; Copyright (c) 1988, 1990-1994, 2021 by Venue & Xerox Corporation.

```
(RPAQQ MULTI-COMPILECOMS
       (;; Support for compiling multiple files in one pass, for a bulk recompilation of the system (or some part of it).
        (COMS                                                          ; Function to compile multiple files without having one step on
                                                                       ; the next (so you could compile all the system with it).
              (FUNCTIONS BIGCOMP))
        (COMS                                                          ; Function to identify all the source files on a given directory
                                                                       ; (useful for creating lists of things to compile)
              (FUNCTIONS FIND-ALL-SOURCE-FILES)
              (FNS FIND-UNCOMPILED-FILES))
        (COMS                                                          ; Misc utility functions from the big Lyric recompiles.
              (FNS NEWERDCOMS? NEWERSOURCES? SETUP-FOR-RECOMPILE SMASH-OPCODES GET-DIRECTORY-LISTING
                   GET-OPEN-FILES)
              ;; Control variables
              (VARS FILES-IN-FULL.SYSOUT FILES-IN-LIBRARY FILES-IN-LISP.SYSOUT FILES-IN-SOURCES FORKED-FILES
                    GARBAGE-OPCODES))
        (COMS                                                          ; Utilities for making mass-scale fixups to a library of files.
              (FNS FIX-FILES FIX-FILE FIX-COPYRIGHT FIX-FILE-COPYRIGHT QUALIFY-FIELDS FIX-TEDIT FIX-DOCS))
        ;; Removes bogus (CLISP  <clisp xlation> <real-code>) translations that result from CLISPARRAY being NIL.
        (FNS CLFIX)
        (PROP FILETYPE MULTI-COMPILE)
        (DECLARE\: DONTEVAL@LOAD DOEVAL@COMPILE DONTCOPY COMPILERVARS (ADDVARS (NLAMA)
                                                                              (NLAML)
                                                                              (LAMA FIX-FILES)))))
```

;; Support for compiling multiple files in one pass, for a bulk recompilation of the system (or some part of it).

;; Function to compile multiple files without having one step on the next (so you could compile all the system with it).

```
(CL:DEFUN BIGCOMP (FILENAMES SOURCEDIRS DESTDIR &OPTIONAL (DRIBBLE-FILE '"{DSK}BIGCOMP.DRIBBLE")
                   DELETE-DCOMS? DELETE-DRIBBLE?)
    ;; Compile all the files in the system.
    (LET ((COMPLETION 'ERROR)
          (NUM-FILES (LENGTH FILENAMES)))
         (IDLE.SET.OPTION 'TIMEOUT T)                                  ; never idle
         (SETQ NOSPELLFLG T)                                           ; death to DWIM!
         (SETQ DWIMIFYCOMPFLG NIL)                                     ; I mean it
         ;; do it
         (CL:UNWIND-PROTECT
             (PROGN (DRIBBLE DRIBBLE-FILE)
                    (WINDOWPROP (WFROMDS (TTYDISPLAYSTREAM))
                                'PAGEFULLFN
                                'NILL)
                    (PRINTOUT NIL "= = = = = Setting up for full-system compilation run on " (DATE)
                              " = = = = =" T T)
                    (|for| FILE |in| FILENAMES |as| FILE-NUM |from| 1
                       |do| (DSPNEWPAGE (GETSTREAM NIL 'OUTPUT))
                    ;; changed the destfile so it has the proper extension.  It was compiling everything correctly, but naming all the files
                    ;; .lcom.
                    (LET* ((CF (COMPILE-FILE? FILE))
                           (SOURCEFILE (FINDFILE FILE NIL SOURCEDIRS))
                           (DESTFILE (PACKFILENAME 'BODY FILE 'DIRECTORY DESTDIR 'EXTENSION
                                                   (SELECTQ CF
                                                       (CL:COMPILE-FILE
                                                           'DFASL)
                                                       'LCOM))))
                          (RESETLST
                              (RESETSAVE (RESETUNDO))
                              (PRINTOUT NIL T "- - - " (OR CF 'BCOMPL)
                                        "'ing file " SOURCEFILE " to " DESTFILE " at " (DATE)
                                        " - - -" T)
                              (PRINTOUT NIL T "(File number " FILE-NUM " of " NUM-FILES ": "
                                        (- NUM-FILES FILE-NUM)
                                        " left)" T T)
                              (PRINT (SELECTQ CF
                                         ((BCOMPL TCOMPL NIL)
                                             (LISPXUNREAD '(F))
                                             (CL:FUNCALL (OR CF 'BCOMPL)
```

```
                                                      SOURCEFILE DESTFILE))
                                              (CL:FUNCALL CF SOURCEFILE :OUTPUT-FILE DESTFILE))
                                     T)
                                  (PRINTOUT NIL T T "- - - End of " FILE " compilation - - -" T))
                               (AND DELETE-DCOMS? (DELFILE DESTFILE))))
                    (PRINTOUT NIL T T T "= = = = = END OF FULL-SYSTEM COMPILATION RUN = = = = =")
                    (SETQ COMPLETION 'SUCCESS))
           ;; cleanup forms

           (PRINTOUT NIL T "Compilation status: " COMPLETION T T)
           (DRIBBLE)
           (WINDOWPROP (WFROMDS (TTYDISPLAYSTREAM))
                  'PAGEFULLFN NIL))
      (SEND.FILE.TO.PRINTER DRIBBLE-FILE)
      (AND DELETE-DRIBBLE? (DELFILE DRIBBLE-FILE))))
```

