

File created: 16-May-90 14:19:58 {DSK}<usr>local>lde>lispcore>sources>CMLPRINT.;2

changes to: (VARS CMLPRINTCOMS)

previous date: 16-Feb-88 11:47:48 {DSK}<usr>local>lde>lispcore>sources>CMLPRINT.;1

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

::
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(RPAQQ CMLPRINTCOMS

```
[ (FNS WRITE CL:WRITE-CHAR CL:PRIN1 CL:PRINT CL:TERPRI CL:FRESH-LINE CL:FINISH-OUTPUT CL:FORCE-OUTPUT
  CL:CLEAR-OUTPUT CL:PPRINT CL:PRINC)
  (FUNCTIONS \WRITE1)
  (FNS CL:WRITE-TO-STRING CL:PRIN1-TO-STRING CL:PRINC-TO-STRING)
  (FUNCTIONS CL:WRITE-LINE)
  (INITVARS (XCL:*PRINT-STRUCTURE*))
  (PROP FILETYPE CMLPRINT)
  (DECLARE%: DONTEVAL@LOAD DOEVAL@COMPILE DONTCOPY COMPILERVERS
    (ADDVARS (NLAMA)
      (NLAML)
      (LAMA CL:WRITE-TO-STRING CL:PRINC CL:PPRINT CL:PRINT CL:PRIN1 CL:WRITE-CHAR WRITE]))
```

(DEFINEQ

(WRITE

```
(CL:LAMBDA (OBJECT &KEY (STREAM *STANDARD-OUTPUT*)
  (:ESCAPE *PRINT-ESCAPE*)
  *PRINT-ESCAPE*)
  (:RADIX *PRINT-RADIX*)
  *PRINT-RADIX*)
  (:BASE *PRINT-BASE*)
  *PRINT-BASE*)
  (:LEVEL *PRINT-LEVEL*)
  *PRINT-LEVEL*)
  (:LENGTH *PRINT-LENGTH*)
  *PRINT-LENGTH*)
  (:CASE *PRINT-CASE*)
  *PRINT-CASE*)
  (:GENSYM *PRINT-GENSYM*)
  *PRINT-GENSYM*)
  (:ARRAY *PRINT-ARRAY*)
  *PRINT-ARRAY*)
  (:PRETTY *PRINT-PRETTY*)
  *PRINT-PRETTY*)
  (:CIRCLE *PRINT-CIRCLE*)
  *PRINT-CIRCLE*))
```

```
(DECLARE (CL:SPECIAL *PRINT-ESCAPE* *PRINT-RADIX* *PRINT-BASE* *PRINT-LEVEL* *PRINT-LENGTH*
  *PRINT-CASE* *PRINT-GENSYM* *PRINT-ARRAY* *PRINT-PRETTY* *PRINT-CIRCLE*
  *PRINT-CIRCLE-HASHTABLE* *PRINT-CIRCLE-NUMBER* THERE-ARE-CIRCLES))
```

; Edited 20-Feb-87 16:56 by bvm:

; Make sure STREAM ends up as an appropriate stream

```
(SETQ STREAM (\GETSTREAM STREAM 'OUTPUT))
```

```
[COND
```

```
((OR (NOT *PRINT-CIRCLE*)
  *PRINT-CIRCLE-HASHTABLE*))
```

```
(\WRITE1 OBJECT STREAM))
```

```
(T (LET ((*PRINT-CIRCLE-NUMBER* 1)
  (*PRINT-CIRCLE-HASHTABLE* (CL:MAKE-HASH-TABLE))
  THERE-ARE-CIRCLES)
```

```
(DECLARE (CL:SPECIAL *PRINT-CIRCLE-NUMBER* *PRINT-CIRCLE-HASHTABLE* THERE-ARE-CIRCLES))
```

```
(PRINT-CIRCLE-SCAN OBJECT)
```

```
(COND
```

```
((NOT THERE-ARE-CIRCLES)
```

```
(CL:SETQ *PRINT-CIRCLE-HASHTABLE* NIL)))
```

```
(\WRITE1 OBJECT STREAM]
```

```
OBJECT))
```

(CL:WRITE-CHAR

```
(CL:LAMBDA (CHARACTER &OPTIONAL OUTPUT-STREAM)
  (\OUTCHAR (\GETSTREAM OUTPUT-STREAM 'OUTPUT)
  (CL:CHAR-INT CHARACTER))
  CHARACTER))
```

