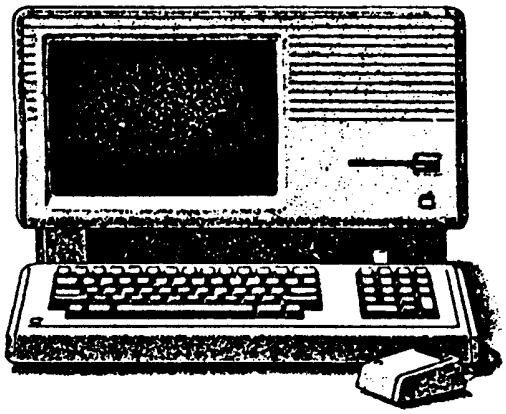
Doc# 112

Apple Lisa Information



FILE NAME

Lisa Independent Developer Opportunities

DISK #

COMMENTS

Apple

David T. Craig
736 Edgewater, Wichita, Kansas 67230
(316) 733-0914

The Lisa Professional

"112-00.PICT" 162 KB 2000-12-24 dpi: 300h x 300v pix: 1892h x 2815v

apple computer inc.
20525 Mariani Avenue
Cupertino, California 95014
(408) 996-1010

Rec'd during Aug. 83 IDC

Dear Developer:

Thank you for your inquiry regarding Lisa third party development. Apple is committed to the support of third party products for Lisa and we hope the information contained in this mailing will answer some of your questions about Lisa and our developer program.

We have a limited amount of Lisas and peripherals available for development at a discount of 30% from list price. This offer is limited to individuals interested in and capable of developing hardware and software products for added-value products. This offer is not open to anyone doing development for their own internal, non-commerical purposes.

If you are interested in ordering one or two Lisas for development, please use the enclosed original forms to apply. We will not accept photocopies of these forms. You can also order a set of manuals without ordering any other products. Note that all orders are C.O.D. and must be accompanied by 1) a purchase order formally ordering the products, 2) the questionnaire which will help us determine eligibility for the discount program, and 3) any product literature or information regarding prior development which will help us determine eligibility for the discount program. Once we receive and if your order is approved, we will send you a confirmation letter.

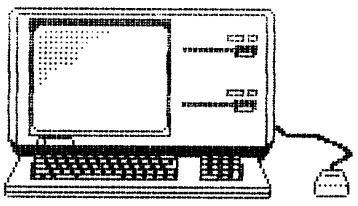
Please return the enclosed order forms or direct any further questions on the program to:

Program Coordinator/Third Party Products
Personal Office Systems Division
Apple Computer, Inc. MS-2S
20525 Mariani Ave.
Cupertino, CA 95014
408-973-3886

Apple has re-invented the personal computer with Lisa and we want you to join the revolution as early as possible. All the early indications are that this type of software technology will be the personal computer technology of the 1980's. We look forward to working with you.

Sincerely,

Program Coordinator
Third Party Products
Personal Office Systems
Apple Computer, Inc.



Apple Lisa Computer
1983 - 1985

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Independent Developer Opportunities

This document is intended to provide a brief overview of the Lisa™ development environments and Lisa-like applications. We expect this will answer some of the most general questions about Lisa.

1.0 OPEN PASTURES

Software developers often find themselves fenced in by the limited number of development environments and language processors which are available for their target machine. Lisa software developers will have the freedom to select from three development environments, each of which supports or will support all of the most common and required language processors and development tools (see Figure 1). These environments are Apple's own **Development Workshop**, Microsoft's **XENIX**, and Digital Research's **CP/M**. Let's take a brief look at each...

2.0 LISA DEVELOPMENT WORKSHOP

The Lisa Development Workshop provides all the tools a developer needs to write, edit, debug and run programs in Lisa **Pascal, COBOL, BASIC PLUS** and 68000 Assembly language. The Lisa Development Workshop consists of the **File Manager**, the **System Manager**, the **Editor**, and a number of system/development **Utilities.**

The **File Manager** is a subsystem of the Workshop that provides file and device manipulation facilities. It handles most of the tasks of transferring information from one place to another. Using the File Manager you can do such things as make copies of files, list directories, rename or delete files,initialize and format volumes, find out what volumes are on line, set file attributes, copy protect object files, and so on.