;; Function to identify all the source files on a given directory (useful for creating lists of things to compile)

```
(CL:DEFUN FIND-ALL-SOURCE-FILES (DIRECTORY)
    ;; Return a list of every file that has a compiled equivalent on DIRECTORY.  This is a way of finding out what needs to be recompiled for a bulk
    ;; compile.
    (LET ((DFASLS (FOR FILENAME IN (DIRECTORY (PACKFILENAME 'DIRECTORY DIRECTORY 'BODY "*.DFASL;"))
                      COLLECT (UNPACKFILENAME FILENAME 'NAME)))
          (LCOMS (FOR FILENAME IN (DIRECTORY (PACKFILENAME 'DIRECTORY DIRECTORY 'BODY "*.LCOM;"))
                      COLLECT (UNPACKFILENAME FILENAME 'NAME))))
        (UNION (INTERSECTION DFASLS DFASLS)
               (INTERSECTION LCOMS LCOMS))))

(DEFINEQ
```

(**FIND-UNCOMPILED-FILES**
```
  (LAMBDA (SRCDIR DESTDIR)                                                     ; Edited 16-Nov-94 16:23 by jds
    (LET ((SRCFILES (DIRECTORY (PACKFILENAME 'DIRECTORY SRCDIR 'BODY '*.\;)))
          SFILE DFILE)
        (|for| FILE |in| SRCFILES |do| (SETQ SFILE (UNPACKFILENAME FILE 'NAME))
                                       (COND
                                          ((AND (SETQ DFILE (FINDFILE-WITH-EXTENSIONS SFILE (LIST DESTDIR)
                                                                   '(DFASL LCOM)))
                                                (ILESSP (GETFILEINFO DFILE 'ICREATIONDATE)
                                                        (GETFILEINFO FILE 'ICREATIONDATE)))
                                           (PRINTOUT T FILE " needs compiling." T))
                                          ((NOT DFILE)
                                           (PRINTOUT T FILE " has no compiled version." T)))))))

)
```

;; Misc utility functions from the big Lyric recompiles.

```
(DEFINEQ
```

(**NEWERDCOMS?**
```
  (LAMBDA (DIRPAIRS EXTENSIONS FILTER)                                         ; Edited  9-Dec-86 21:39 by bvm
    (OR DIRPAIRS (SETQ DIRPAIRS '(({ERIS}<LISPCORE>NEWSTRING>SOURCES> {ERIS}<LISPCORE>SOURCES>)
                                  ({ERIS}<LISPCORE>NEWSTRING>LIBRARY> {ERIS}<LISPCORE>LIBRARY>)
                                  ({ERIS}<LISPCORE>NEWSTRING>INTERNAL>LIBRARY> {ERIS}<LISPCORE>INTERNAL>LIBRARY>
                                  ))))
    (OR EXTENSIONS (SETQ EXTENSIONS '(LCOM DCOM)))
    (|for| PAIR |in| DIRPAIRS
       |join| (RESETLST
                 (LET ((THISDIR (CAR PAIR))
                       (OTHERDIR (CADR PAIR))
                       (THISEXT (CAR EXTENSIONS))
                       (OTHEREXT (CADR EXTENSIONS))
                       NEXT DT OTHERFILE OTHERDT OTHERWDT THISAUTHOR DIRPRINTED GEN)
                     (SETQ GEN (\\GENERATEFILES (PACKFILENAME.STRING 'DIRECTORY THISDIR 'NAME "*" 'EXTENSION
                                                       THISEXT 'VERSION "")
                                    '(ICREATIONDATE)
                                    '(RESETLST)))
                     (|while| (SETQ NEXT (\\GENERATENEXTFILE GEN)) |eachtime| (SETQ OTHERWDT NIL)
                        |when| (AND (SETQ OTHERFILE (INFILEP (PACKFILENAME.STRING 'DIRECTORY OTHERDIR
                                                                 'EXTENSION OTHEREXT 'VERSION NIL 'BODY NEXT))
                                    )
                                    (SETQ DT (\\GENERATEFILEINFO GEN 'ICREATIONDATE))
                                    (OR (AND (SETQ OTHERDT (GETFILEINFO OTHERFILE 'ICREATIONDATE))
                                             (< DT OTHERDT))
                                        (AND (SETQ OTHERWDT (GETFILEINFO OTHERFILE 'IWRITEDATE))
                                             (< DT OTHERWDT)))
                                    (OR (NULL FILTER)
                                        (CL:FUNCALL FILTER NEXT OTHERFILE DT OTHERDT OTHERWDT GEN)))
                        |collect| (|if| (NOT DIRPRINTED)
                                      |then| (|printout| T T "    " THISDIR 18 "This Date" 38 "Other Date" 58
                                                        "Author" T)
                                             (SETQ DIRPRINTED T))
                                 (|printout| T (SUBSTRING NEXT (STRPOS THISDIR NEXT 1 NIL T T UPPERCASEARRAY))
```

```
                                        18
                                        (GDATE DT)
                                        38
                                        (GDATE OTHERDT)
                                        58)
                          (|if| OTHERWDT
                              |then| (|printout| T (GDATE OTHERWDT)
                                             " "))
                          (|printout| T (GETFILEINFO OTHERFILE 'AUTHOR)
                                  T)
                          (FILENAMEFIELD NEXT 'NAME)))))))))
```

