

```
File created: 19-Jul-2022 23:31:31 {DSK}<users>kaplan>local>medley3.5>working-medley>sources>CMLREAD.
;15
```

```

changes to: (FNS CL:PEEK-CHAR)

previous date: 16-Aug-2021 23:42:49 {DSK}<users>kaplan>local>medley3.5>working-medley>sources>CMLREAD.;14

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

```

```
(RPAQQ CMLREAD:MS)
[ (COMS
    ;; Misc Common Lisp reader functions

    (FNS CL:COPY-READTABLE)
    (FNS CL:READ-LINE CL:READ-CHAR CL:UNREAD-CHAR CL:PEEK-CHAR CL:LISTEN CL:READ-CHAR-NO-HANG
      CL:CLEAR-INPUT CL:READ-FROM-STRING CL:READ-BYTE CL:WRITE-BYTE)
      ; must turn off packed version of CLISP infix

    (VARS [CLISPCCHARS (LDIFFERENCE CLISPCCHARS '(- *)
      (CLISPCCHARARRAY (MAKEBITTABLE CLISPCCHARS))
      (DWIMINMACROSFGL))
    (VARIABLES *READ-DEFAULT-FLOAT-FORMAT*)
    (GLOBALVARS CMLRDTBL READ-LINE-RDTBL))

[COMS
    ;; Crude means to aid reading and printing things in same reader environment. There are some fns and an INITRECORDS for this on
    ;; ATBL to get it early in the loadup

    (RECORDS READER-ENVIRONMENT)
    (FUNCTIONS WITH-READER-ENVIRONMENT)
    (ADDVARS (SYSSPECVARS *PACKAGE* *READTABLE* *READ-BASE* *PRINT-BASE*))
    (PROP INFO WITH-READER-ENVIRONMENT)
    (GLOBALVARS *COMMON-LISP-READ-ENVIRONMENT*)
    (INITVARS (*COMMON-LISP-READ-ENVIRONMENT* (create READER-ENVIRONMENT REPACKAGE _ (CL:FIND-PACKAGE
      "USER")
      REREADTABLE _ CMLRDTBL REBASE _ 10 REFORMAT _
      :XCCS])

    (PROP FILETYPE CMLREAD)
    (DECLARE%: DONTEVAL@LOAD DOEVAL@COMPILE DONTCOPY COMPILEVARS
      (ADDVARS (NLAMA)
        (NLAML)
        (LAMA CL:READ-BYTE CL:READ-FROM-STRING CL:CLEAR-INPUT CL:READ-CHAR-NO-HANG CL:PEEK-CHAR
          CL:UNREAD-CHAR CL:READ-CHAR CL:READ-LINE CL:COPY-READTABLE]))
    )
  )
)
```

(DEFINEQ

```

[CL:LAMBDA (&OPTIONAL (FROM-READTABLE *READTABLE*)
              TO-READTABLE)
  (if (AND (NULL FROM-READTABLE)
            (NULL TO-READTABLE))
      then
        (CMLRDTBL)
      else (SETQ FROM-READTABLE (\DTEST (OR FROM-READTABLE (CMLRDTBL)
                                              'READTABLEP))
            (if TO-READTABLE
                then (RESETREADTABLE (\DTEST TO-READTABLE 'READTABLEP)
                                      FROM-READTABLE)
                TO-READTABLE
            else (COPYREADTABLE FROM-READTABLE]))
  )

```

```
(DEFINEQ
```

```

[CL:LAMBDA (OPTIONAL STREAM (EOF-ERRORP T)
                                EOF-VALUE RECURSIVE-P)
; Edited 31-Mar-87 18:36 by bvm:

;; Returns a line of text read from the STREAM as a string, discarding the newline character.

(CL:SETQ STREAM (\GETSTREAM STREAM ' INPUT))
(if (AND (NULL EOF-ERRORP)
         (NULL RECURSIVE-P)
         (\EOFP STREAM))
    then EOF-VALUE
    else (LET ((RESULT (RSTRING STREAM READ-LINE-RDTBL)))
          (if (\EOFP STREAM)
              then (CL:VALUES RESULT T)
              else ; consume the eol

```

```
(READCCCODE STREAM)
(CL:VALUES RESULT NIL)]
```

(CL:READ-CHAR

```
[CL:LAMBDA (&OPTIONAL (STREAM *STANDARD-INPUT*)
              (EOF-ERRORP T)
              EOF-VALUE RECURSIVE-P)
```

; Edited 14-Dec-86 20:41 by bvm:

;; Inputs a character from STREAM and returns it.

```
(LET [(STREAM (\GETSTREAM STREAM 'INPUT))
      (COND
        ((AND (NOT EOF-ERRORP)
              (NOT RECURSIVE-P)
              (\EOF STREAM))
          EOF-VALUE)
        (T (CL:CODE-CHAR (READCCCODE STREAM)))]
```

(CL:UNREAD-CHAR

```
(CL:LAMBDA (CHARACTER &OPTIONAL (INPUT-STREAM *STANDARD-INPUT*))
```

; Edited 23-Jun-2021 13:05 by rmk:

```
;; Puts the CHARACTER back on the front of the input STREAM. According to the manual, 'One may apply UNREAD-CHAR only to the
;; character most recently read from INPUT-STREAM.'
```

```
(\BACKCCCODE (\GETSTREAM INPUT-STREAM 'INPUT))
NIL))
```

(CL:PEEK-CHAR

```
[CL:LAMBDA (&OPTIONAL (PEEK-TYPE NIL)
              (STREAM *STANDARD-INPUT*)
              (EOF-ERRORP T)
              EOF-VALUE RECURSIVE-P)
```

; Edited 19-Jul-2022 23:29 by rmk

; Edited 14-Apr-87 14:39 by bvm:

;; Peeks at the next character in the input Stream. See manual for details.

```
(DECLARE (IGNORE RECURSIVE-P))
(LET ((STREAM (\GETSTREAM STREAM 'INPUT))
      (\RefillBufferFn '\PEEKREFILL)
      CL:CHAR)
  (DECLARE (CL:SPECIAL \RefillBufferFn))
  (SELECTQ PEEK-TYPE
    (NIL
```

; standard case--return next char. \peekcccode to terminal

; requires the binding of \RefillBufferFn above

```
      (if (SETQ CL:CHAR (\PEEKCCCODE.EOLC STREAM
              then (CL:CODE-CHAR CL:CHAR)
              else EOF-VALUE))
```

; skip whitespace before peeking

```
      (T
        (if (SETQ CL:CHAR (SKIPSEPRCODES STREAM))
            then (CL:CODE-CHAR CL:CHAR)
            elseif EOF-ERRORP
            then (\EOF.ACTION STREAM)
            else EOF-VALUE))
      (if (CL:CHARACTERP PEEK-TYPE)
          then (LET ((DESIREDCHAR (CL:CHAR-CODE PEEK-TYPE))
                    (NOERROR (NULL EOF-ERRORP)))
                (until (EQ (SETQ CL:CHAR (\PEEKCCCODE.EOLC STREAM NOERROR))
                           DESIREDCHAR)
                  do (if (NULL CL:CHAR)
                        then (RETURN EOF-VALUE)))
                ;; READCCCODE sets STREAM's LASTCCCODE, \INCCODE.EOLC doesn't
                (READCCCODE STREAM)
                finally (RETURN PEEK-TYPE)))
          else (\ILLEGAL.ARG PEEK-TYPE)]
```

(CL:LISTEN

```
(CL:LAMBDA (&OPTIONAL STREAM)
```

; Edited 14-Apr-87 16:49 by bvm:

;; Returns T if a character is available on the given STREAM

```
(READP (\GETSTREAM STREAM 'INPUT)
  T)))
```

(CL:READ-CHAR-NO-HANG

```
(CL:LAMBDA (&OPTIONAL STREAM (EOF-ERRORP T)
              EOF-VALUE RECURSIVE-P)
```

; Edited 14-Apr-87 16:40 by bvm:

;; Returns the next character from the STREAM if one is available, or NIL. However, if STREAM is at eof, do eof handling.

```
(COND
  ((READP STREAM T) ; there is input, get it
   (CL:READ-CHAR STREAM EOF-ERRORP EOF-VALUE RECURSIVE-P))
  ((NOT (EOF STREAM)) ; there could be more input, so don't wait, return NIL
   NIL)
  (EOF-ERRORP (\EOF.ACTION STREAM))
```

(T EOF-VALUE)))

(CL:CLEAR-INPUT

[CL:LAMBDA (&OPTIONAL (STREAM *STANDARD-INPUT*))

(* bvm%: "13-Oct-86 15:46")

;; Clears any buffered input associated with the Stream.