The **System Manager** is another subsystem that allows you to set system defaults and configuration. With the System Manager you can set Lisa system characteristics such as screen contrast and speaker volume, configure external devices such as disks and printers, set default start-up devices, set processes to be resident or non-resident (to effectively performance tune your Workshop system), set the console device, and monitor and manage all currently existing processes.

The **Editor** is used to create and modify text files. Unlike most standard text-editors the Workshop Editor utilizes the Lisa User Interface. Text is selected using the mouse and most editor commands can be invoked through the use of pull-down menus. Each text file is displayed in it's own unique window and multiple windows may reside on the display screen. Transferring a procedure or subroutine from one text file to another is as simple as moving text within a file. The Editor also provides full search and replace capabilities, font selection and formatting facilities.

A number of system **Utilities** are included to assist your development efforts. A simple terminal emulation utility allows you to download source code to the Lisa from other systems. Additional utilities allow you to compare files, examine and patch object files, divide large files and join small files, along with numerous other features.

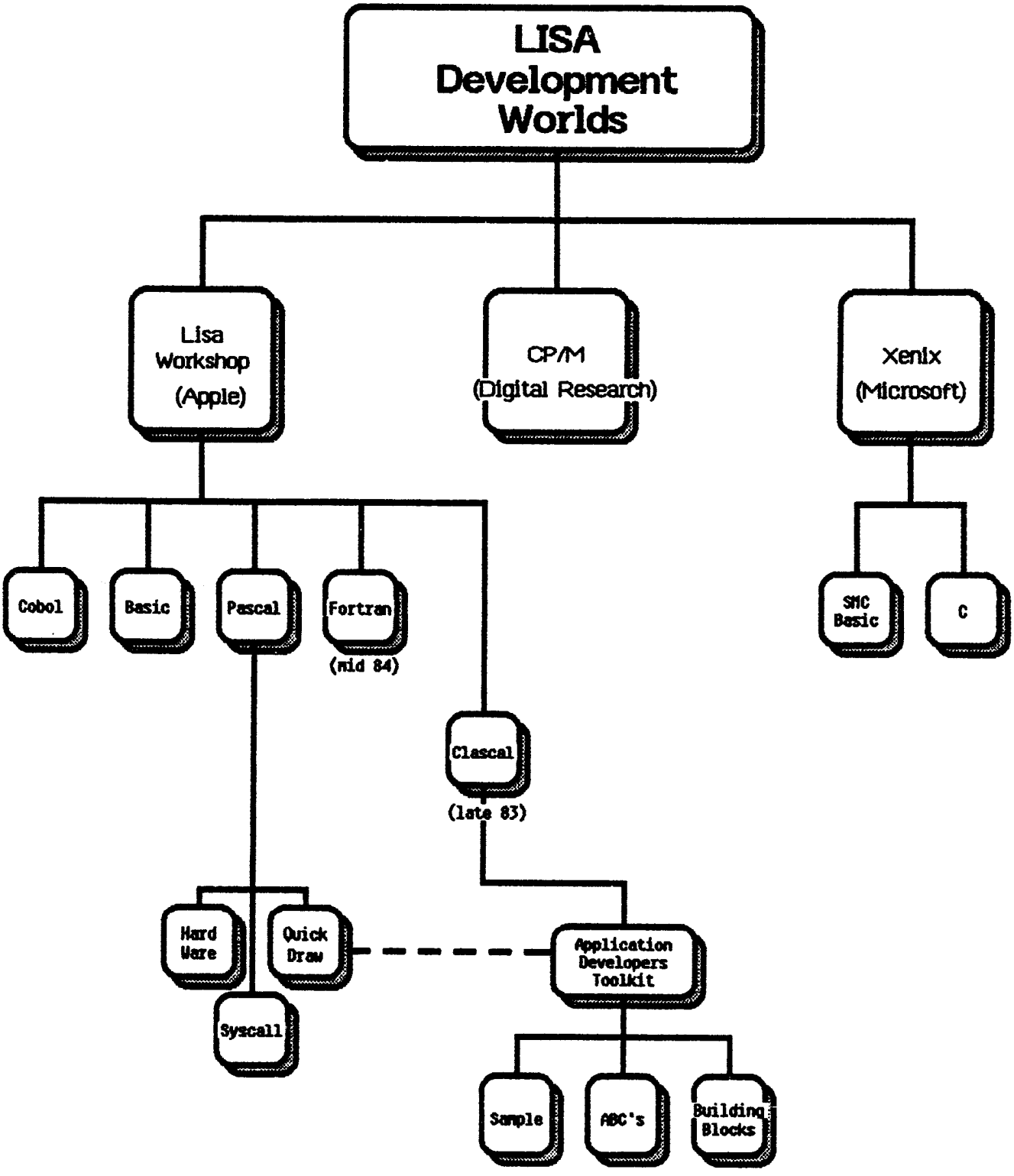

Figure 1. Lisa Development Worlds

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2.1 WHAT ABOUT LANGUAGES?

The Lisa Development Workshop will support three languages at first release: (1) **Pascal** (ISO standards plus extensions), (2) **COBOL** (GSA certifiable high-level compatible), and (3) **BASIC PLUS** (DEC BASIC-PLUS compatible). FORTRAN 77 will be available at a future date.

Each language product is sold individually and includes all of the Workshop facilities previously described. Any one or all of these languages may reside on the same Workshop volume . All languages utilize the same editor for text file creation and utilize the same File management and System management facilities provided in the Workshop. This allows you to switch back and forth between languages easily, without having to learn an entirely new set of editing and system/file management procedures for each language.

2.1.1 Pascal