(**NEWERSOURCES?**
```
  (LAMBDA (DIRPAIRS FILTER)                                                   ; Edited  9-Dec-86 23:07 by bvm
    (OR DIRPAIRS (SETQ DIRPAIRS '(({ERIS}<LISPCORE>NEWSTRING>SOURCES> {ERIS}<LISPCORE>SOURCES>)
                                  ({ERIS}<LISPCORE>NEWSTRING>LIBRARY> {ERIS}<LISPCORE>LIBRARY>)
                                  ({ERIS}<LISPCORE>NEWSTRING>INTERNAL>LIBRARY> {ERIS}<LISPCORE>INTERNAL>LIBRARY>
                                  ))))
        (|for| PAIR |in| DIRPAIRS
          |do| (RESETLST
                 (LET ((THISDIR (CAR PAIR))
                       (OTHERDIR (CADR PAIR))
                       NEXT DT THISFILE THISDT WDT DIRPRINTED GEN)
                      (SETQ GEN (\\GENERATEFILES (PACKFILENAME.STRING 'DIRECTORY OTHERDIR 'NAME "*" 'VERSION "")
                                        '(ICREATIONDATE IWRITEDATE AUTHOR)
                                        '(RESETLST)))
                      (|while| (SETQ NEXT (\\GENERATENEXTFILE GEN)) |eachtime| (SETQ THISDT (SETQ WDT (SETQ DT NIL)))
                          |when| (AND (SETQ DT (\\GENERATEFILEINFO GEN 'ICREATIONDATE))
                                      (OR (NULL (SETQ THISFILE (INFILEP (PACKFILENAME.STRING 'DIRECTORY THISDIR
                                                                                 'EXTENSION COMPILE.EXT 'VERSION NIL
                                                                                 'BODY NEXT))))
                                          (AND (SETQ THISDT (GETFILEINFO THISFILE 'ICREATIONDATE))
                                               (OR (> DT THISDT)
                                                   (AND (SETQ WDT (\\GENERATEFILEINFO GEN 'IWRITEDATE))
                                                        (> WDT THISDT)))))
                                      (OR (NULL FILTER)
                                          (CL:FUNCALL FILTER NEXT THISFILE DT WDT THISDT GEN)))
                          |do| (|if| (NOT DIRPRINTED)
                                   |then| (|printout| T T "    " OTHERDIR 18 " Its Date" 38 " Other Date" 58 "Author" T
                                            )
                                          (SETQ DIRPRINTED T))
                               (OR (GET (NAMEFIELD NEXT)
                                        'FILEDATES)
                                   (PRIN1 "+" T))
                               (|printout| T (SUBSTRING NEXT (STRPOS OTHERDIR NEXT 1 NIL T T UPPERCASEARRAY))
                                      18
                                      (GDATE DT)
                                      38
                                      (|if| THISDT
                                          |then| (GDATE THISDT)
                                          |else| " - - -")
                                      58)
                               (|if| WDT
                                   |then| (|printout| T (GDATE WDT)
                                                  " "))
                               (|printout| T (\\GENERATEFILEINFO GEN 'AUTHOR)
                                      T)))))))))
```

(**SETUP-FOR-RECOMPILE**
```
  (LAMBDA NIL                                                                 ; Edited  8-Dec-86 21:23 by jop:
                                                                              ; So we don't get alot of warnings
    (SETQ *REMOVE-INTERLISP-COMMENTS* NIL)                                    ; So we don't get asked stupid questions
    (SETQ CROSSCOMPILING T)                                                   ; setup up new compiled file version
    (PUTPROP ':D4 'CODEREADER (COPYALL (GETPROP 'D1 'CODEREADER)))
    (RPAQQ CODEINDICATOR :D4)
    (RPAQQ COMPILE.EXT LCOM)                                                  ; Smash garbage collectable opcodes
    (SMASH-OPCODES GARBAGE-OPCODES)                                           ; Setup for unwind recompile
    (LOAD '{ERIS}<LISPCORE>NEWSTRING>SOURCES>UNWINDMACROS 'SYSLOAD)
                                                                              ; may not be necessary
    (LOAD '{ERIS}<LISPCORE>NEWSTRING>SOURCES>PROC 'PROP)                      ; Setup for new string recompile
    (LOAD '{ERIS}<LISPCORE>NEWSTRING>SOURCES>LLCHAR 'PROP)
    (REMPROP 'STRINGP 'DOPVAL)                                                ; to get correct record def's
    (LOAD '{ERIS}<LISPCORE>SOURCES>CMLARRAY 'PROP)                            ; Setup for new stream record
    (LOAD '{ERIS}<LISPCORE>NEWSTRING>SOURCES>FILEIO 'PROP)                    ; To setup packagified global type number vars
    (LOAD '{ERIS}<LISPCORE>NEWSTRING>SOURCES>DTDECLARE.DCOM 'SYSLOAD)
                                                                              ; hack for typep - not needed if makesysdate > Nov 23
    (CL:DEFTYPE :DATATYPE (OBJECT)
       '(DATATYPE ,OBJECT))                                                   ; dribble hack
    (WBREAK NIL)                                                              ; So the debuuger will compile
    (LOAD '{ERIS}<LISPCORE>SOURCES>XCL-PACKAGE.DCOM)                          ; To fix the broken FP printer
    (LOADFNS '\\CONVERT.FLOATING.NUMBER '{ERIS}<LISPCORE>SOURCES>LLFLOAT.DCOM)))
```