; Edited 20-Feb-87 16:57 by bvm:

(CL:PRIN1

```
(CL:LAMBDA (OBJECT &OPTIONAL OUTPUT-STREAM)
  (WRITE OBJECT :STREAM OUTPUT-STREAM :ESCAPE T)))
```

; Edited 20-Feb-87 16:58 by bvm:

(CL:PRINT

```
(CL:LAMBDA (OBJECT &OPTIONAL (OUTPUT-STREAM *STANDARD-OUTPUT*))
  (TERPRI OUTPUT-STREAM)
  (PROG1 (CL:PRIN1 OBJECT OUTPUT-STREAM)
    (SPACES 1 OUTPUT-STREAM))))
(* lmm " 4-May-86 03:15")
```

```
(CL:TERPRI
 [LAMBDA (OUTPUT-STREAM)
  (TERPRI (OR OUTPUT-STREAM *STANDARD-OUTPUT*))])
(* bvm%: "19-May-86 15:53")
```

```
(CL:FRESH-LINE
 [LAMBDA (OUTPUT-STREAM)
  (FRESHLINE (OR OUTPUT-STREAM *STANDARD-OUTPUT*))])
(* bvm%: "19-May-86 15:53")
```

```
(CL:FINISH-OUTPUT
 [LAMBDA (OUTPUT-STREAM)
  (FORCEOUTPUT (OR OUTPUT-STREAM *STANDARD-OUTPUT*)
    T)
  NIL])
(* bvm%: "19-May-86 15:53")
```

```
(CL:FORCE-OUTPUT
 [LAMBDA (OUTPUT-STREAM)
  (FORCEOUTPUT (OR OUTPUT-STREAM *STANDARD-OUTPUT*))
  NIL])
(* bvm%: "19-May-86 15:53")
```

```
(CL:CLEAR-OUTPUT
 [LAMBDA (OUTPUT-STREAM)
  NIL])
(* bvm%: "19-May-86 15:38")
```

```
(CL:PPRINT
 (CL:LAMBDA (OBJECT &OPTIONAL (OUTPUT-STREAM *STANDARD-OUTPUT*))
  (TERPRI OUTPUT-STREAM)
  (WRITE OBJECT :STREAM OUTPUT-STREAM :ESCAPE T :PRETTY T)
  (CL:VALUES)))
(* lmm " 4-May-86 03:19")
```

```
(CL:PRINC
 (CL:LAMBDA (OBJECT &OPTIONAL OUTPUT-STREAM)
  (WRITE OBJECT :STREAM OUTPUT-STREAM :ESCAPE NIL)))
; Edited 20-Feb-87 16:59 by bvm:
```

```
(CL:DEFUN \WRITE1 (OBJECT STREAM)
 (CL:IF (AND *PRINT-PRETTY* (OR (NOT *PRINT-CIRCLE*)
  (NOT *PRINT-CIRCLE-HASHTABLE*))
  *PRINT-ESCAPE*))
```

;; If :pretty is on, and either :circle is not, or it was and no circles exist, and :escape is on...

;; For the moment, *PRINT-CIRCLE* and *PRINT-ESCAPE* override *PRINT-PRETTY* completely. This leaves *PRINT-LEVEL* AND *PRINT-LENGTH* ignored when *PRINT-PRETTY* is on; this must be fixed later... probably by a new pretty-printer (ecch).

```
(LET (FONTCHANGEFLG)
  (DECLARE (CL:SPECIAL FONTCHANGEFLG))
  (PRINTDEF OBJECT (POSITION STREAM)
    NIL NIL NIL STREAM))
```

;; otherwise just print it all on one line

```
(LET (\THISFILELINELENGTH)
  (DECLARE (CL:SPECIAL \THISFILELINELENGTH))
  ;; CommonLisp streams do not observe line length
  (\PRINDATUM OBJECT (\GETSTREAM STREAM 'OUTPUT)
    0)))
```