Pascal is the language of choice for software developed by Apple. In fact, all of the Lisa Office applications and the Lisa Operating System were developed in Pascal. Pascal is reasonably compatible with Apple // and Apple /// Pascal, provides all the features of standard Pascal as described in the Pascal User Manual and Report (Jensen and Wirth), and includes a variety of extensions including 32-bit integers, an **otherwise** clause in **case** statements, procedural and functional parameters with type-checked parameter lists, and the **@** operator for obtaining a pointer to an object. The real arithmetic conforms to the proposed IEEE standard for single-precision arithmetic. Pascal for the Lisa compiles to native 68000 code; there is no run-time interpreter.

The Pascal Development System consists of all the Workshop features described above and includes facilities for compiling, code generating, assembling, linking and debugging. Figure 2 shows the Pascal program development cycle. The Pascal Compiler translates Pascal source code into a special intermediate code; the Code Generator then translates the intermediate code into native 68000 object code. The 68000 Assembler translates Assembly language programs into object code. The Linker combines object code files into executable programs. The Debugger allows you to examine memory, set breakpoints and perform other run-time debugging functions.

Pascal also includes a set of Pascal units. These are separately compiled, non-executable programs that can be linked with other object files to produce complete programs. You can write a progam that uses unit procedures by including the appropriate unit name in the **Uses** statement of your main program. These units are only accessible through Pascal and may not be called from BASIC PLUS or COBOL. The four units available at first release (**Quickdraw, Hardware** and **Syscall**) form the nucleus of a very powerful set of development tools.

The **Quickdraw** units consist of Pascal callable procedures for specifying fonts and for drawing text, lines , rectangles, round-rectangles, ovals, arcs, polygons, bitmaps and arbitrary regions on Lisa's bitmap display. The Hardware Interface (**Hardware**) unit contains all the procedures necessary for controlling and detecting mouse and keyboard events. Thus a Pascal programmer that uses **Quickdraw** and **Hardware** can create visually attractive, graphical applications that use both the mouse and the keyboard for operator interaction.