(**SMASH-OPCODES**
```
  (LAMBDA (OPCODE-ALIST)                                                      ; Edited 24-Nov-86 17:56 by jop:
```

```
    (LET (OPNUMBER)
        (CL:DOLIST (OPCODE OPCODE-ALIST)
            (SETQ OPNUMBER (CADR OPCODE))
            (CL:NSUBSTITUTE-IF (LIST OPNUMBER ':UNUSED)
                (FUNCTION (CL:LAMBDA (OP)
                                (EQL (CAR OP)
                                     OPNUMBER)))
                \\OPCODES :COUNT 1)
            (SETQ \\OPCODEARRAY NIL)))))
```

(**GET-DIRECTORY-LISTING**
```
    (LAMBDA (DIRECTORY EXTENSION)                                          ; Edited 24-Nov-86 18:14 by jop:
        (|for| X |infiles| (DIRECTORY.FILL.PATTERN DIRECTORY (OR EXTENSION "")
                                "")
            |collect| (FILENAMEFIELD X 'NAME))))
```

(**GET-OPEN-FILES**
```
    (LAMBDA (DEVICE-NAME)                                                  ; Edited 25-Nov-86 18:16 by jop:
        (FETCH (FDEV OPENFILELST) OF (CDR (ASSOC DEVICE-NAME \\DEVICENAMETODEVICE)))))
```

)

