

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

::
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(RPAQQ **CMLCOMPILECOMS**

```
[ (COMS (FUNCTIONS CL:DISASSEMBLE)
      (FNS FAKE-COMPILE-FILE INTERLISP-FORMAT-P INTERLISP-NLAMBDA-FUNCTION-P COMPILE-FILE-EXPRESSION
        COMPILER-FILE-WALK-FUNCTION ARGTYPE.STATE COMPILE.CHECK.ARGTYPE COMPILE.FILE.DEFINEQ
        COMPILER-FILE-SETF-SYMBOL-FUNCTION COMPILER-FILE-EX/IMPORT COMPILE.FILE.APPLY
        COMPILER-FILE.RESET COMPILER-IN-CORE)
      (FNS COMPILER-FILE-SCAN-FIRST)
      ; This function is support for AR#11185
      (VARS ARGTYPE.VARS)
      (PROP COMPILER-FILE-EXPRESSION DEFINEQ * SETF-SYMBOL-FUNCTION PRETTYCOMPRINT)
      (FUNCTIONS COMPILER-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 CLOSEP?)
          (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 COMPILER-FILE-RESET)
            [SETQ OUTPUT-FILE (OPENSTREAM (OR OUTPUT-FILE (PACKFILENAME.STRING
              'VERSION NIL 'EXTENSION
              COMPILER-FILE-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 "COMPILE-FILE" (2-July-1990
      ; TT)
      (SETQ TEMPVAL (CADDR FORM))
      (if (SETQ TEMPVAL (ASSOC 'DECLARE%: TEMPVAL))
        then (if (SETQ TEMPVAL (FMEMB 'COMPILE-FILE (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)
          (SKIPSEPCODES STREAM)
          (if (EOPF 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)
                 (DELFIL (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)
  (SELCHARQ (PEEKCCODE STREAM)
    (; NIL)
    ((^F "(")
     T)
  NIL])
(* bvm%: " 3-Aug-86 14:01")

```

(INTERLISP-NLAMBDA-FUNCTION-P

```

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

```

(COMPILE-FILE-EXPRESSION

```

[LAMBDA (FORM COMPILED.FILE COMPILE.TIME TOO DEFER FORCE-OUTPUT-P)
  (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))
          ; Edited 30-Jun-90 18:31 by nm

```

```

(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)
 NIL) ; ignore top level quoted expression -i
((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, because 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)
 (if (NLISTP FORM)
 then FORM
 else (CL:VALUES FORM (INTERLISP-NLAMBDA-FUNCTION-P (CAR FORM)))
 (* Imm "26-Jun-86 17:25")

```

(ARGTYPE.STATE

```

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

```

T])

(COMPILE.CHECK.ARGTYPE

(* lmm "15-Jun-85 16:58")

```

[LAMBDA (X AT)
  (if (NEQ AT (LET (BLKFLG)
                  (COMP.ARGTYPE X)))
    then
      (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 "
                                                                           (CADR ATYPEPAIR)))
                                         [/SETTOPVAL (CADR ATYPEPAIR)
                                          (CONS X (PROGN (GETTOPVAL (CADR ATYPEPAIR)
                                                                    (CONS X (PROGN (GETTOPVAL (CADR ATYPEPAIR)
                                                                    (PRINTOUT COUTFILE "Warning: compiler thought " X " "
                                                                    (LIST 'a (OR (CADDR (ASSOC AT ARGTYPE.VARS))
                                                                    "LAMBDA spread")
                                                                    'function)
                                                                    " was a "
                                                                    (CADR ATYPEPAIR)
                                                                    " because it was incorrectly on "
                                                                    (CADR ATYPEPAIR)
                                                                    T)
                                                                    (/SETTOPVAL (CADR ATYPEPAIR)
                                                                    (REMOVE X (PROGN (GETTOPVAL (CADR ATYPEPAIR)

```

; Incorrectly on one of the defining lists

(COMPILE.FILE.DEFINEQ

(* bvm%: "18-Sep-86 14:35")

```

[LAMBDA (FORM LCFIL)
  (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

(* bvm%: " 8-Sep-86 16:55")

```

[LAMBDA (FORM LCFIL)
  (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))
                  (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

(* bvm%: " 3-Aug-86 15:05")

```

[LAMBDA (FORM LCFIL RDTBL)

  (** "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

; Edited 29-Jun-90 19:21 by nm

```

[LAMBDA (PROP FORM DEFER FORCE-OUTPUT-P)
  (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

(* bvm%: " 9-Sep-86 15:16")

(* Cleans up after brecompile and bcompl have finished operating,)

```

[LAMBDA (COMPILED.FILE SOURCEFILE ROOTNAME)

  (if (AND COMPILED.FILE (OPENP COMPILED.FILE))
    then (CLOSE-AND-MAYBE-DELETE COMPILED.FILE))
  (if SOURCEFILE
    then (CLOSEF? SOURCEFILE))
  (if (NULL RESETSTATE)
    then
      (/SETATOMVAL 'NOTCOMPILEDFILES (REMOVE ROOTNAME NOTCOMPILEDFILES))
      (* Finished successfully.)
      (* 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))
  (* Imm "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))
                           (* RESETLST to provide reset context for macros under
                              COMPILE1 as generated e.g. by DECL.))
                        (RETURN (RESETLST
                               [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
                                           ((COMPILERVERS) (SETQ DFNFLG T))
                                           ; for Compilervers
                                           (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 NIL)
(PUTPROPS SETF-SYMBOL-FUNCTION COMPILE-FILE-EXPRESSION COMPILE-FILE-SETF-SYMBOL-FUNCTION)
(PUTPROPS PRETTYCOMPRINT COMPILE-FILE-EXPRESSION NIL)

(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 COMPILERVERS) )
              (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)
  [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))

```

(* bvm%: "30-Sep-86 23:12")

(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 COMPILERVERS

(ADDTOVAR **NLAMA**)

(ADDTOVAR **NLAML**)

(ADDTOVAR **LAMA** FAKE-COMPILE-FILE)

)

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

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