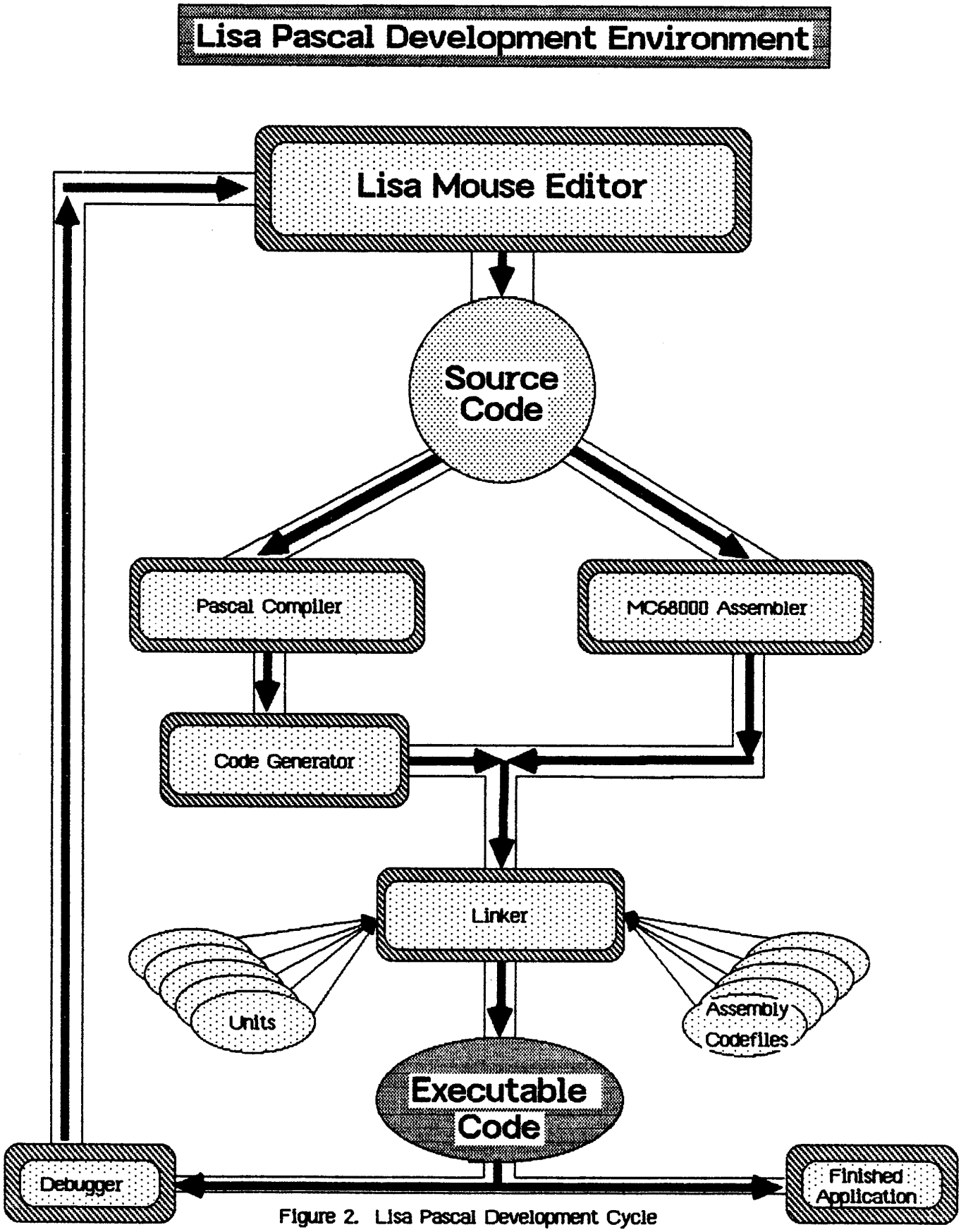

Figure 2. Lisa Pascal Development Cycle

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The **Syscall** Unit allows Pascal programs to make explicit calls to the Lisa Operating System (OS). The Lisa OS employs a single-user, multi-tasking based design philosophy and provides an environment in which multiple processes can coexist, communicate and share data. The OS also provides a file system for I/O and information storage, and handles exceptions (software interrupts) and memory management.

Programs developed under the first release of Pascal will not be integrated with the Lisa Office applications; that is they will not coexist on the desktop with LisaWrite, LisaDraw, etc. and they will not be able to share information (via CUT-AND-PASTE) with the Office applications. However, they will be highly graphical through the use of **Quickdraw** and can read mouse events for input. As such, these first release applications may have many of Lisa's superb qualities. They will run in the Workshop environment -- a separate world from the Office environment. When the user first boots the Lisa system, he/she will have the choice (via the Environments Window) whether to enter the Workshop (running COBOL, BASIC PLUS, or Pascal applications) or the Office environment.