;; Control variables

```
(RPAQQ FILES-IN-FULL.SYSOUT
        (PACKAGE-STARTUP LLPACKAGE LLSYMBOL CMLARRAY CMLLIST CMLMACROS DMISC COMPATIBILITY APUTDQ LLDISPLAY FONT
            PASSWORDS LEAF PUP LLETHER PROC ERROR-RUNTIME DEFSTRUCT-RUN-TIME BOOTSTRAP MISC AINTERRUPT AERROR
            ABASIC APRINT ATERM MOD44IO VANILLADISK PMAP ADIR AOFD COREIO IOCHAR LLCODE ATBL DTDECLARE ASTACK
            LLTIMER LLKEY LLDATATYPE LLSTK LLCHAR LLREAD LLBIGNUM LLFLOAT LLARITH LLARRAYELT LLMVS LLINTERP
            LLGC LLBASIC IMAGEIO FILEIO LLNEW LLBFS LLSUBRS LLFAULT PACKAGE-CONVERSION-TABLE ACODE
            MACHINEINDEPENDENT POSTLOADUP DEFPACKAGE-IMPORT XCL-PACKAGE LISP-PACKAGE FASL-PACKAGE
            COMPILER-PACKAGE BSP DPUPFTP CMLCHARACTER CMLREADTABLE STACKFNS CMLMVS MACROS MACROAUX CMLSYMBOL
            CMLHASH CMLDEFFER CMLPROGV CMLEVAL COMMON CMLSPECIALFORMS CONDITION-HIERARCHY XCLC-RUNTIME
            CMLTYPES CL-ERROR AFONT EDIT WEDIT PRETTY DSPRINTDEF NEWPRINTDEF FONTPROFILE SPELLFILE PRINTFN
            ADVISE LOADFNS DIRECTORY FILEPKG RESOURCE DLAP BYTECOMPILER COMPILE HIST UNDO SPELL DWIM WTFIX
            CLISP DWIMIFY CLISPIFY RECORD ASSIST ASKUSER CMLUNDO CMLEXEC DEBUGGER TRACE CMLDOC CMLPARSE
            CMLSETF CMLPRED CMLARRAY-OPTIMIZERS CMLREAD CMLWALK CMLSEQCOMMON CMLSEQBASICS CMLSEQMAPPERS
            CMLSEQMODIFY CMLSEQFINDER CMLSORT CMLSEQ CMLARITH XCLC-META-EVAL XCLC-ANNOTATE XCLC-GENCODE XCLC-PEEPHOLE
            CLSTREAMS CMLDESTRUCT CMLFORMAT CMLENVIRONMENT CMLPRINT CMLLOAD CMLFILESYS CMLFLOAT CMLTIME
            CMLRAND CMLMODULES ADDARITH READ-PRINT-PROFILE CMLPATHNAME HPRINT MSANALYZE MSPARSE MASTERSCOPE
            AARITH ADISPLAY HLDISPLAY MENU WINDOWOBJ WINDOWSCROLL WINDOW WINDOWICON ATTACHEDWINDOW XXGEOM
            XXFILL DEXEC INSPECT TWODINSPECTOR FREEMENU CMLARRAYINSPECTOR EDITINTERFACE TTYIN DISKDLION
            DOVEINPUTOUTPUT DOVEDISK DOVEDISPLAY DOVEMISC DOVEETHER DOVEFLOPPY LOCALFILE DSKDISPLAY 10MBDRIVER
            LLNS TRSERVER SPP COURIER NSPRINT CLEARINGHOUSE NSFILING HARDCOPY INTERPRESS FLOPPY IDLER ICONW
            SEDIT-ATOMIC SEDIT-COMMANDS SEDIT-COMMENTS SEDIT-LINEAR SEDIT-LISTS SEDIT-TERMINAL SEDIT-TOPLEVEL
            SEDIT-WINDOW SEDIT D-ASSEM-PACKAGE D-ASSEM FASL XCLC-READER XCLC-ENV-CTXT XCLC-TREES
            XCLC-TOP-LEVEL XCLC-ALPHA XCLC-ANALYZE XCLC-META-EVAL XCLC-ANNOTATE XCLC-GENCODE XCLC-PEEPHOLE
            XCLC-DATABASE XCL-COMPILER CMLPACKAGE GIVE-AND-TAKE CHATTERMINAL DMCHAT DCHAT PUPCHAT NSCHAT PRESS
            PUPPRINT TEDITDECLS TEXTOFD TEDITCOMMAND TEDITSCREEN TEDITABBREV TEDITLOOKS TEDITFIND TEDITHISTORY
            TEDITFILE TEDITWINDOW TEDITSELECTION READNUMBER EDITBITMAP IMAGEOBJ TFBRAVO TEDITHCPY TEDITPAGE
            TEDITMENU TEDITFNKEYS TEDIT HRULE TEDITCHAT GRAPEVINE MAILCLIENT NSMAIL LAFITEBROWSE LAFITESEND
            LAFITEMAIL LAFITE TABLEBROWSER FILEBROWSER REMOTEVMEM VMEM READSYS RDSYS TELERAID GRAPHER SPY
            AREDIT HASH WHEREIS COPYFILES))
```

```
(RPAQQ FILES-IN-LIBRARY
        (4045XLPDEFAULTPRINTER 4045XLPSTREAM ARCLEANUP AREDIT BROWSER BSEARCH CENTRONICS CHARCODETABLES CHAT
            CHATDECLS CHATTERMINAL CLMAIL CML CMLARRAYINSPECTOR CMLDEBUGGER CMLFLOATARRAY CMLHELP COLOR
            COLORDEMO CONDITIONGRAPH COPYFILES DANDELIONKEYBOARDS DATABASEFNS DAYBREAKKEYBOARDS DEDIT DES
            DICOLOR DINFO DLRS232C DLTTY DMCHAT DO-TEST DORADOCOLOR DORADOKEYBOARDS DOVEKEYBOARDS DOVERS232C
            DSKTEST EDITBITMAP ETHERRECORDS FASTFX80STREAM FILEBROWSER FILECACHE FILECACHE-BROWSER
            FILECACHE-DECLS FILECACHE-HOSTUP FILECACHE-SCAVENGE FILENAMES FONTSAMPLE FTPSERVER FX80STREAM
            FXPRINTER GCHAX GIVE-AND-TAKE GRAPEVINE GRAPHER GRAPHZOOM HASH HELPSYS HRULE IMAGEOBJ KERMIT
            KERMITMENU KEYBOARDEDITOR LAFITE LAFITEBROWSE LAFITEDECLS LAFITEFIND LAFITEMAIL LAFITESEND
            LAMBDATRAN LISPDIAGNOSTICS LLCOLOR MACROTEST MACROTESTAUX MAILCLIENT MAILSCAVENGE MAINTAIN MATMULT
            MERGE-FILEGEN MESATYPES MINISERVE MSHASH NEWDEBUG NSCHAT NSCHATSERVER NSMAIL NSMAINTAIN
            NSTOASCIIDISPLAYFONT PCALLSTATS PCE PCEDISPLAY PCEERD PCEFLOPPY PCEKEYBOARD PCEWINDOW PCMEMTEST
            PIXELBLT PUPCHAT PUPIDSERVER RDSYS READAIS READNUMBER READSYS REMOTEVMEM RS232CHAT RS232CHATSERVER
            RS232CMENU SAMEDIR SCALEBITMAP SFFONT SKETCHCOLOR SKETCHSTREAM SPY SYSEDIT TABLEBROWSER
            TABLEBROWSERDECLS TCP TCPCHAT TCPCONFIG TCPDEBUG TCPFTP TCPHTE TCPLLAR TCPLLICMP TCPLLIP TCPNAMES
            TCPTFTP TCPUDP TEDIT TEDITABBREV TEDITCHAT TEDITCOLOR TEDITCOMMAND TEDITDECLS TEDITFILE TEDITFIND
            TEDITFNKEYS TEDITHCPY TEDITHISTORY TEDITKEY TEDITLOOKS TEDITMENU TEDITPAGE TEDITPAGINATE
            |TEditPartOne| |TEditPartTwo| TEDITSCREEN TEDITSELECTION TEDITWINDOW TEK4010 TEK4010CHAT TELERAID
            TEXEC TEXTOFD TFBRAVO TTYCHAT TWODINSPECTOR VIRTUALKEYBOARDS VMEM VPCDISK VT100KP VTCHAT WHEREIS
            4045STREAM BUSCOLOR BUSEXTENDER BUSMASTER BUSMASTERARRAYBASE BUSTEST C150STREAM COLORNNCC COLOROBJ
            COLORPOLYGONS DANDELIONUFO DANDELIONUFO4096 IRISCONSTANTS IRISIO IRISLIB IRISNET IRISSTREAM
            LOADIRIS))
```

```
(RPAQQ FILES-IN-LISP.SYSOUT
        (PACKAGE-STARTUP LLPACKAGE LLSYMBOL CMLARRAY CMLLIST CMLMACROS DMISC COMPATIBILITY APUTDQ LLDISPLAY FONT
            PASSWORDS LEAF PUP LLETHER PROC ERROR-RUNTIME DEFSTRUCT-RUN-TIME BOOTSTRAP MISC AINTERRUPT AERROR
            ABASIC APRINT ATERM MOD44IO VANILLADISK PMAP ADIR AOFD COREIO IOCHAR LLCODE ATBL DTDECLARE ASTACK
            LLTIMER LLKEY LLDATATYPE LLSTK LLCHAR LLREAD LLBIGNUM LLFLOAT LLARITH LLARRAYELT LLMVS LLINTERP
