



OS LISP MACHINE

Осипенко Д.В. 595 гр.

Lisp machine

- Компьютер общего назначения
- Созданный для эффективного запуска ОС и программ написанных на Lisp с поддержкой железа
- Первые однопользовательские рабочие станции
- Созданы в количестве 7000 штук на 1988 год
- Пионер во многих ныне распространенных технологиях:
 - Сборщик мусора
 - Лазерная печать
 - Оконные системы
 - Компьютерные мышки
 - Растровая графика в высоком разрешении
 - Отображение компьютерной графики
 - Сетевые иновации



MIT's Lisp machine OS

- Разрабатывалась с середины 1970-х до начала 1980-х годов
- Написана на Lisp Machine Lisp
- Однопользовательский интерфейс
- Нацеленна на разработку искусственного интелеска

Особенности

- код для внешнего процессора,
- управление виртуальной памятью,
- сборщик мусора,
- интерфейсы к различному оборудованию: мышь, клавиатура, растровый буфер кадра, диск, принтер, сетевой интерфейс,
- интерпретатор и компилятор кода для Lisp Machine Lisp,
- система объектов: Flavors (раннее объектно-ориентированное расширение Lisp, разработанное Говардом Кэнноном в MIT Ai lab),
- оконная система с графическим пользовательским интерфейсом (GUI) и оконный менеджер,
- локальная файловая система,
- поддержка сети Chaosnet (CHAOS),
- редактор, похожий на Emacs, по имени Zmacs, почтовая программа Zmail,
- Listener Lisp, отладчик

Command: █

Symbolics Genera® 8.3

This machine is *Standalone MacIvory*, a Symbolics MacIvory model 2™.

Symbolics Genera 8.3
Loaded from FEP0:>Genera-8-3-Y2K-fixed.ilod.1
2.6M words Physical memory, 244.1M words Swapping space.

Genera 8.3
Macintosh System Software 8.0
Genera 8.3 y2k patches

You are typing to *Dynamic Lisp Listener 1*.

Control characters are interpreted as commands to edit input.

Press Control-**H** for a list of input editor commands.

Type "Help Commands" to display a list of Command Processor commands.

Press **SELECT** **D** to select Document Examiner® to read online documentation.

Press **SELECT** **H** for a list of programs.

Press **FUNCTION** **H** for a list of asynchronous and window operations.

Hold down Shift and click the rightmost mouse button to select the System Menu of programs and window operations.

Press Symbol-**H** for a list of special function keys and special character keys.

Copyright (c) 1993-1990, Symbolics, Inc. All Rights Reserved.
Use the *Show Legal Notice* command to see important legal notices. Symbolics and MacIvory model 2 are trademarks and Genera and Document Examiner are registered trademarks of Symbolics, Inc. Macintosh is a registered trademark of Apple Computer, Inc.

Please login.

Command: Login (user name) LISP-MACHINE

Command: █

Dynamic Lisp Listener 1

Mouse-L: Select Activity Document Examiner; Mouse-R: Menu.
To see other commands, press Shift, Control, Meta-Shift, or Super.

Sat 22 Aug 11:18:57] Lisp

CL USER:

User Input

Genera

☐ Command: (+ 2 2)

4

Command: (defun hello (name) (format t "~2Hello, ~A" name))