The Application Developer's Toolkit (see Section 5.1) will be available in late 1983 and will provide the developer with the required tools for developing full Lisa-like, integrated applications.

For complete information on Pascal and the Lisa OS use the enclosed order form to obtain a copy of the Pascal Manual set.

2.1.2 COBOL

COBOL is a fully certifiable GSA high-level COBOL. COBOL for the Lisa provides many features that are not usually found even on a number of mainframe and mini-based COBOL implementations. COBOL includes all the Workshop facilities descibed earlier and includes the COBOL Compliler which generates intermediate code from source code produced in the Workshop editor, and the COBOL run-time system which interprets and executes the intermediate code. A COBOL code-generator which will produce native 68000 assembly code is planned for a future date. Apple /// COBOL applications should run on Lisa without modification, only recompiling.

Applications developed in COBOL run under the Workshop environment and will not be able to display graphics on the bit-map display or use the mouse. At this time no integration or sharing of data is possible between COBOL programs and the Lisa Office applications.

For complete information on COBOL use the enclosed order form to obtain a copy of the COBOL manual set.

2.1.3 BASIC PLUS

BASIC PLUS is a version of DEC BASIC PLUS modified for the Lisa programming environment. BASIC PLUS includes all the Workshop features. Source code is entered using either the Workshop editor or the BASIC PLUS Interpreter.

BASIC PLUS provides all of the DEC BASIC PLUS language constructs and most of the system statements. Statement syntax, and, where possible I/O operations are the same. There are some differences: (1) BASIC PLUS is interpretive while DEC BASIC PLUS 2 is compiled; (2) BASIC PLUS does not support **noextend** mode; (3) The **clustersize** and **position** options of the open command are ignored in BASIC PLUS; (4) BASIC PLUS doesn't include the DEC BASIC PLUS system statements **assign, reassign, ccont, tape,** and **key** because they are not relevant in the Lisa environment. As with COBOL, BASIC PLUS runs in the Workshop environment, cannot display graphics on the bit-map display or use the mouse, and cannot integrate or share data with Lisa Office applications. For complete information on BASIC PLUS use the enclosed order form to obtain a copy of the BASIC Manual Set.

3.0 XENIX

Microsoft's XENIX is an implementation of Bell Lab's popular UNIX Time-Sharing System. As a general-purpose operating system, Microsoft's XENIX offers facilities that are seldom found even on larger mainframes. Hierarchical file structures, device-independent I/O, multi-tasking and multi-user capabilities, together with a comprehensive set of program development and file-management utilities, all combine to form a solid structure for developing sophisticated, powerful applications.

XENIX will be marketed and distributed by Microsoft, and will be supported by another company (soon to be announced). XENIX will not carry an Apple label and exists as a completely separate entity from the Apple Workshop environment and the Apple Office System. Applications developed under XENIX will currently not support any of the Apple Office System user-interface standards; that is, XENIX applications will not be able to co-exist with or look like Apple's own office software. Rather, XENIX based applications will run in a standard alpha-numeric terminal environment. Routines for accessing the bit-map graphic display are available under XENIX.

Multi-user applications are made possible by connecting standard alpha-numeric terminals to the Lisa through either the two built in serial RS-232 ports and/or by a multi-port expansion card which will be built and distributed by Microsoft.

Developers that choose to work in the XENIX environment will be entitled to the same level of support and receive the same discount structures as those who are developing applications under the Apple Workshop Environment.

Microsoft's **"C"** language and **SMC Business BASIC** (a Basic Four compatible multi-user BASIC interpreter) are among the language processors that will be available under XENIX at first release.

