1. INTRODUCTION

Medley is an integrated programming environment, with support for the Interlisp and Common Lisp languages, an integrated windowing system, and a large collection of utilities and programs. It offers a mature and rich programming and development environment, as well as access to a large number of applications written for Interlisp, Interlisp-D, Common Lisp, and LOOPS.

Medley for the Sun Workstation has two versions, a Sun–3 version and a Sun–4 version, available on separate tapes. Medley 2.0 runs on the Sun–3 and Sun–4 workstations and the SPARCstation.

What Medley Requires

Hardware

Medley runs on Sun–3 and Sun–4 Workstations and the SPARCstation. It runs on both standalone workstations and diskless workstations linked to servers.

Medley on the Sun–3 Workstation requires the MC68881 floating-point coprocessor chip. On the Sun–4 Workstation, the Weitek 1164/1165 coprocessor is optional, but recommended.

For adequate performance, we recommend at least a 20 MHz 68020 (Sun 3/60 or 3/260), a 14 MHz SPARC (Sun 4/110 or 4/260), or a SPARCstation.

Except under X Windows, reasonable interactive performance can be expected with 8 megabytes (MB) or more of RAM. Smaller configurations of diskless workstations have been tested, but performance suffers. When using X Windows software, allow an additional 4 MB.

Naturally, larger applications will benefit from more memory. Medley's maximum working set is approximately 40 MB.

Input/Output Devices

Medley provides access to the Sun's input/output devices, such as display, keyboard, mouse, and file systems. It also provides access to PUP and XNS Ethernet services directly.

Bitmap Display

Medley supports all standard Sun displays and frame buffers.

Printers

You can print on Xerox Interpress printers using the XNS networking protocols. The FX80 printer also works via the RS232 port.

If you have a PostScript printer, you can use the LispUser modules PostScriptStream and UNIXPrint to direct output to your printer.

Software Requirements

Medley on the Sun–3 Workstation requires SunOS versions 3.2, 3.4, 3.5, 4.0, or 4.0.3. On the Sun–4 Workstation, Medley requires SunOS version 4.0, 4.0.3, or 4.1.

If you plan to run Medley under X Windows, you will need X11, version 4, or Motif.

NOTE: Medley's XNS Ethernet code will not work if you are running SunOS 3.5 configured for Kernel XNS Ethernet Support or Alpine.

Medley and Other Applications

Display Usage

When Medley is running alone, it takes over the entire display screen. When running under X, Medley uses one window as its screen; Medley maintains its own windows within that single window. Medley cannot run at the same time as Suntools or Open Windows.

Processor Usage

Medley runs its own process scheduler; as far as the UNIX scheduler is concerned, Medley is always running. For this reason, other heavy computational jobs on the same Sun Workstation will not get as good performance as they would competing with conventional UNIX interactive applications.

Similarly, Medley may not have adequate interactive performance if it is competing with other compute-bound tasks on the same machine.

For these reasons, we recommend that Medley be used on machines that are set up primarily for a single user.

System Components

Functionally, Medley consists of the following components:

emulator	A SunOS-executable program, which performs several functions. It executes the Interlisp-D virtual machine instruction set compatibly with the microcode of the Xerox 1100 series workstations. (This instruction set allows memory-efficient representation of Interlisp and Common Lisp programs.) It also provides access to the host machine's I/O (display, keyboard, file system), and executes some system functions directly.
sysout	A virtual memory image (the *sysout*) containing both byte-code-compiled Lisp functions and data structures. The sysout provided can be used both on the Sun Workstation and on the Xerox 1100 series machines.
library	Files of compiled Lisp code and data structures.
fonts	Data describing the "looks" of printed characters used by Medley's graphics, windowing, and hardcopying subsystems. Font directories are in three groups: display fonts, InterPress printer fonts, and Press printer fonts.

checksum — A script that reports inconsistent files, the correct checksum values for the files, and an error message. The checksum of individual files can be generated with the UNIX command `sum` *filename*. Use this when Medley installs correctly but does not run.

Medley Device-Naming Conventions

Medley for the Sun Workstation lets you interact with SunOS file systems (including file systems mounted from other machines) by using host device names. The two device names are as follows:

{DSK} — A host name which gives you access to the SunOS file system using Xerox workstation local disk conventions.

{UNIX} — A host name which gives you access to the file system using normal SunOS conventions.