            LLGC LLBASIC IMAGEIO FILEIO LLNEW LLBFS LLSUBRS LLFAULT PACKAGE-CONVERSION-TABLE ACODE
            MACHINEINDEPENDENT POSTLOADUP DEFPACKAGE-IMPORT XCL-PACKAGE LISP-PACKAGE FASL-PACKAGE
            COMPILER-PACKAGE BSP DPUPFTP CMLCHARACTER CMLREADTABLE STACKFNS CMLMVS MACROS MACROAUX CMLSYMBOL
```

```
            CMLHASH CMLDEFFER CMLPROGV CMLEVAL COMMON CMLSPECIALFORMS CONDITION-HIERARCHY
            CONDITION-HIERARCHY-SI CONDITION-HIERARCHY-POST-SI CONDITION-HIERARCHY-IL XCLC-RUNTIME CMLTYPES
            CL-ERROR AFONT EDIT WEDIT PRETTY DSPRINTDEF NEWPRINTDEF FONTPROFILE SPELLFILE PRINTFN ADVISE
            LOADFNS DIRECTORY FILEPKG RESOURCE DLAP BYTECOMPILER COMPILE HIST UNDO SPELL DWIM WTFIX CLISP
            DWIMIFY CLISPIFY RECORD ASSIST ASKUSER CMLUNDO CMLEXEC DEBUGGER TRACE CMLDOC CMLPARSE CMLSETF
            CMLPRED CMLARRAY-OPTIMIZERS CMLREAD CMLWALK CMLSEQCOMMON CMLSEQBASICS CMLSEQMAPPERS CMLSEQMODIFY
            CMLSEQFINDER CMLSORT CMLSEQ CMLARITH DEFSTRUCT CMLMISCIO CMLCOMPILE CMLSTRING CLSTREAMS
            CMLDESTRUCT CMLFORMAT CMLENVIRONMENT CMLPRINT CMLLOAD CMLFILESYS CMLFLOAT CMLTIME CMLRAND
            CMLMODULES ADDARITH READ-PRINT-PROFILE CMLPATHNAME HPRINT MSANALYZE MSPARSE MASTERSCOPE AARITH
            ADISPLAY HLDISPLAY MENU WINDOWOBJ WINDOWSCROLL WINDOW WINDOWICON ATTACHEDWINDOW XXGEOM XXFILL
            DEXEC INSPECT TWOINSPECTOR FREEMENU CMLARRAYINSPECTOR EDITINTERFACE TTYIN DISKDLION
            DOVEINPUTOUTPUT DOVEDISK DOVEDISPLAY DOVEMISC DOVEETHER DOVEFLOPPY LOCALFILE DSKDISPLAY 10MBDRIVER
            LLNS TRSERVER SPP COURIER NSPRINT CLEARINGHOUSE NSFILING HARDCOPY INTERPRESS FLOPPY IDLER ICONW
            SEDIT-ATOMIC SEDIT-COMMENTS SEDIT-LINEAR SEDIT-LISTS SEDIT-TERMINAL SEDIT-TOPLEVEL
            SEDIT-WINDOW SEDIT D-ASSEM-PACKAGE D-ASSEM FASL XCLC-READER XCLC-ENV-CTXT XCLC-TREES
            XCLC-TOP-LEVEL XCLC-ALPHA XCLC-ANALYZE XCLC-META-EVAL XCLC-ANNOTATE XCLC-GENCODE XCLC-PEEPHOLE
            XCLC-DATABASE XCL-COMPILER CMLPACKAGE))

(RPAQQ FILES-IN-SOURCES
        (ADVISE AFONT BREAK-AND-TRACE CL-ERROR CLOSURE-CACHE CMLDEFFER CMLENVIRONMENT CMLPACKAGE CMLSETF
            CMLSMARTARGS CMLUNDO DEBUGGER DEFSTRUCT DESCRIBE ERROR-RUNTIME-AFTER-FASL FASDUMP HPRINT
            IMPLICIT-KEY-HASH SEDIT-ACCESS SEDIT-ATOMIC SEDIT-BASE SEDIT-COMMANDS SEDIT-COMMENTS SEDIT-EXPORTS
            SEDIT-INDENT SEDIT-LINEAR SEDIT-LIST-FORMATS SEDIT-LISTS SEDIT-TERMINAL SEDIT-TOPLEVEL
            SEDIT-WINDOW SEDIT WALKER XCL-EXTRAS XCLC-DATABASE XCLC-OPTIMIZERS XCLC-TOP-LEVEL XCLC-TREES
            10MBDRIVER AARITH ABASIC ACODE ADDARITH ADIR ADISPLAY AERROR AINTERRUPT AOFD APRINT APUTDQ ARGLIST
            ASKUSER ASTACK ATBL ATERM ATTACHEDWINDOW AUTHENTICATION NSFILING BOOTSTRAP BSP BYTECOMPILER
            CLEARINGHOUSE CLISP CLISPIFY CLSTREAMS CMLARITH CMLARRAY-SUPPORT CMLARRAY CMLARRAYINSPECTOR
            CMLCHARACTER CMLCOMPILE CMLDESTRUCT CMLDOC CMLEVAL CMLEXEC CMLFILESYS CMLFLOAT CMLFORMAT CMLHASH
            CMLLIST CMLLOAD CMLMACROS CMLMISCIO CMLMODULES CMLMVS CMLPARSE CMLPATHNAME CMLPRED CMLPRINT
            CMLPROGV CMLRAND CMLREADTABLE CMLSEQ CMLSEQBASICS CMLSEQCOMMON CMLSEQFINDER CMLSEQMAPPERS
            CMLSEQMODIFY CMLSORT CMLSPECIALFORMS CMLSTEP CMLSTRING CMLSYMBOL CMLTIME CMLTYPES COMMON COMPARE
            COMPATIBILITY COMPILE COMPILER-PACKAGE CONDITION-HIERARCHY-IL CONDITION-HIERARCHY-POST-SI
            CONDITION-HIERARCHY-SI CONDITION-HIERARCHY CONDITION-PACKAGE COREIO COROUTINE COURIER
            D-ASSEM-PACKAGE D-ASSEM DEBUGEDIT DEFFER-RUNTIME DEFPACKAGE-IMPORT DEFSTRUCT-RUN-TIME DEXEC
            DIRECTORY DISKDLION DLAP DLFIXINIT DMISC DOVEDISK DOVEDISPLAY DOVEETHER DOVEFLOPPY DOVEINPUTOUTPUT
            DOVEMISC DPUPFTP DSKDISPLAY DSPRINTDEF DTDECLARE DWIM DWIMIFY EDIT EDITINTERFACE ERROR-RUNTIME
            EXEC-COMMANDS FASL-PACKAGE FASLOAD FILEIO FILEPKG FLOPPY FONT FONTPROFILE FREEMENU GAINSPACE
            HARDCOPY HIST HLDISPLAY ICONW IDLER IL-ERROR-STUFF IMAGEIO INSPECT-CLOSURE INSPECT INTERPRESS
            IOCHAR LEAF LISP-PACKAGE CMLWALK DEBUGGER-EVAL DOVEMEMSIZEPATCH SEDIT-CONVERT SEDIT-DEBUG
            SEDIT-LOAD LLARITH LLARRAYELT LLBASIC LLBFS LLBIGNUM LLCHAR LLCODE LLDATATYPE LLDISPLAY LLERROR
            LLETHER LLFAULT LLFLOAT LLGC LLINTERP LLKEY LLMVS LLNEW LLNS LLPACKAGE LLREAD LLRESTART LLSTK
            LLSUBRS LLSYMBOL LLTIMER LOADFNS LOCALFILE LOGOW LYRIC-PATCH-1 MACHINEINDEPENDENT MACROAUX MACROS
            MAKEINIT MEM MENU MISC MOD44IO NEWPRINTDEF NSPRINT PACKAGE-CONVERSION-TABLE PACKAGE-STARTUP PAINTW
            PASSWORDS PMAP POSTLOADUP PRETTY PRINTFN PROC PROFILE PUP READ-PRINT-PROFILE RECORD RENAMEFNS
            RESOURCE SETF-RUNTIME SPELL SPELLFILE SPP STACKFNS SYSPRETTY TIME TRSERVER TTYIN TWOINSPECTOR
            UNDO UNWINDMACROS VANILLADISK WEDIT WINDOW WINDOWICON WINDOWOBJ WINDOWSCROLL WRAPPERS WTFIX
            XCL-COMPILER XCL-PACKAGE XCLC-ALPHA XCLC-ANALYZE XCLC-ANNOTATE XCLC-ENV-CTXT XCLC-GENCODE
            XCLC-META-EVAL XCLC-PEEPHOLE XCLC-RUNTIME XCLC-TRANSFORMS XXFILL XXGEOM))

(RPAQQ FORKED-FILES (ABC APUTDQ ASTACK CMLEVAL CMLMVS DEFPACKAGE-IMPORT DLAP DTDECLARE DWIMIFY FILEIO FILESETS
                        LLBASIC LLCHAR LLCODE LLDATATYPE LLINTERP LLNEW LLSTK MACHINEINDEPENDENT MACROS MISC
                        PACKAGE-STARTUP PROC UNWINDMACROS XCL-PACKAGE))

(RPAQQ GARBAGE-OPCODES
        ((BOUT 33)
         (DOCOLLECT 36)
         (ENDCOLLECT 37)
         (GETP 27)
         (GETHASH 29)
         (ELT 40)
         (NTHCHC 41)
         (SETA 42)
         (RPLCHARCODE 43)
         (EVALV 45)
         (ATOMNUMBER 112)
         (GETBASEFIXP.N 203)
         (PUTBASEFIXP.N 204)))
```

