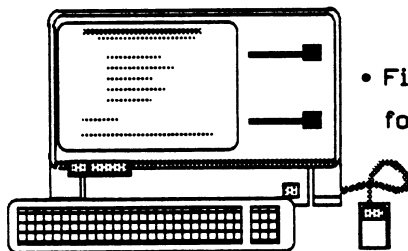


Development Environments on the Lisa™

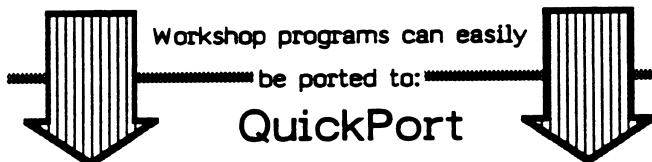
Lisa Workshop

- Pascal, BASIC-Plus, High Level COBOL are available now.
- Extended Fortran 77 & C are planned for future, will have QuickDraw, speaker, mouse access

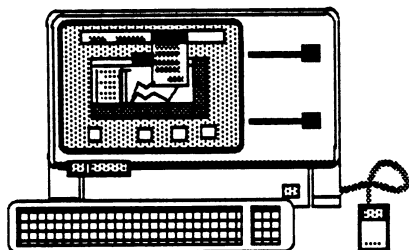


- File transfer utility for easy porting.

- Advanced, window based editor provided.
- Other utilities provided for quicker development times.

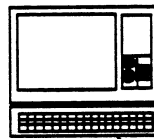


- Actually shipped with each Workshop language shown above.
- A set of libraries is compiled and linked with the final Workshop program - the process takes only a few minutes!

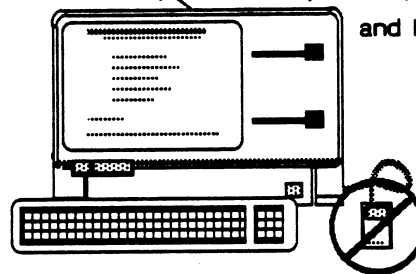


- Icon Editor for customization of icons
- QuickPort is a quick, easy way for porting applications into the Desktop environment.

UNIX™ on the Lisa



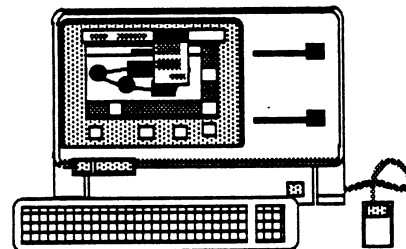
- Microsoft's XENIX™ is available with C, Business BASIC, COBOL.
- UniPress' UniPlus+ is available with C, Pascal, COBOL, Fortran and BASIC.



- A powerful, cost-effective system for implementation of UNIX.
- Full development tools available.

LisaPort

- Programs actually developed in Workshop using Clascal, an object-oriented language.
- Requires a rewrite if application already written - underlying algorithm may be retained



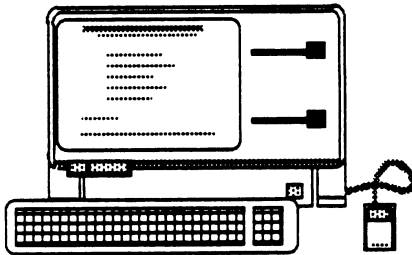
- Icon Editor for customization of icons
- LisaPort is initially more complicated than "vanilla" programs, but preliminary reports prove it to be a highly productive tool for creating revolutionary applications.

Operating Environments on the Lisa™

Lisa Workshop

(available now)

- Program takes over the machine
- Screen is like 24x80 terminal
- Program input from mouse available with Pascal

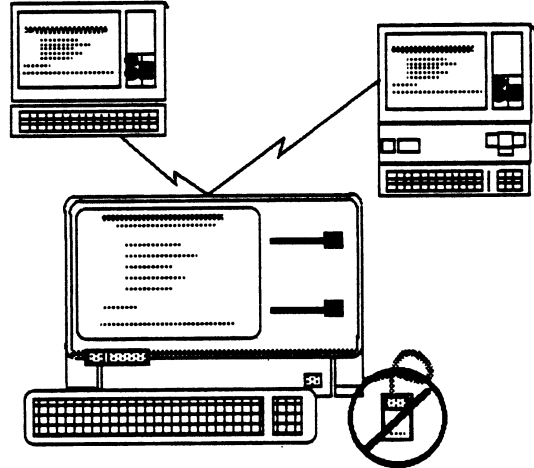


- Graphics with QuickDraw and speaker control available with Pascal

- MC68000: faster execution
- 1MB RAM: larger capacity
- 5MB Winchester: faster access

UNIX™ on the Lisa

(XENIX or UniPlus+ available now)

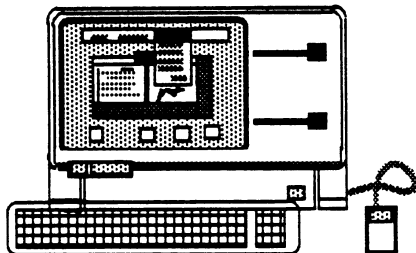


- Screen is like a 24x80 terminal
- Allows for single- or multi-user applications
- A low-cost UNIX implementation
- Large capacity Winchester soon to be available

QuickPort

(available Spring, 1984)

- Standard menus for opening, closing, "setup"
- Scrolling and resizing the window available
- Text "pane" operates as an 80x24+ terminal
- Graphics "pane" available for QuickDraw output
- Graphics "pane" may be copied into LisaDraw
- Mouse used only to copy and paste text



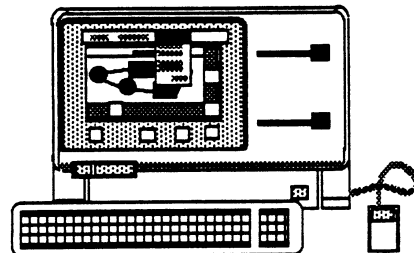
- QuickPort allows any program developed in the Workshop to run on the Desktop with limited integration and menu functions

Lisa Desktop Environment

LisaPort

(Pre-release available Nov.)

- Mouse and menus may be used by the LisaPort application (e.g. creating graphics)
- Lisa text fonts and printing handled automatically from the menu bar
- Full data integration with other LisaPort applications



- LisaPort brings to the developer the full power and integration of the Lisa system