

Implementation Summaries

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This list represents the descriptions I have received between 27 May 1987 and 11 August 1987. Note that there are some updated descriptions, as products have new releases.

Name Procyon Common Lisp

Standard Common Lisp

Additional Features

- Zetalisp style LOOP macro.
- User-definable FORMAT directives.
- User-definable Error handling and trapping.
- Interface to other languages and host operating system.
- Support for color graphics and windows.
- User-defined stream managers with multiple inheritance.
- Both incremental and block (file) compilation.
- Toploop with history mechanism and system-wide clipboard.
- User-extensible source code manager.
- Text and structure editors.
- Extended debugging facilities.
- Interactive source code cross referencer.
- Profiler.
- User-extensible pretty printer.
- Spelling corrector and pattern matcher.
- Stand-alone programs may be produced with the block compiler.

Version June 1987; block compiler, pattern match compiler, and dialog design tool 4th quarter 1987.

Support Fully supported. Runtime licenses are available.

Hardware Apple Macintosh Plus

Contact Procyon Research Limited, 16 Union Road, Cambridge, CB2 1HE. +44(0223)65011.

Name TI Explorer

Standard Common Lisp

Additional Features

- Compatibility with Zetalisp and Zetalisp's GLOBAL package.
- Flavors with Flavor Inspector.
- Locatives.
- Stack groups.
- Multiple processes.
- Dynamic closures.
- LOOP Macro.
- Type checking is done at runtime with special machine logic to avoid speed penalties. Type declarations are observed for compiler optimizations.
- Compiler optimizations include tail recursion elimination constant folding, inline expansion of function calls, and dead code elimination.
- Graphics operations with color optional.
- Compiler available for C. Function calls between Lisp and C.
- Advanced condition signaling and handling facility.
- Subprimitives available to examine memory locations.
- Microcode supported function call metering and real time function call histogram.
- Physical arrays allow ordinary Lisp code to access all physical memory on the NuBus independent of Lisp virtual memory mapping.

New Features for Release 3.0

- Network and site configuration handled by a Namespace facility complete with a Namespace editor.
- Generational Copying garbage collector, both batch and automatic.
- Facility to "train" your load band for your personal working set.
- Generic Network Interface.

Version Release 3.0, July 1987.

Includes the basic Lisp machine environment plus the following extra features: Glossary, Suggestions, Profile, New User utility, Universal Command Loop, Graphics Window System, Graphics Editor, Tree Editor, and Remote Procedure Call servers.

Optional extra cost software available from TI include TCP/IP, Sun's Network File System, TI Prolog, DECNet, Relational Table Management System, Natural Language Menu system, and Raster Tech color graphics.

Support Fully supported by TI. Source is free with all licensed software except for TI Prolog.

Hardware TI Explorer in NuBus chassis or TI Explorer LX (Explorer processor plus 68K-based processor running TI System V in one NuBus chassis)

Contact Explorer Product Marketing, Texas Instruments, P.O. Box 2909, M/S 2107, Austin, TX 78769-2909

Name MacScheme

Standard Scheme (December 1986 SIGPLAN Notices)

Additional Features .

- Interactive compilation to compact byte code.
- Multi-window Scheme editor acts as foreground task.
- Quickdraw graphics.
- Debugger, trace, break.
- Heap-based with snapshot facility.

Missing Features Complexnums, ratnums, fancy number syntax; case-insensitive string comparisons.

Version 1.22. List price \$125. Educational and university site licenses available.

Support Semantic Microsystems, Inc.

Hardware Apple Macintosh, Macintosh Plus, Macintosh SE, Macintosh II. Requires 512K RAM.

Contact Semantic Microsystems, 4470 SW Hall Blvd Suite 340, Beaverton OR. 97005. (503) 643-4539.

Comment This is probably the only commercial implementation of Lisp or Scheme whose underlying byte code architecture and compiler algorithm have been proved correct relative to a formal semantics.

Name MacScheme+Toolsmith

Standard Scheme (December 1986 SIGPLAN Notices)

Additional Features .

- Interactive compilation to compact byte code or fast native code.
- High-level support for interactive menu, window, and editor objects.
- Comprehensive library of Toolbox data structures and traps.
- User-programmable interrupt system for event handling.
- Multi-tasking via continuations and timer interrupts.
- Scheme source code for interactive objects, standard interrupt handlers, task scheduler.
- Application Builder and selective linker for stand-alone applications.
- Includes all MacScheme features.