;; Utilities for making mass-scale fixups to a library of files.

```
(DEFINEQ

(FIX-FILES
  (CL:LAMBDA (FILENAMES SOURCEDIR DESTDIR &OPTIONAL (DRIBBLE-FILE '{DSK6}BIGCOMP.DRIBBLE)
                    DELETE-DRIBBLE? RECORDS-TO-FIX)                    ; Edited 15-Aug-90 12:02 by jds

        ;; Make large-scale fix-ups to a bunch of files.

        (CL:BLOCK FIX-FILES
            (LET ((COMPLETION 'ERROR)
                  (NUM-FILES (LENGTH FILENAMES)))
                (IDLE.SET.OPTION 'TIMEOUT T)
                (SETQ NOSPELLFLG T)
                (SETQ DWIMIFYCOMPFLG NIL)
                (CL:UNWIND-PROTECT
                    (PROGN (DRIBBLE DRIBBLE-FILE)
                            (WINDOWPROP (WFROMDS (TTYDISPLAYSTREAM))
                                    'PAGEFULLFN
```

```
                                                        'NILL)
                                          (CNDIR DESTDIR)
                                          (PRINTOUT NIL "= = = = = Setting up for large-scale fix-up run on " (DATE)
                                                  " = = = = =" T T)
                                          (|for| FILE |in| FILENAMES |as| FILE-NUM |from| 1
                                             |do| (DSPNEWPAGE (GETSTREAM NIL 'OUTPUT))
                                                  (LET* ((SOURCEFILE (PACKFILENAME 'BODY FILE 'DIRECTORY SOURCEDIR))
                                                         (DESTFILE (PACKFILENAME 'BODY FILE 'DIRECTORY DESTDIR)))
                                                        (RESETLST
                                                           (PRINTOUT NIL T "Fixing file " SOURCEFILE " at " (DATE)
                                                                   " - - -" T)
                                                           (PRINTOUT NIL T "(File number " FILE-NUM " of " NUM-FILES ": "
                                                                   (- NUM-FILES FILE-NUM)
                                                                   " left)" T T)
                                                           (PRINT (FIX-FILE FILE RECORDS-TO-FIX)
                                                                  T)
                                                           (PRINTOUT NIL T T "- - - End of " FILE " fix-up - - -" T))))
                                          (PRINTOUT NIL T T T "= = = = = END OF CLEANUP RUN = = = = =")
                                          (SETQ COMPLETION 'SUCCESS))
                                   (PRINTOUT NIL T "Fix-up status: " COMPLETION T T)
                                   (DRIBBLE)
                                   (WINDOWPROP (WFROMDS (TTYDISPLAYSTREAM))
                                          'PAGEFULLFN NIL))
                            (SEND.FILE.TO.PRINTER DRIBBLE-FILE)
                            (AND DELETE-DRIBBLE? (DELFILE DRIBBLE-FILE))))))))
```

