File created: 18-Oct-93 10:39:21 **{Pele:mv:envos}<LispCore>Sources>CLTL2>CMLCOMPILE.;2**

previous date: 30-Mar-92 12:16:41 {Pele:mv:envos}<LispCore>Sources>CLTL2>CMLCOMPILE.;1

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

;;


```
(RPAQQ CMLCOMPILECOMS
       [(COMS (FUNCTIONS CL:DISASSEMBLE)
              (FNS FAKE-COMPILE-FILE INTERLISP-FORMAT-P INTERLISP-NLAMBDA-FUNCTION-P COMPILE-FILE-EXPRESSION
                   COMPILE-FILE-WALK-FUNCTION ARGTYPE.STATE COMPILE.CHECK.ARGTYPE COMPILE.FILE.DEFINEQ
                   COMPILE-FILE-SETF-SYMBOL-FUNCTION COMPILE-FILE-EX/IMPORT COMPILE.FILE.APPLY
                   COMPILE.FILE.RESET COMPILE-IN-CORE)
              (FNS COMPILE-FILE-SCAN-FIRST)
                                                          ; This function is support for AR#11185
              (VARS ARGTYPE.VARS)
              (PROP COMPILE-FILE-EXPRESSION DEFINEQ * SETF-SYMBOL-FUNCTION PRETTYCOMPRINT)
              (FUNCTIONS COMPILE-FILE-DECLARE%:))
        [COMS (FNS NEWDEFC)
              (DECLARE%: DONTEVAL@LOAD DOCOPY (P (MOVD 'NEWDEFC 'DEFC]
        (PROP FILETYPE CMLCOMPILE)
        (DECLARE%: DONTEVAL@LOAD DOEVAL@COMPILE DONTCOPY COMPILERVARS (ADDVARS (NLAMA)
                                                                               (NLAML)
                                                                               (LAMA FAKE-COMPILE-FILE])


(CL:DEFUN CL:DISASSEMBLE (NAME-OR-COMPILED-FUNCTION &KEY LEVEL-P (RADIX 8)
                                  (OUTPUT *STANDARD-OUTPUT*)
                                 FIRST-BYTE MARKED-PC)
   (PRINTCODE (if (CCODEP NAME-OR-COMPILED-FUNCTION)
                  then NAME-OR-COMPILED-FUNCTION
                else (CL:COMPILE NIL (if (CL:SYMBOLP NAME-OR-COMPILED-FUNCTION)
                                         then (CL:SYMBOL-FUNCTION NAME-OR-COMPILED-FUNCTION)
                                       else NAME-OR-COMPILED-FUNCTION)))
         LEVEL-P RADIX OUTPUT FIRST-BYTE MARKED-PC))

(DEFINEQ

(FAKE-COMPILE-FILE
  (CL:LAMBDA
   (FILENAME &KEY LAP REDEFINE OUTPUT-FILE (SAVE-EXPRS T)
          (COMPILER-OUTPUT T)
          (PROCESS-ENTIRE-FILE NIL PEFP))                  ; Edited 29-Jun-90 19:19 by nm
   (LET
    (COMPILE.FILE.AFTER VALUE COMPILE.FILE.VALUE (NLAML NLAML)
           (NLAMA NLAMA)
           (LAMS LAMS)
           (LAMA LAMA)
           (DFNFLG NIL))
    (DECLARE (CL:SPECIAL COMPILE.FILE.AFTER COMPILE.FILE.VALUE NLAML NLAMA LAMS LAMA DFNFLG))
    (RESETLST
        (RESETSAVE NIL (LIST 'RESETUNDO)
               (RESETUNDO))
        (RESETSAVE COUTFILE COMPILER-OUTPUT)
        (RESETSAVE STRF REDEFINE)
        (RESETSAVE SVFLG (AND SAVE-EXPRS REDEFINE 'DEFER))
        (RESETSAVE LAPFLG LAP)
        (LET ((*PACKAGE* *INTERLISP-PACKAGE*)
              (*READ-BASE* 10)
              (LOCALVARS SYSLOCALVARS)
              (SPECVARS T)
             STREAM LSTFIL ROOTNAME INTERLISP-FORMAT ENV FORM)
             (DECLARE (CL:SPECIAL *PACKAGE* *READ-BASE* LOCALVARS SPECVARS LSTFIL))
             [RESETSAVE NIL (LIST (FUNCTION CLOSEF?)
                                  (SETQ STREAM (OPENSTREAM FILENAME 'INPUT]
             (CL:MULTIPLE-VALUE-SETQ (ENV FORM)
                    (\PARSE-FILE-HEADER STREAM 'RETURN T))
             (SETQ INTERLISP-FORMAT (AND ENV (NEQ ENV *COMMON-LISP-READ-ENVIRONMENT*)))
             (if (NOT PEFP)
                 then (SETQ PROCESS-ENTIRE-FILE INTERLISP-FORMAT))
             (if LAP
                 then (SETQ LSTFIL COUTFILE))
             (SETQ FILENAME (FULLNAME STREAM))
             (RESETSAVE NIL (LIST (FUNCTION COMPILE.FILE.RESET)
                                  [SETQ OUTPUT-FILE (OPENSTREAM (OR OUTPUT-FILE (PACKFILENAME.STRING
                                                                                  'VERSION NIL 'EXTENSION
                                                                                  COMPILE.EXT 'BODY FILENAME))
                                                                'OUTPUT