HELLO

Command: █


```
MACIVORY:>*.*.newest
147411 free, 45079/192490 used (23%) (LMFS records, 1 = 5056. 8-bit bytes)

demo.directory.1      1  DIRECTORY !      #1 07/02/20 17:44:50 X=07/02/20 Lisp
doc-on-cd-host.lisp.2  1    163(8) !      #1 02/13/00 21:02:40 (02/13/00) Lisp
DOC-ON-LOCAL-HOST.lisp.2  1    156(8) !      #1 02/13/00 21:03:23 (02/13/00) Lisp
kbd-repeat.lisp.1     1    446(8) !      #1 02/15/99 22:31:18 (02/13/00) DKS
sys.directory.1       1  DIRECTORY !      #1 02/13/00 18:48:26 X=02/13/00 LISP-MACHINE
translations.lisp.1   1    700(8) !      #1 01/23/00 12:13:41 (07/15/20) DKS
y2k-fix.lisp.1        2   5752(8) !      #1 12/31/99 23:59:59 (02/13/00) DKS

8 blocks in 7 files

Command: Show Directory (files [default MACIVORY:>*.*.newest]) MACIVORY:>sys>examples>*.text.newest
```

```
MACIVORY:>sys>examples>*.text.newest
147411 free, 45079/192490 used (23%) (LMFS records, 1 = 5056. 8-bit bytes)

file-server-init-file.text.7  4 14031(8) !      #1 12/09/88 13:57:55 (02/13/00) Lown
teach-znacs-info.text.1      1  1607(8) !      #1 12/09/88 12:37:23 (02/13/00) Lown
teach-znacs-master.text.6    7 32452(8) !      #1 05/29/90 16:11:33 (02/13/00) CGay
```

12 blocks in 3 files

Command: █

Command: Show Directory (files [default MACIVORY:>*.*.newest]) MACIVORY:>sys>examples>*.text.newest

```
MACIVORY:>sys>examples>*.text.newest
147411 free, 45079/192490 used (23%) (LMFS records, 1 = 5056. 8-bit bytes)

file-server-init-file.text.7  4 14031(8) !      #1 12/09/88 13:57:55 (02/13/00) Lown
teach-znacs-info.text.1      1  1607(8) !      #1 12/09/88 12:37:23 (02/13/00) Lown
```

```
Operation on MACIVORY:>sys>examples>teach-znacs-info.text.1:
Delete File (file) MACIVORY:>sys>examples>teach-znacs-info.text.1
Edit File (file) MACIVORY:>sys>examples>teach-znacs-info.text.1
Hardcopy File MACIVORY:>sys>examples>teach-znacs-info.text.1 (specify printer name)
Load File (file) MACIVORY:>sys>examples>teach-znacs-info
Show Differences (between file) MACIVORY:>sys>examples>teach-znacs-info.text.1
Show File (file) MACIVORY:>sys>examples>teach-znacs-info.text.1
Undelete File (file) MACIVORY:>sys>examples>teach-znacs-info.text.1
Marking and yanking menu
Presentation debugging menu
System menu
Window operation menu
```

Dynamic Lisp Listener 5

Mouse-L, -M, -R: Show File (file) MACIVORY:>sys>examples>teach-znacs-info.text.1.
To see other commands, press Shift, Control, Meta-Shift, or Super.

```
*** MACIVORY:>sys>examples>teach-zmacs-info.text.1 ***  
;;;> EXAMPLES-MESSAGE  
;;;>  
;;;>*****  
;;;>  
;;;>      Symbolics hereby grants permission to customer to incorporate  
;;;>      the examples in this file in any work belonging to customer.  
;;;>  
;;;>*****
```

USING THE TEACH ZMACS ONLINE TUTORIAL

About Teach Zmacs:

Teach Zmacs is a tutorial that is meant to familiarize you with some of the basic features of the Zmacs editor. It is really only a text file that is loaded into the editor plus a few special commands to enable you to move around in the file.

This whole tutorial is based on the idea that the best way to learn something is by doing it. As you read through the tutorial you are given the opportunity to try any of the commands that are described. To get the most benefit from Teach Zmacs you should try all the examples.

Teach Zmacs is separated into sections that are in a specific order. If you are already familiar with the material covered in one section you may want to skip over it and move to the next section.

To move to the next section press the TRIANGLE key.
To move to the previous section press the SQUARE key.

Getting Started:

Go to a Lisp Listener by typing SELECT L.

Type Load File sys:examples;teach-zmacs when you get the "Command:" prompt.

Type Teach Zmacs.

****MORE**[Abort]**FLUSHED****

Back to Lisp Top Level in Dynamic Lisp Listener 5.

Command: █

Dynamic Lisp Listener 5

Mouse-R: Menu.

To see other commands, press Shift, Control, Meta-Shift, or Super.

[Sat 22 Aug 11:57:48] Lispn

CL USER:

User Input



СПАСИБО ЗА
ВНИМАНИЕ