For additional information about XENIX contact:

John Uiett
Microsoft Corporation
10700 Northup Way
Bellevue, WA 98004
(206) 828-8080

For information on SMC Business BASIC contact:
Mike Suscreba
Science Management Corporation
1011 Route 22 P.O. Box 6800
Bridgewater, NJ 08807
(201) 685-9000

4.0 CP/M

Digital Research will have available for the Lisa system Concurrent CP/M for the 68000 and a family of languages, programming tools and graphics products. Concurrent CP/M is a single-user, multi-tasking operating system designed to enhance the productivity of the end user. Languages available will include "C", Pascal MT+, C Basic and CIS and Level 2 Cobol. In addition, the programming tools Display Manager and Access manager will be available. With Concurrent CP/M and a full family of programming languages the independent developer now has a path to easily port existing CP/M applications to the Lisa. For further information on Concurrent CP/M for the 68000 contact:

Rob LaTulipe
ISV Coordinator
Digital Research Incorporated
P.O. Box 579
160 Central Avenue
Pacific Grove,CA 93950
(408) 646-6309

5.0 LISA SOFTWARE ARCHITECTURE

Lisa's software is revolutionary. Software is responsible for quickly drawing complex graphical objects; software is responsible for translating mouse movements into powerful commands; software is responsible for Lisa's ease-of-use.

The six Lisa Office applications were all designed within a very explicit set of user-interface and performance standards. These standards impart a consistency of program use and feel and contribute to an almost intuitive user learning experience. However, beneath this layer of standards lies a software architecture completely dissimilar to those used by standard data-driven applications.

A Lisa-like application lives in a single-user, multi-process environment. The Lisa Operating System manages the multiple processes that the user activates; however, unlike most time-slice multi-process systems, the Lisa OS uses a non-preemptive scheduling algorithm. This means that once a process is executing, it will continue to execute until it either makes an operating system call or explicitly yields the CPU to another process. This algorithm was selected with the user interface in mind. When dragging the mouse around in a program, the user expects the full performance of the machine; the current program (or process) should not be interrupted to allow another program to run. The programs themselves decide when it is best to pass the CPU to another program.

5.1 THE LISA APPLICATION DEVELOPERS' TOOLKIT

With the first release of the Pascal Workshop, developers will be able to create visually attractive, graphic oriented programs which use the mouse for user interaction. These graphic and mouse-driven applications written in Pascal will see a tremendous market demand and probably will have a long product life, even if they run in the Workshop, provided they deliver solid functionality to the user.

For applications which are intended to be integrated into the desktop, it is highly desirable that these applications be:

* integrated properly with the Lisa Operating System and the Desktop Manager
* able to cut and paste with other Lisa applications
* able to handle exception conditions in a standard robust way
* consistent with the Lisa user interface
* quick and easy to implement
* able to share common code with other applications
* easy to modify for international versions

The Lisa Application Developer's Toolkit is provided to make these goals easy to attain.

The Toolkit is written in a powerful language called **Clascal** which is simply an extended form of Pascal. All applications which use the Toolkit must be written in Clascal. The Toolkit Software itself will consist of (1) **The Sample** (a short program that can be edited into an application, (2) **The ABC's** (Application Base Classes, shared by all new applications) and (3) **the Building Blocks** (additional classes optional to each application).

The ABC's and the Building Blocks together are known as the "Toolkit Interface". The Toolkit will also include a comprehensive **Guide Book** explaining the use of the kit and its component parts. The Guide Book and other documentation on the Toolkit will not be available until the first release of the Toolkit.

5.1.1 Clascal

Clascal is an extended form of Pascal. Clascal extensions support "object-oriented" programming by providing Smalltalk/Simula-like classes, objects and methods, although the use of these extensions is optional. Clascal makes it easy for applications to inherit standard behavior from the Toolkit, while retaining flexibility. Clascal supports all of the standard Pascal language constructs and features.

5.1.2 The ABC's (Application Base Classes)

The Application Base Classes implement a "generic application" including most of the Lisa user interface and system interface (e.g. scrolling, creation and manipulation of windows, panels and panes, document creation, filing, etc.). An application program need only describe the differences between the desired application and the standard behavior. For example the ABC's define an abstract Document. An application can define a specific ListDocument, PictureDocument, VoiceDocument or whatever is needed, without having to reimplement standard operations such as communicating with the Desktop Manager.