                                                                'NEW
                                                                '((TYPE BINARY]
```

```
                                STREAM
                                (ROOTFILENAME FILENAME)))
            (if OUTPUT-FILE
                then (RESETSAVE LCFIL OUTPUT-FILE)
                     (PRINT-COMPILE-HEADER (LIST STREAM)
                            '("COMPILE-FILEd")
                            ENV))
            (WITH-READER-ENVIRONMENT ENV
                (PROG ((DEFERRED.EXPRESSIONS NIL)
                       (*PRINT-ARRAY* T)
                       (*PRINT-LEVEL* NIL)
                       (*PRINT-LENGTH* NIL)
                       (FIRSTFORMS NIL)
                       (AFTERS NIL)
                       (SCRATCH.LCOM '{CORE}SCRATCH.LCOM)
                       DUMMYFILE TEMPVAL)
                      (DECLARE (CL:SPECIAL DEFERRED.EXPRESSIONS *PRINT-ARRAY* *PRINT-LEVEL* *PRINT-LENGTH*
                                           FIRSTFORMS AFTERS DEFERS))
                                                          ; Edited by TT (11-June-90 : for AR#11185) all contents of file
                                                          ; are read, and each forms are compiled.(This reading method is
                                                          ; for supporting "FIRST", "NOTFIRST" tag.)
                      [RESETSAVE NIL (LIST (FUNCTION CLOSEF?)
                                           (SETQ DUMMYFILE (OPENSTREAM SCRATCH.LCOM 'BOTH 'NEW]
                       LPDUMP
                      [if (EQUAL (CAR FORM)
                                 'RPAQQ)
                          then                            ; This is the support method of "COMPILERVARS" (2-July-1990
                                                          ; TT)
                               (SETQ TEMPVAL (CADDR FORM))
                               (if (SETQ TEMPVAL (ASSOC 'DECLARE%: TEMPVAL))
                                   then (if (SETQ TEMPVAL (FMEMB 'COMPILERVARS (FMEMB 'DOEVAL@COMPILE TEMPVAL)))
                                            then (SETQ DFNFLG T)
                                                 (if [SETQ TEMPVAL (FMEMB 'ADDVARS (SETQ TEMPVAL (CADR TEMPVAL]
                                                     then (CL:DOLIST (ARG (CDR TEMPVAL))
                                                                     (APPLY 'ADDTOVAR ARG))]
                      (COMPILE-FILE-EXPRESSION FORM DUMMYFILE NIL PROCESS-ENTIRE-FILE)
                      (SKIPSEPRCODES STREAM)
                      (if (EOFP STREAM)
                          then (CLOSEF STREAM)
                               (for FORM in FIRSTFORMS do (COMPILE-FILE-EXPRESSION FORM OUTPUT-FILE NIL
                                                                                   PROCESS-ENTIRE-FILE T))
                               (COPYBYTES DUMMYFILE OUTPUT-FILE 0 (GETFILEPTR DUMMYFILE))
                               (CLOSEF? DUMMYFILE)
                               (DELFILE (FULLNAME DUMMYFILE))
                               (AND PROCESS-ENTIRE-FILE (for EXP in (REVERSE DEFERRED.EXPRESSIONS)
                                                           do (APPLY* (CAR EXP)
                                                                      (CDR EXP)
                                                                      OUTPUT-FILE)))
                               (for FORM in AFTERS do (COMPILE-FILE-EXPRESSION FORM OUTPUT-FILE NIL
                                                                               PROCESS-ENTIRE-FILE T))
                               (RETURN))
                      (SETQ FORM (READ STREAM))
                      (GO LPDUMP))
                 (PRINT NIL OUTPUT-FILE))
              (SETQ COMPILE.FILE.VALUE (CLOSEF OUTPUT-FILE))))    ; Do these after UNDONLSETQ entered
    (MAPC (REVERSE COMPILE.FILE.AFTER)
          (FUNCTION EVAL))
    COMPILE.FILE.VALUE)))
```