(**FIX-FILE**
  (LAMBDA (FILE RECORD-NAMES MAKEFILE-ONLY?)   ; Edited 21-Jan-93 16:30 by jds

    ;; Perform cleanup tasks on FILE.

    (LOAD FILE 'PROP)
    (LOADCOMP FILE 'PROP)

    ;; (FIX-COPYRIGHT FILE)

    (AND (FILEFNSLST FILE)
         (|for| RECNAME |in| (APPEND (FILECOMSLST FILE 'RECORDS)
                                     RECORD-NAMES)
             |do| (**QUALIFY-FIELDS** RECNAME FILE)))
    (MARKASCHANGED FILE 'FILES)
    (COND
       (MAKEFILE-ONLY? (MAKEFILE FILE))
       (T (APPLY* 'CLEANUP FILE)))))

(**FIX-COPYRIGHT**
  (LAMBDA (FILENAME)
    (LET ((CR (GETPROP FILENAME 'COPYRIGHT)))
         (COND
            (CR (RPLACA CR "Venue & Xerox Corporation"))
            (T (PUTPROP FILENAME 'COPYRIGHT (LIST "Venue" 1990)))))))

(**FIX-FILE-COPYRIGHT**
  (LAMBDA (FILE)
    (LOADFROM FILE NIL 'PROP)
    (**FIX-COPYRIGHT** FILE)
    (MARKASCHANGED FILE 'FILES)
    (APPLY* 'CLEANUP FILE)))

(**QUALIFY-FIELDS**
  (LAMBDA (RECNAME FILE)   ; Edited 28-Sep-87 14:41 by bvm:
    (APPLY* 'EDITFNS FILE '(LPQ F ((*ANY* FETCH |fetch| REPLACE |replace| FFETCH |ffetch| FREPLACE |freplace|
                                   /REPLACE |/replace|)
                             (*ANY* ,@(APPEND (RECORDFIELDNAMES RECNAME)))
                             --)
                        2
                        (MBD ,RECNAME)
                        0 P))))

(**FIX-TEDIT**
  (LAMBDA (FILE)   ; Edited 17-Aug-90 16:07 by jds
    (LET ((STRM (OPENTEXTSTREAM (MKATOM FILE))))
         (TEDIT.SUBLOOKS STRM '(FAMILY OPTIMA)
                '(FAMILY CLASSIC))
         (TEDIT.PUT STRM FILE)
         (CLOSEF STRM))))

(**FIX-DOCS**
  (LAMBDA (DIRECTORY)
    (LET ((FILES (|for| FILE |in| (DIRECTORY (CONCAT DIRECTORY "*.TEDIT;")) |collect| (PACKFILENAME.STRING
                                                                           'VERSION NIL 'BODY FILE))))
         (|for| FILE |in| FILES |do| (**FIX-TEDIT** FILE)))))
```

)

;; Removes bogus (CLISP  <clisp xlation> <real-code>) translations that result from CLISPARRAY being NIL.

(DEFINEQ

(**CLFIX**
  (LAMBDA (FILE)                                                              ; Edited  9-Sep-94 11:57 by jds
     (APPLY* 'EDITFNS FILE '(LPQ F CLISP\  1 D D 0 P))))

)

(PUTPROPS **MULTI-COMPILE FILETYPE** CL:COMPILE-FILE)

(DECLARE\: DONTEVAL@LOAD DOEVAL@COMPILE DONTCOPY COMPILERVARS

(ADDTOVAR **NLAMA** )

(ADDTOVAR **NLAML** )

(ADDTOVAR **LAMA** FIX-FILES)
)

(PUTPROPS **MULTI-COMPILE COPYRIGHT** ("Venue & Xerox Corporation" 1988 1990 1991 1992 1993 1994 2021))

## FUNCTION INDEX

## VARIABLE INDEX

## PROPERTY INDEX