5.1.3 The Building Blocks

The Building Blocks provide a number of additional classes which are optional to each application. Among the Building Blocks from which applications will be able to choose will be a graphics object package, a bit-map graphics package, a text-editing package, and a data-field editor. The Toolkit to be released at the end of 1983 will include the beginning of a series of Building Blocks to be released over time.

5.1.4 The Sample

The Sample Application is a program template. In it appear models of the procedures that most applications must define. To help guide the programmer in editing the template, explanatory comments appear wherever code must be added or changed.

Apple will send you a more detailed description of the Applications Developers' Toolkit upon request. This document is free, even if you do not order Lisas at this time.

5.1.5 A Bibliography on Object-Oriented Programming

The following articles and books provide background information on the object-oriented methodologies embodied in Clascal.

Byte special issue on Smalltalk, August 1981 (primarily the following articles)
Xerox Learning Research Group, "The Smalltalk-80 System"
Robson,D., "Object Oriented Software Systems"
Tesler,L.,"The Smalltalk Environment"
Ingalls,D.,"Design Principles Behind Smalltalk"

Ingalls, D., "The Smalltalk-76 Programming System: Design and Implementation," 5th Annual ACM Symposium on Principles of Programming Languages, January,1978

Golden and Robson, Eddison Wesley 1983 "Smalltalk-80 The Language and its Implementation"

6.0 DEVELOPMENT PATHS

The key question that you must address as a developer is whether you can or should do any development now before the Toolkit is available. The answer is that there is a lot you can do. If you develop a standalone application now in Pascal, you still will be able to provide a level of graphics and user-friendliness unmatched by any other microcomputer. The Pascal we will release will have access to our set of bit-map graphics and hardware I/O (including the mouse). It will not support our pull-down menus, icons,and data integration. You will, however, be able to design some terrific visuals and use the mouse, even at first release. When the Toolkit is available, it will manage your user interface for you. If you are porting your application over to Lisa, you should seriously consider enhancing it with **Quickdraw** and the other Pascal units to develop a visual, user friendly application as soon as possible and take advantage of all the Lisas which will require application software before the Toolkit is available. To minimize the amount of re-writing, you will want to keep computation separate from user interface code.

If you intend to design only under the Toolkit, you should get started now, rather than wait for the Toolkit. You can begin to learn Pascal/Clascal and begin separating your user interface code from your computational algorithms. You should also study the Lisa user interface closely to understand how your application can take advantage of some of it's subtleties. Since the Toolkit essentially is an I/O manager, you can develop all your computational segments now. They will not be impacted by the Toolkit. The key thing to do is keep your design modular, since the Toolkit will require a re-architecting of the application. If you were to wait until the Toolkit were available to begin development, you would lose a major 6-9 month headstart on the market.

Apple will be shipping AppleNet in early 1984. Applenet is a one-megabit, passive bus topology local area network and supports all current (Apple IIe, ///, Lisa) and planned Apple products. Applenet protocols are compatible with Xerox Network Systems standards. AppleNet will support up to 128 devices on a 2000 foot network at a minimal installation cost per device.

More information on AppleNet is available for those who are interested upon request. This document is free, even if you do not order Lisas at this time.

8.0 ORDERING LISAS

Apple will be providing qualified independent developers and qualified OEMs with a discount on Lisas for developmental purposes. This program is limited to developers and OEMs who are or intend to be engaged in the production of software and/or hardware products for re-sale. The discounts are not intended for end-users or in-house computer staffs intending to do development for their own, non-commercial purposes. Current and potential Lisa OEMs should contact their local Apple Regional Sales Office for additional information on Apple's OEM program.

The discount for development applies to a maximum of two Lisas, complete with ProFiles. For each Lisa ordered, one additional ProFile can also be ordered. Most serious development work will benefit with the addition of an extra ProFile. Developers will also be able to purchase up to two printers (letter quality or dot matrix) as part of the order. The Pascal, BASIC, and COBOL Workshops are also available at discount; however Apple will not ship any printers, ProFiles or software without an order for at least one Lisa. Developers may choose to purchase 1 discounted Lisa now and 1 later at their option. Developers may also order manuals separately. Orders for manuals only do not need to be accompanied by a Lisa order. All parties who wish to receive consideration for developer discounts must also complete and sign the enclosed Developer Discount Application Form. This form must be returned with all orders (manuals and/or systems) to the address given below.