(INTERLISP-FORMAT-P

```
  [LAMBDA (STREAM)                                        (* bvm%: " 3-Aug-86 14:01")
    (SELCHARQ (PEEKCCODE STREAM)
         (; NIL)
         ((^F "(")
              T)
         NIL])
```

(INTERLISP-NLAMBDA-FUNCTION-P

```
  [LAMBDA (X)                                             (* lmm " 7-May-86 20:12")
    (AND (LITATOM X)
         (FMEMB (ARGTYPE X)
                '(1 3))
         (NOT (CL:SPECIAL-FORM-P X])
```

(COMPILE-FILE-EXPRESSION

```
  [LAMBDA (FORM COMPILED.FILE COMPILE.TIME.TOO DEFER FORCE-OUTPUT-P)
                                                          ; Edited 30-Jun-90 18:31 by nm
    (DECLARE (CL:SPECIAL COMPILED.FILE))
    (AND (LISTP FORM)
         (SELECTQ (CAR FORM)
              ((DECLARE%: FILECREATED)
                   (COMPILE-FILE-SCAN-FIRST FORM COMPILED.FILE NIL T COMPILE.TIME.TOO DEFER FORCE-OUTPUT-P))
              ((DEFMACRO)
                   (LET* ((DEFINITION (REMOVE-COMMENTS FORM))
```

```
                    (NAME (XCL::%%DEFINER-NAME 'DEFMACRO DEFINITION))
                    (BODY (XCL::%%EXPAND-DEFINER 'DEFMACRO DEFINITION)))
                   (CL:EVAL BODY)
                   (COMPILE-FILE-EXPRESSION BODY COMPILED.FILE COMPILE.TIME.TOO DEFER FORCE-OUTPUT-P)))
    ((PROGN)
         (for X in (CDR FORM) do (COMPILE-FILE-EXPRESSION X COMPILED.FILE COMPILE.TIME.TOO DEFER
                                        FORCE-OUTPUT-P)))
    ((QUOTE)                                                ; ignore top level quoted expression -i
        NIL)
    ((CL:COMPILER-LET)                                      ; top level compiler-let. bind variables and recursively compile
                                                            ; sub-expressions. This is here mainly for b PCL has top level
                                                            ; compiler-lets
         [LET [(VARS (CL:MAPCAR #'(CL:LAMBDA (X)
                                        (if (CL:CONSP X)
                                            then (CAR X)
                                          else X))
                             (CADR FORM)))
               (VALS (CL:MAPCAR #'[CL:LAMBDA (X)
                                        (if (CL:CONSP X)
                                            then (CL:EVAL (CADR X]
                             (CADR FORM]
              (CL:PROGV VARS VALS
                  (CL:MAPC #'(CL:LAMBDA (X)
                                    (COMPILE-FILE-EXPRESSION X COMPILED.FILE COMPILE.TIME.TOO DEFER
                                        FORCE-OUTPUT-P))
                           (CDDR FORM)))]])
    ((CL:EVAL-WHEN)
         [LET [[EVAL.SPECIFIED (OR (FMEMB 'EVAL (CADR FORM))
                                   (FMEMB 'CL:EVAL (CADR FORM]
               [LOAD.SPECIFIED (OR (FMEMB 'LOAD (CADR FORM))
                                   (FMEMB 'CL:LOAD (CADR FORM]
               (COMPILE.SPECIFIED (OR (FMEMB 'COMPILE (CADR FORM))