The {DSK} device name provides an interface to the Sun Workstation for users who want to maintain compatibility with existing development tools and applications originally developed on a Xerox workstation. The {UNIX} device name provides a way for new applications to interact naturally with UNIX. Chapter 5 explains, in greater detail, some important exceptions and restrictions to the {DSK} and {UNIX} device name.

Notation Conventions

Text marked by a revision bar in the right margin contains information that was added or modified since the last release. Fonts, packages, and prompts have the following types of notation.

Fonts

Bold text in TITAN font indicates text you should type in exactly as printed.

Regular TITAN font text indicates what the system prints on your workstation screen. Lisp functions and variables and UNIX files and programs are also shown in TITAN FONT.

Text in Classic italics indicates variables or parameters that you should replace with the appropriate word or string.

Packages

Most Lisp symbols have a Lisp package qualifier; the INTERLISP package (IL:) is the default when no package qualifier is shown.

Prompts

All examples which include SunOS dialogues use the following conventions for the SunOS prompt.

A number sign (#), part of the system prompt, indicates that you are logged on as `root` or is running `su`; for example,

```
prompt#
```

A percent sign (%), part of the system prompt, indicates that a user other than `root` is logged on; for example,

```
prompt%
```

Compatibility

The Medley release on the Sun Workstation is designed for maximum compatibility with the Xerox workstation implementations. However, when moving applications to the Sun Workstation note the differences in end-of-line conventions and techniques for moving files.

Sysout Compatibility

Sysouts of the same version are compatible with all machine types. But a sysout generated on a Sun Workstation cannot be used on a Xerox workstation.

NOTE: You cannot mix different versions of sysouts and emulators.

Compiled-File Compatibility

Code compiled in a Medley 1.0, 1.1, 1.15 or 1.2 sysout cannot be loaded into Medley 2.0 sysouts, nor can code compiled in Medley 2.0 be loaded onto earlier sysouts. Code compiled for Medley 2.0 on a Xerox workstation cannot be loaded into Medley running on a Sun. The opposite is not possible either.

End-of-Line Convention

Some care must be taken in moving files to and from Xerox workstations, since the default end-of-line convention in UNIX is to terminate lines with the line feed (LF) character, while, traditionally, Medley has terminated lines with the carriage return (CR) character. In particular, if you use some other file transfer mechanism, such as FTP or Kermit, be careful to transfer `.TEDIT`, `.DFASL`, and `.LCOM` files in binary mode.

In Medley on the Sun Workstation, the default end-of-line convention for all text files is line feed (LF). The default end-of-line convention for all binary files is carriage return (CR); this is because CR (ASCII 13) is used internally in the system.

Release Contents

The release distribution contains the following documentation and software.

Documentation

The Medley documentation kit for users moving from a Xerox workstation to a Sun Workstation contains:

- *Lisp Library Modules*, Medley Release
- *Lisp Release Notes*, Medley Release
- *Medley For the Sun Workstation® User's Guide*

- Sun Type 3 and Type 4 keyboard templates.

New customers also receive the following:

- *Interlisp-D Reference Manual, Volumes 1-3*, Koto Release
- *Xerox Common Lisp Implementation Notes*, Lyric Release
- *Lisp Documentation Tools*, Lyric Release
- Guy Steele, *Common Lisp, the Language, First Edition*

All users can also purchase this document:

- *LispUsers' Modules*, Medley Release

Software

The software release is available on either a ¼-inch tape cartridge or a ½-inch 9-track tape. The software release is specific to the Sun architecture (Sun 3 or 4) for which you purchased Medley, but contains multiple SunOS versions. This `tar` tape contains the directories listed below. (See Appendix C for details of the directory contents.)

```
./install-medley
./medley
./install.sunos3/
./install.sunos4/
./install.sunos4.1/
./lisplibrary
./checksumdir
./lispsysouts
./fonts/display
./fonts/interpress
```

LispUsers Modules

The Medley version of LispUsers Modules is a software supplement to Medley for the Sun Workstation. This is software written by our users which you may purchase separately. The support for these modules comes from each module's author; Venue has no commitment to support LispUsers' modules.

Two LispUsers Modules are particularly useful when you are running Medley on a Sun Workstation. For those users with Postscriptstream printers for output, the PostScript module is particularly useful. The LispUsers module RPC implements Sun remote procedure calls.

[This page intentionally left blank]