(CLEARBUF (\GETSTREAM STREAM 'INPUT])

(CL:READ-FROM-STRING

[CL:LAMBDA (STRING &OPTIONAL EOF-ERROR-P EOF-VALUE &KEY START END PRESERVE-WHITESPACE)

; Edited 8-Jun-90 14:15 by ymasuda

(LET [(STREAM (OPENSTRINGSTREAM (COND

[END (SUBSTRING STRING 1 (IMIN END (NCHARS STRING)
(T (MKSTRING STRING)

(COND

(START (SETFILEPTR STREAM START)))

(CL:VALUES (CL:IF PRESERVE-WHITESPACE

(CL:READ-PRESERVING-WHITESPACE STREAM EOF-ERROR-P EOF-VALUE)

(CL:READ STREAM EOF-ERROR-P EOF-VALUE))

(\GETFILEPTR STREAM]))

(CL:READ-BYTE[CL:LAMBDA (BINARY-INPUT-STREAM &OPTIONAL (EOF-ERRORP T)
EOF-VALUE)

(* bvm%: "13-Oct-86 15:49")

;; Returns the next byte of the BINARY-INPUT-STREAM

(LET [(STREAM (\GETSTREAM BINARY-INPUT-STREAM 'INPUT]

(CL:IF (AND (NOT EOF-ERRORP)

(\EOFP STREAM))

EOF-VALUE

(\BIN STREAM))])

(CL:WRITE-BYTE

[CL:LAMBDA (INTEGER BINARY-OUTPUT-STREAM)

(* bvm%: "13-Oct-86 15:49")

;; Outputs the INTEGER to the binary BINARY-OUTPUT-STREAM

(BOUT BINARY-OUTPUT-STREAM INTEGER)

INTEGER))

)

;; must turn off packed version of CLISP infix

(RPAQ CLISPCHARS (LDIFFERENCE CLISPCHARS '(- *)))

(RPAQ CLISPCHARRAY (MAKEBITTABLE CLISPCHARS))

(RPAQQ DWIMINMACROSFLG NIL)

(CL:DEFVAR *READ-DEFAULT-FLOAT-FORMAT* 'CL:SINGLE-FLOAT)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS CMLRDTBL READ-LINE-RDTBL)

)

;; Crude means to aid reading and printing things in same reader environment. There are some fns and an INITRECORDS for this on ATBL to get it
;; early in the loadup

(DECLARE%: EVAL@COMPILE

(DATATYPE READER-ENVIRONMENT (REPACKAGE REREADTABLE REBASE REPACKAGEFORM REFORMAT REREADTABLEFORM))

)

(/DECLAREDATATYPE 'READER-ENVIRONMENT '(POINTER POINTER POINTER POINTER POINTER POINTER))

;; ---field descriptor list elided by lister---

'12)

(DEFMACRO WITH-READER-ENVIRONMENT (ENV . BODY)

'((CL:LAMBDA (E)

(LET ((*PACKAGE* (ffetch (READER-ENVIRONMENT REPACKAGE) of E))

(*READTABLE* (ffetch (READER-ENVIRONMENT REREADTABLE) of E))

(*READ-BASE* (ffetch (READER-ENVIRONMENT REBASE) of E))

(*PRINT-BASE* (ffetch (READER-ENVIRONMENT REBASE) of E)))

,@BODY))

(\DTEST ,ENV 'READER-ENVIRONMENT)))

(ADDOVAR SYSSPECVARS *PACKAGE* *READTABLE* *READ-BASE* *PRINT-BASE*)

```

{MEDLEY}<sources>CMLREAD.;1

(PUTPROPS WITH-READER-ENVIRONMENT INFO EVAL)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS *COMMON-LISP-READ-ENVIRONMENT*)
)

(RPAQ? *COMMON-LISP-READ-ENVIRONMENT* (create READER-ENVIRONMENT REPACKAGE _ (CL:FIND-PACKAGE "USER")
                                             REREADTABLE _ CMLRDTBL REBASE _ 10 REFORMAT _ :XCCS))

(PUTPROPS CMLREAD FILETYPE CL:COMPILE-FILE)

(DECLARE%: DONTVAL@LOAD DOEVAL@COMPILE DONTCOPY COMPILEVAR)

(ADDTOVAR NLAMA )

(ADDTOVAR NLAML )

(ADDTOVAR LAMA CL:READ-BYTE CL:READ-FROM-STRING CL:CLEAR-INPUT CL:READ-CHAR-NO-HANG CL:PEEK-CHAR CL:UNREAD-CHAR
           CL:READ-CHAR CL:READ-LINE CL:COPY-READTABLE)

)

(PUTPROPS CMLREAD COPYRIGHT ("Venue & Xerox Corporation" 1985 1986 1987 1988 1990 1993 2021))

```

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