                                      (FMEMB 'CL:COMPILE (CADR FORM]
              (COND
                 [(NOT LOAD.SPECIFIED)
                  (COND
                     ((OR COMPILE.SPECIFIED (AND COMPILE.TIME.TOO EVAL.SPECIFIED))
                      (for INNER-FORM in (CDDR FORM) do (EVAL INNER-FORM]
                    (T (for INNER-FORM in (CDDR FORM) do (COMPILE-FILE-EXPRESSION INNER-FORM COMPILED.FILE
                                                            (OR COMPILE.SPECIFIED (AND COMPILE.TIME.TOO
                                                                                       EVAL.SPECIFIED))
                                                            DEFER FORCE-OUTPUT-P])
    ((CL:IN-PACKAGE CL:IN-PACKAGE)                          ; These are special because they have to be dumped to the
                                                            ; output BEFORE the package changes
         (PRINT FORM COMPILED.FILE)
         (EVAL FORM))
    ((CL:MAKE-PACKAGE CL:SHADOW CL:SHADOWING-IMPORT EXPORT CL:UNEXPORT CL:USE-PACKAGE CL:UNUSE-PACKAGE
            IMPORT)                                         ; This is Special also, becouse the compiling Environment Must
                                                            ; be changed.(see CLtL, 11.7. Package System Functions and
                                                            ; Variables) edited by TT(10-April-90)
         (PRINT FORM COMPILED.FILE)
         (EVAL FORM))
    ((CL:SETQ)                                              ; Gasly kludge because cl:setq needs to run in the init before
                                                            ; macroexpansion is enabled
         (COMPILE-FILE-EXPRESSION (EXPANDMACRO FORM T)
                COMPILED.FILE COMPILE.TIME.TOO DEFER FORCE-OUTPUT-P))
    (LET [(PROP (OR (GETPROP (CAR FORM)
                             'COMPILE-FILE-EXPRESSION)
                    (GETPROP (CAR FORM)
                             'COMPILE.FILE.EXPRESSION]
         (if [AND (NOT PROP)
                  (NOT (CL:SPECIAL-FORM-P (CAR FORM)))
                  (NOT (INTERLISP-NLAMBDA-FUNCTION-P (CAR FORM)))
                  (NEQ FORM (SETQ FORM (CL:MACROEXPAND-1 FORM]
             then (COMPILE-FILE-EXPRESSION FORM COMPILED.FILE COMPILE.TIME.TOO DEFER FORCE-OUTPUT-P)
           else (if COMPILE.TIME.TOO
                    then (EVAL FORM))
                (if PROP
                    then (COMPILE.FILE.APPLY PROP FORM DEFER FORCE-OUTPUT-P)
                  elseif [NOT (EQUAL FORM (SETQ FORM (WALK-FORM FORM :WALK-FUNCTION
                                                        (FUNCTION COMPILE-FILE-WALK-FUNCTION]
                    then (COMPILE-FILE-EXPRESSION FORM COMPILED.FILE COMPILE.TIME.TOO DEFER
                                FORCE-OUTPUT-P)
                  else (COMPILE.FILE.APPLY (FUNCTION PRINT)
                                FORM DEFER FORCE-OUTPUT-P])
```

