONS EDIT-CONDITIONS GRAPH-CONDITIONS CONDITION-SUBGRAPH
            CONDITION-SUBGRAPH-RECURSION RECOMPUTE-CONDITION-GRAPH-SEXPR
            COUNT-CONDITION-TYPES COUNT-CONDITION-TYPES-RECURSION)
 (PROP CONDITIONGRAPH)))

(DECLARE\ : DOEVAL@LOAD DOEVAL@COMPILE DONTCOPY

(XCL:DEFINE-FILE-ENVIRONMENT :CONDITIONGRAPH :READTABLE "XCL"
 :PACKAGE "IL"
 :COMPILER :COMPILE-FILE)
)

(CL:DEFVAR *CONDITION-GRAPH-WINDOW* NIL
 "Window in which to display the condition hierarchy graph.")

(CL:DEFVAR *CONDITION-GRAPH-SEXPR* NIL
 "Tree structure representing last calculated condition type graph.")

(CL:DEFUN EDIT-CONDITIONS (ROOT)
 (CL:LABELS ((EDIT-CONDITIONS-RECURSION (GRAPH)
 (CL:UNLESS (NULL GRAPH)
 (ED (CL:FIRST GRAPH)
 :STRUCTURES)
 (CL:MAPC #'EDIT-CONDITIONS-RECURSION (CL:REST GRAPH))))))
 (EDIT-CONDITIONS-RECURSION (CONDITION-SUBGRAPH ROOT NIL)))

(CL:DEFUN GRAPH-CONDITIONS (&OPTIONAL (ROOT 'CONDITION)
 (RECOMPUTE (NULL *CONDITION-GRAPH-SEXPR*)
 W)
 (LET ((NEWW (SHOWGRAPH (LAYOUTSEXPR (CONDITION-SUBGRAPH ROOT RECOMPUTE)
 ' (HORIZONTAL))
 (OR W *CONDITION-GRAPH-WINDOW* (CL:FORMAT NIL "Condition type graph from: ~S" ROOT))
 NIL NIL T)))
 (WINDOWPROP NEWW 'TITLE (CL:FORMAT NIL "Condition type graph from: ~S" ROOT))
 (OR W *CONDITION-GRAPH-WINDOW* (CL:SETF *CONDITION-GRAPH-WINDOW* NEWW))))

(CL:DEFUN CONDITION-SUBGRAPH (ROOT RECOMPUTE &AUX (ONCE NIL)
 RESULT)
 (CL:UNLESS (CL:SUBTYPEP ROOT 'CONDITION)
 (CL:ERROR "~S is not a condition type."))
 (CL:LOOP (CL:WHEN RECOMPUTE (RECOMPUTE-CONDITION-GRAPH-SEXPR))
 (CL:SETF RESULT (CONDITION-SUBGRAPH-RECURSION ROOT *CONDITION-GRAPH-SEXPR*))
 (CL:WHEN (OR ONCE RESULT)
 (CL:RETURN-FROM CONDITION-SUBGRAPH RESULT))
 (CL:FORMAT *ERROR-OUTPUT* "Couldn't find ~S in current graph.")
 (CL:SETQ ONCE T RECOMPUTE T)))

(CL:DEFUN CONDITION-SUBGRAPH-RECURSION (TARGET TREE)
 (COND
 ((NULL TREE)
 NIL)
 ((EQ TARGET (CL:FIRST TREE))
 TREE)
 (T (CL:DOLIST (SUBTREE (CL:REST TREE))
 (LET ((FOUND? (CONDITION-SUBGRAPH-RECURSION TARGET SUBTREE)))
 (CL:WHEN FOUND? (RETURN FOUND?)))))))

(CL:DEFUN RECOMPUTE-CONDITION-GRAPH-SEXPR ()
 (LET ((CGHASH (CL:MAKE-HASH-TABLE)))
 (CL:FORMAT *ERROR-OUTPUT* " Computing condition hierarchy graph.")
 (MAPCAR (DATATYPES)
 #'(CL:LAMBDA (SYMBOL)
 (BLOCK)
```

```
(CL:WHEN (AND (NOT (CL:GETHASH SYMBOL CGHASH))
              (CL:SUBTYPEP SYMBOL 'CONDITION))
  (CL:DO ((TYPE SYMBOL (CONDITION-PARENT TYPE))
          (CHAIN NIL))
    (COND
      ((NULL TYPE)
        (CL:SETF *CONDITION-GRAPH-SEXPR* CHAIN))
      ((CL:GETHASH TYPE CGHASH)
        (NCONC (CL:GETHASH TYPE CGHASH)
                (LIST CHAIN)))
      (T NIL)))
  (CL:PRINC ".")
  (CL:SETF (CL:GETHASH TYPE CGHASH)
    (CL:SETF CHAIN (CL:IF (NULL CHAIN)
                          (LIST TYPE)
                          (LIST TYPE CHAIN))))))
```

```
(CL:DEFUN COUNT-CONDITION-TYPES ()
  (COUNT-CONDITION-TYPES-RECURSION (CONDITION-SUBGRAPH 'CONDITION NIL)))
```

```
(CL:DEFUN COUNT-CONDITION-TYPES-RECURSION (TREE)
  (COND
    ((NULL TREE)
      0)
    ((CL:SYMBOLP TREE)
      1)
    (T (FOR SUBTREE IN TREE SUM (COUNT-CONDITION-TYPES-RECURSION SUBTREE)))))
```

```
(PUTPROPS CONDITIONGRAPH COPYRIGHT ("Venue & Xerox Corporation" 1986 1987 1990))
```

FUNCTION INDEX

CONDITION-SUBGRAPH	1	COUNT-CONDITION-TYPES-RECURSION ..	2	RECOMPUTE-CONDITION-GRAPH-SEXPR ..	1
CONDITION-SUBGRAPH-RECURSION	1	EDIT-CONDITIONS	1		
COUNT-CONDITION-TYPES	2	GRAPH-CONDITIONS	1		

VARIABLE INDEX

CONDITION-GRAPH-SEXPR	1	*CONDITION-GRAPH-WINDOW*	1
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FILE-ENVIRONMENT INDEX

:CONDITIONGRAPH	1
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