(DEFINEQ

(CL:WRITE-TO-STRING

```
(CL:LAMBDA (OBJECT &KEY ((:ESCAPE *PRINT-ESCAPE*)
  *PRINT-ESCAPE*)
  ((:RADIX *PRINT-RADIX*)
  *PRINT-RADIX*)
  ((:BASE *PRINT-BASE*)
  *PRINT-BASE*)
  ((:CIRCLE *PRINT-CIRCLE*)
  *PRINT-CIRCLE*)
  ((:PRETTY *PRINT-PRETTY*)
  *PRINT-PRETTY*)
  ((:LEVEL *PRINT-LEVEL*)
  *PRINT-LEVEL*)
  ((:LENGTH *PRINT-LENGTH*)
```

```

    *PRINT-LENGTH*
    (:CASE *PRINT-CASE*)
    *PRINT-CASE*
    (:ARRAY *PRINT-ARRAY*)
    *PRINT-ARRAY*
    (:GENSYM *PRINT-GENSYM*)
    *PRINT-GENSYM*
    "Returns the printed representation of OBJECT as a string."
    (\PRINDATUM.TO.STRING OBJECT))

```

```

(CL:PRIN1-TO-STRING
 [LAMBDA (OBJECT)
   (* * Produces a string consisting of the output of (CL:PRIN1 OBJECT))
 (LET ((*PRINT-ESCAPE* T)
       (\PRINDATUM.TO.STRING OBJECT))

```

```

(CL:PRINC-TO-STRING
 [LAMBDA (OBJECT)
   ;; A lot like MKSTRING, but not quite. Produces a string consisting of the output of (PRINC OBJECT)
 (LET ((*PRINT-ESCAPE* NIL)
       (\PRINDATUM.TO.STRING OBJECT))

```

```

(CL:DEFUN CL:WRITE-LINE (STRING &OPTIONAL (STREAM *STANDARD-OUTPUT*)
                        &KEY
                        (CL::START 0)
                        (CL::END))
 (PROG1 (WRITE-STRING* STRING STREAM CL::START CL::END)
 (CL:TERPRI STREAM)))

(RPAQ? XCL:*PRINT-STRUCTURE* )

(PUTPROPS CMLPRINT FILETYPE :FAKE-COMPILE-FILE)

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

(ADDTOVAR NLAMA )

(ADDTOVAR NLAML )

(ADDTOVAR LAMA CL:WRITE-TO-STRING CL:PRINC CL:PPRINT CL:PRINT CL:PRIN1 CL:WRITE-CHAR WRITE)

)

(RPAQQ CMLPRINTCOMS
 [ (FNS WRITE CL:WRITE-CHAR CL:PRIN1 CL:PRINT CL:TERPRI CL:FRESH-LINE CL:FINISH-OUTPUT CL:FORCE-OUTPUT
      CL:CLEAR-OUTPUT CL:PPRINT CL:PRINC)
  (FUNCTIONS \WRITE1)
  (FNS CL:WRITE-TO-STRING CL:PRIN1-TO-STRING CL:PRINC-TO-STRING)
  (FUNCTIONS CL:WRITE-LINE)
  (INITVARS (XCL:*PRINT-STRUCTURE*))
  (PROP FILETYPE CMLPRINT)
  (DECLARE%: DONTEVAL@LOAD DOEVAL@COMPILE DONTCOPY COMPILERVARS (ADDVARS (NLAMA)
                                                                              (NLAML)
                                                                              (LAMA CL:WRITE-TO-STRING CL:PPRINT
                                                                              CL:PRINT WRITE))

)

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

(ADDTOVAR NLAMA )

(ADDTOVAR NLAML )

(ADDTOVAR LAMA CL:WRITE-TO-STRING CL:PPRINT CL:PRINT WRITE)

)

(PUTPROPS CMLPRINT COPYRIGHT ("Venue & Xerox Corporation" 1985 1986 1987 1988 1990))

```

FUNCTION INDEX

CL: CLEAR-OUTPUT	2	CL:PPRINT	2	CL:PRINC-TO-STRING	3	CL:WRITE-CHAR	1
CL: FINISH-OUTPUT	2	CL:PRIN1	1	CL:PRINT	1	CL:WRITE-LINE	3
CL: FORCE-OUTPUT	2	CL:PRIN1-TO-STRING	3	CL:TERPRI	2	CL:WRITE-TO-STRING	2
CL: FRESH-LINE	2	CL:PRINC	2	WRITE	1	\WRITE1	2

PROPERTY INDEX

CMLPRINT3

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XCL:*PRINT-STRUCTURE* ...3