(COMPILE-FILE-WALK-FUNCTION

```
  [LAMBDA (FORM)                                            (* lmm "26-Jun-86 17:25")
    (if (NLISTP FORM)
        then FORM
      else (CL:VALUES FORM (INTERLISP-NLAMBDA-FUNCTION-P (CAR FORM])
```

(ARGTYPE.STATE

```
  [LAMBDA NIL
    (for X in ARGTYPE.VARS do (PRINTOUT T X %, (EVAL (CADR X))
```

```
                                    T])
```

(COMPILE.CHECK.ARGTYPE

```
[LAMBDA (X AT)                                                    (* lmm "15-Jun-85 16:58")
  (if (NEQ AT (LET (BLKFLG)
                   (COMP.ARGTYPE X)))
      then                                                        ; Incorrectly on one of the defining lists
           (for ATYPEPAIR in ARGTYPE.VARS
              do (LET [(VAL (FMEMB X (EVALV (CADR ATYPEPAIR]
                       (if (EQ AT (CAR ATYPEPAIR))
                           then (if VAL
                                    then (PRINTOUT COUTFILE "Compiler confused: " X " on " (CADR ATYPEPAIR)
                                                   " but compiler doesn't think its a "
                                                   (CADDR ATYPEPAIR)))
                                [/SETTOPVAL (CADR ATYPEPAIR)
                                       (CONS X (PROGN (GETTOPVAL (CADR ATYPEPAIR]
                         else (if VAL
                                  then (PRINTOUT COUTFILE "Warning: compiler thought " X " "
                                                 (LIST 'a (OR (CADDR (ASSOC AT ARGTYPE.VARS))
                                                              "LAMBDA spread")
                                                       'function)
                                                 " was a "
                                                 (CADDR ATYPEPAIR)
                                                 " because it was incorrectly on "
                                                 (CADR ATYPEPAIR)
                                                 T)
                                     (/SETTOPVAL (CADR ATYPEPAIR)
                                                 (REMOVE X (PROGN (GETTOPVAL (CADR ATYPEPAIR])
```

(COMPILE.FILE.DEFINEQ

```
[LAMBDA (FORM LCFIL)                                              (* bvm%: "18-Sep-86 14:35")
  (for DEF in (CDR FORM) unless (FMEMB (CAR DEF)
                                       DONTCOMPILEFNS)
     do (COMPILE.CHECK.ARGTYPE (CAR DEF)
                               (ARGTYPE (CADR DEF)))
        (BYTECOMPILE2 (CAR DEF)
                      (COMPILE1A (CAR DEF)
                                 (CADR DEF)
                                 NIL])
```

(COMPILE-FILE-SETF-SYMBOL-FUNCTION

```
[LAMBDA (FORM LCFIL)                                              (* bvm%: " 8-Sep-86 16:55")
  (if [AND (FMEMB (CAR (LISTP (CL:THIRD FORM)))
                  '(FUNCTION CL:FUNCTION))
           (EQ (CAR (LISTP (CL:SECOND FORM)))
               'QUOTE)
           (CL:CONSP (CL:SECOND (CL:THIRD FORM]
      then (BYTECOMPILE2 (CADR (CL:SECOND FORM))
                         (CADR (CL:THIRD FORM)))
     else (PRINT (WALK-FORM FORM :WALK-FUNCTION (FUNCTION COMPILE-FILE-WALK-FUNCTION))
                 LCFIL])
```

(COMPILE-FILE-EX/IMPORT

```
[LAMBDA (FORM LCFIL RDTBL)                                        (* bvm%: " 3-Aug-86 15:05")
```

(* * "EXPORT, IMPORT, SHADOW, USE-PACKAGE are all implicitly EVAL@COMPILE, since they have to affect the package being used to read what follows")

```
  (PRINT FORM LCFIL RDTBL)
  (EVAL FORM])
```