Missing Features As for MacScheme.

Version 1.0. List price \$395.

Support Semantic Microsystems, Inc.

Hardware Apple Macintosh, Macintosh Plus, Macintosh SE, Macintosh II. Requires 1024K RAM.

Contact Semantic Microsystems, 4470 SW Hall Blvd Suite 340, Beaverton OR. 97005. (503) 643-4539.

Name NanoLISP

Standard Common Lisp subset

Additional Features .

screen graphics
low-level DOS control

Missing Features .

ratios, complexes, packages, arrays of rank 3 or higher, hash-tables, readtables, random-states
compiler (interpreter only)

Version 1.0e⁻⁹, \$99.99

Support Fully supported by MSC

Hardware/Software 8086 family/ MS-DOS or PC-DOS 2.1 or higher.

Contact Microcomputer Systems Consultants, Box 747, Santa Barbara, CA, 93102, (805)9630-3412.

Name Chez Scheme

Standard Scheme (December 1986 SIGPLAN Notices)

Additional Features .

Incremental compilation of expressions typed at the keyboard or loaded from a file.
Compiler optimization levels.
Object-code loader.
Syntactic extension facility (macros).
Multitasking (engines).
User-programmable exception and interrupt handlers.
Arbitrary precision integers, ratios, and real numbers.
Tracing facility.
Enhanced structure definition tool.
Extensible pretty-printer.
Input/output transcript facility.
String input and output ports.
Optional arguments.
Fixnum specific operations.

Version 2.0

Support Cadence Research Systems

Hardware/Software VAX: VMS, 4.2BSD, 4.3BSD, Ultrix; Apollo: Domain/IX, Sun-3.

Contact Cadence Research Systems, 620 Park Ridge Road, Bloomington, IN, 47401, (812)333-9269.

Name VAX LISP

Standard Common Lisp

Additional Features .

- Call-out to external routines of other languages
- Manipulation of alien data structures
- Extensible editor (except Ultrix)
- Extensible pretty-printer and FORMAT
- Additional debugging facilities
- General interrupt handling (except Ultrix)
- Additional operating system environment query functions
- Graphics and windowing support, including window-streams (on VAXstations)
- Cross referencer
- Portable Common Loops
- Profiler
- Extensive documentation

New Features for Version 2.2 .

- System building utility to create small executable images, potentially without licensing requirements
- Many examples of call-outs to system services, library routines, and other tools, such as ISAM file manipulation

Missing Features .

- Complex numbers
- Inspector

Version V2.2

Support Fully supported by Digital Equipment Corporation

Hardware all VAX systems except 725, MicroVAX-I

Software VMS V4.4, Ultrix V2.0

Contact your local DEC representative

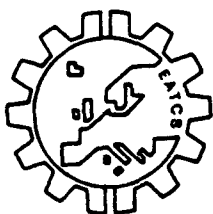
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FINLAND

DATES

Deadline for submission: November 15, 1987
Notification of acceptance/
rejection: February 5, 1988
Deadline for final text: April 1, 1988
Conference: July 11-15, 1988

FURTHER INFORMATION

Those in attendance will have opportunities to:

- * bathe in a Finnish sauna
- * hike through the many nearby beautiful and picturesque parks and forests
- * fish, cruise and swim in the abundance of clean lakes and rivers
- * shop in the large modern department stores and personal boutiques
- * view Finnish architecture at its best including classic church architecture plus an award winning city library
- * take advantage of cultural activities including music festivals, theatre and opera.

In connection with the colloquium there will be a computer science summer school headed by professors R.J. Back and R. Kurki-Suonio. Reservations have been made with hotels located in the city centre of Tampere. Further information about the conference will be sent to all those who have submitted a paper and to all EATCS members. Others wishing further information should fill in and return the attached form.

TOPICS

Computability, Automata, Formal Languages, Analysis of Algorithms, Computational Complexity, Data Types and Data Structures, Theory of Data Bases and Knowledge Bases, Semantics of Programming Languages, Program Specification, Transformation and Verification, Foundations of Logic Programming, Theory of Logical Design and Layout, Parallel and Distributed Computation, Theory of Concurrency, Symbolic and Algebraic Computation, Term Rewriting Systems, Cryptography, Theory of Robotics. This is not meant to be an exhaustive list.

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