(COMPILE.FILE.APPLY

```
[LAMBDA (PROP FORM DEFER FORCE-OUTPUT-P)                          ; Edited 29-Jun-90 19:21 by nm
  (if FORCE-OUTPUT-P
      then (PRINT FORM COMPILED.FILE)
    else (if DEFER
             then (push DEFERRED.EXPRESSIONS (CONS PROP FORM))
           else (APPLY* PROP FORM COMPILED.FILE])
```

(COMPILE.FILE.RESET

```
[LAMBDA (COMPILED.FILE SOURCEFILE ROOTNAME)                       (* bvm%: " 9-Sep-86 15:16")
                                                                  (* Cleans up after brecompile and bcompl have finished
                                                                  operating,)
  (if (AND COMPILED.FILE (OPENP COMPILED.FILE))
      then (CLOSE-AND-MAYBE-DELETE COMPILED.FILE))
  (if SOURCEFILE
      then (CLOSEF? SOURCEFILE))
  (if (NULL RESETSTATE)
      then                                                        (* Finished successfully.)
           (/SETATOMVAL 'NOTCOMPILEDFILES (REMOVE ROOTNAME NOTCOMPILEDFILES))
                                                                  (* Removes FILES from NOTCOMPILEDFILES.)])
```

(COMPILE-IN-CORE

```
  [LAMBDA (fn-name fn-expr fn-type NOSAVE)
    (DECLARE (SPECVARS LCFIL LAPFLG STRF SVFLG LSTFIL SPECVARS LOCALVARS DONT-TRANSFER-PUTD))
                                                                  (* lmm " 2-Jun-86 22:04")

          (* in-core compiling for functions and forms, without the interview.
          if X is a list, we assume that we are being called merely to display the lap and machine code.
          the form is compiled as the definition of FOO but the compiled :CODE is thrown away.
          -
          if X is a litatom, then saving, redefining, and printing is controlled by the flags.)

    (LET ((NOREDEFINE NIL)
          (PRINTLAP NIL)
          (DONT-TRANSFER-PUTD T))
         (RESETVARS [(NLAMA NLAMA)
                     (NLAML NLAML)
                     (LAMS LAMS)
                     (LAMA LAMA)
                     (NOFIXFNSLST NOFIXFNSLST)
                     (NOFIXVARSLST NOFIXVARSLST)
                     (COUTFILE (COND
                                  ((AND (BOUNDP 'NULLFILE)
                                        (STREAMP NULLFILE)
                                        (OPENP NULLFILE))
                                   NULLFILE)
                                  (T (SETQ NULLFILE (OPENFILE '{NULL} 'OUTPUT]
                    (RETURN (RESETLST                             (* RESETLST to provide reset context for macros under
                                                                  COMPILE1 as generated e.g. by DECL.)
                              [PROG ((LCFIL)
                                     [LAPFLG (AND PRINTLAP (COND
                                                              (BYTECOMPFLG T)
                                                              (T 2]
                                     (STRF (NOT NOREDEFINE))
                                     (SVFLG (if (EQ fn-type 'SELECTOR)
                                                then 'SELECTOR
                                              else (NOT NOSAVE)))
                                     (LSTFIL T)
                                     (SPECVARS SYSSPECVARS)
                                     (LOCALVARS T))
                                    (RETURN (PROGN (SETQ fn-expr (COMPILE1A fn-name fn-expr T))
                                                   (PROG ((FREEVARS FREEVARS))
                                                         (RETURN (BYTECOMPILE2 fn-name fn-expr])])

)

(DEFINEQ
```

(COMPILE-FILE-SCAN-FIRST

```
  [LAMBDA (FORM COMPILED.FILE FIRSTFLG DOCOPY EVAL@COMPILE DEFER FORCE-OUTPUT-P)
                                                                  ; Edited 30-Jun-90 18:32 by nm
                                                                  ; Edited 26-Apr-90 by tt
                                                                  ; This is enhancement for Fake Compiler's interpretation of file
                                                                  ; package coms
    (PROG ((DFNFLG DFNFLG)
           (FIRST FIRSTFLG)
           (DOCOPY DOCOPY)
           (EVAL@COMPILE EVAL@COMPILE)
           NOTFIRST)
          (if (LISTP FORM)
              then (SELECTQ (CAR FORM)
                            ((DECLARE%:)
                                 (CL:DO ((TAIL (CDR FORM)
                                               (CDR TAIL)))
                                        ((CL:ENDP TAIL))
                                     [if (CL:SYMBOLP (CAR TAIL))
                                         then (CASE (CAR TAIL)
                                                    ((DOCOPY COPY) (SETQ DOCOPY T))
                                                    ((DONTCOPY) (SETQ DOCOPY NIL))
                                                    ((COPYWHEN) [SETQ DOCOPY (EVAL (CAR (SETQ TAIL (CDR TAIL])
                                                    ((EVAL@LOAD DOEVAL@LOAD DONTEVAL@LOAD) NIL)
                                                    ((EVAL@LOADWHEN) (CL:POP TAIL))
                                                    ((EVAL@COMPILE DOEVAL@COMPILE) (SETQ EVAL@COMPILE T))
                                                    ((DONTEVAL@COMPILE) (SETQ EVAL@COMPILE NIL))
                                                    ((EVAL@COMPILEWHEN) [SETQ EVAL@COMPILE (EVAL (CAR (SETQ TAIL
                                                                                                          (CDR TAIL])
                                                    ((FIRST)
                                                       (SETQ FIRST T)
                                                       (SETQ NOTFIRST NIL))
                                                                  ; for First
                                                    ((NOTFIRST)
                                                       (SETQ NOTFIRST T)
                                                       (SETQ FIRST NIL)) ; for Not First
                                                    ((COMPILERVARS) (SETQ DFNFLG T))
                                                                  ; for Compilervars
                                                    (CL:OTHERWISE (CL:FORMAT COUTFILE "Warning: Ignoring unrecognized
```

```
                                                                DECLARE: tag: ~S~%%" (CAR TAIL))))
                                    else (COND
                                           ((EQ 'DECLARE%: (CAR (CAR TAIL)))
                                            (COMPILE-FILE-SCAN-FIRST (CAR TAIL)
                                                   COMPILED.FILE FIRST DOCOPY EVAL@COMPILE DEFER))
                                           (T (CL:WHEN EVAL@COMPILE
                                                  (EVAL (CAR TAIL)))
                                              (CL:WHEN DOCOPY
                                                  (CL:IF FIRST
                                                      (SETQ FIRSTFORMS (NCONC1 FIRSTFORMS (CAR TAIL)))
                                                      (CL:IF NOTFIRST
                                                          (SETQ AFTERS (NCONC1 AFTERS (CAR TAIL)))
                                                          (COMPILE-FILE-EXPRESSION (CAR TAIL)
                                                                 COMPILED.FILE EVAL@COMPILE DEFER FORCE-OUTPUT-P))
))]))
                          ((FILECREATED)
                               (if FORCE-OUTPUT-P
                                   then (PRINT FORM COMPILED.FILE)
                                 else (SETQ FIRSTFORMS (NCONC1 FIRSTFORMS FORM))))
                          NIL])

)
```

;; This function is support for AR#11185

```
(RPAQQ ARGTYPE.VARS ((1 NLAML "NLAMBDA spread")
                     (2 LAMA "LAMBDA nospread")
                     (0 LAMS "LAMBDA spread")
                     (3 NLAMA "NLAMBDA no-spread")))

(PUTPROPS DEFINEQ COMPILE-FILE-EXPRESSION COMPILE.FILE.DEFINEQ)

(PUTPROPS * COMPILE-FILE-EXPRESSION NILL)

(PUTPROPS SETF-SYMBOL-FUNCTION COMPILE-FILE-EXPRESSION COMPILE-FILE-SETF-SYMBOL-FUNCTION)

(PUTPROPS PRETTYCOMPRINT COMPILE-FILE-EXPRESSION NILL)


(CL:DEFUN COMPILE-FILE-DECLARE%: (FORM COMPILED.FILE EVAL@COMPILE DOCOPY DEFER)
   (CL:DO ((TAIL (CDR FORM)
                 (CDR TAIL)))
          ((CL:ENDP TAIL))
       (CL:IF (CL:SYMBOLP (CAR TAIL))
           (CASE (CAR TAIL)
               ((EVAL@LOAD DOEVAL@LOAD DONTEVAL@LOAD) NIL)
               ((EVAL@LOADWHEN) (CL:POP TAIL))
               ((EVAL@COMPILE DOEVAL@COMPILE) (SETQ EVAL@COMPILE T))
               ((DONTEVAL@COMPILE) (SETQ EVAL@COMPILE NIL))
               ((EVAL@COMPILEWHEN) [SETQ EVAL@COMPILE (EVAL (CAR (SETQ TAIL (CDR TAIL])
               ((COPY DOCOPY) (SETQ DOCOPY T))
               ((DONTCOPY) (SETQ DOCOPY NIL))
               ((COPYWHEN) [SETQ DOCOPY (EVAL (CAR (SETQ TAIL (CDR TAIL])
               ((FIRST) )
               ((NOTFIRST COMPILERVARS) )
               (CL:OTHERWISE (CL:FORMAT COUTFILE "Warning: Ignoring unrecognized DECLARE: tag: ~S~%%"
                                  (CAR TAIL))))
           [COND
              ((EQ 'DECLARE%: (CAR (CAR TAIL)))
               (COMPILE-FILE-DECLARE%: (CAR TAIL)
                      COMPILED.FILE EVAL@COMPILE DOCOPY DEFER))
              (T (CL:WHEN EVAL@COMPILE
                     (EVAL (CAR TAIL)))
                 (CL:WHEN DOCOPY
                     (COMPILE-FILE-EXPRESSION (CAR TAIL)
                            COMPILED.FILE EVAL@COMPILE DEFER))]))))

(DEFINEQ

(NEWDEFC
  [LAMBDA (NM DF)                                                    (* bvm%: "30-Sep-86 23:12")
    [COND
       ((EQ SVFLG 'DEFER)
        (push COMPILE.FILE.AFTER (LIST (FUNCTION NEWDEFC)
                                       (KWOTE NM)
                                       (KWOTE DF)
                                       T)))
       ((OR (NULL DFNFLG)
            (EQ DFNFLG T))
        [COND
           ((GETD NM)
            (VIRGINFN NM T)
            (COND
               ((NULL DFNFLG)
                (CL:FORMAT *ERROR-OUTPUT* "~&(~S redefined)~%%" NM)
                (SAVEDEF NM]
        (/PUTD NM DF T))
```

```
        (T ;; Save on CODE prop.  Be nice and change it from archaic CCODEP object to modern compiled code object.
           (/PUTPROP NM 'CODE (if (ARRAYP DF)
                                  then (create COMPILED-CLOSURE
                                               FNHEADER _ (fetch (ARRAYP BASE) of DF))
                                  else DF]
    DF])

)

(DECLARE%: DONTEVAL@LOAD DOCOPY

(MOVD 'NEWDEFC 'DEFC)
)

(PUTPROPS CMLCOMPILE FILETYPE CL:COMPILE-FILE)

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

(ADDTOVAR NLAMA )

(ADDTOVAR NLAML )

(ADDTOVAR LAMA FAKE-COMPILE-FILE)
)

(PUTPROPS CMLCOMPILE COPYRIGHT ("Venue & Xerox Corporation" 1985 1986 1987 1990 1991 1992 1993))
```

FUNCTION INDEX

PROPERTY INDEX

VARIABLE INDEX