Apple will ship to developers on a priority basis, but reserves the right to ration Lisas. THE ACTUAL SHIP DATE OF YOUR ORDER MAY VARY DUE TO ALLOCATIONS. IF YOU ORDER TWO, IT IS LIKELY THAT YOU WILL RECEIVE ONE LISA FIRST AND THEN THE SECOND WILL FOLLOW LATER. All orders are C.O.D. and must be accompanied by a purchase order and a description of the product or products intended for development. Apple reserves the right to determine the eligibility of each request.

Once your order is received and approved, we will send you a confirmation. We will not be able to estimate at that time when the unit(s) you ordered will actually be shipped. We will try to expedite the process as quickly as possible, but cannot predict when any given order will arrive.

Return Developer Information and order forms to:

Program Coordinator/Third Party Products
Personal Office Systems Division
Apple Computer, Inc. MS-2S
20525 Mariani Ave.
Cupertino, CA 95014
408-973-3886

Apple Computer, Inc.
Lisa Developer Discount Program Application Form

Thank you for your expressed interest in the Apple Lisa. Apple is firmly committed to insuring the availability of a wide variety of quality software for the Apple product line and we have established several programs to provide you, the independent developer, with the resources, support, training and special programs required to insure your success in the marketplace.

We please ask that you answer each of the following questions to help us in determining your eligibility for this discount program. All of the information you provide will be treated as confidential; you should not, however, send any source code or reveal any other trade secrets in the process of answering the questions. Please answer each question as thoroughly and accurately as possible and attach additional pages where necessary.

PART A — Company Information (to be completed by all applicants)

Company Name: _____

Street: _____

City: _____ State: _____ Zip: _____

Marketing Contact: _____

Technical Contact: _____

Phone Number(s): _____

What is your company's principal business (i.e. OEM, Software Developer, etc.)?

_____

What is your company's specific area of expertise (i.e. finance, manufacturing, graphics, etc.)? _____

Is your company currently an Apple licensed third-party vendor? _____

What Apple Products, if any, do you currently develop products for (i.e. Apple //e, Apple ///)? _____

PART B -- Current Product Information (If you *currently* have any *distributed* products which operate with any personal computers, minicomputers or mainframe computers, please complete this section. If you have no currently distributed products please skip this section and complete Part C of this application.)

1. FOR EACH PRODUCT: Please give product name, product type, what computer(s) and what operating system(s) does it work with, and the development language.

PRODUCT NAME	PRODUCT TYPE	COMPUTERS & OS	LANGUAGE
e.g. MyWriter	Word Processing	Apple //e, IBM w/MSDOS	BASIC

2. How are your products currently distributed (national distributors, direct salesforce, dealers, mail order, OEM's, etc.)?

3. If applicable, Please give the names of up to five distributors, dealers and/or mail order firms who are distributing your products.

4. What programs do you have for providing customer support, bug fixes and re-releases of your products?

5. Please enclose any materials that will help us understand your product(s) and your company including product literature, demonstration copies, and product documentation. This is very important in helping us to evaluate your application.

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PART C — New Developer Information (If your company does not have any software and/or hardware products currently being distributed, or if you are in the development phase for your first product(s), we ask that you answer the following questions to assist us in determining your eligibility for the Lisa Discount Program)

1. Please describe in as much detail as possible the range of technical experience that you or your company have and why you feel this experience is relevant to developing products for the Apple family line.

(PLEASE DESCRIBE ON A SEPARATE PIECE OF PAPER)

2. Describe any experience you may have in marketing software/hardware products and describe the distribution channels you plan to use for the Apple-compatible products you intend to develop.

(PLEASE DESCRIBE ON A SEPARATE PIECE OF PAPER)

3. Please describe what plans you have to provide technical service/support and documentation for your products . Describe any relevant experience you may have in preparing user-manuals and documentation.

(PLEASE DESCRIBE ON A SEPARATE PIECE OF PAPER)

PART D — Signature and Agreement (to be completed by all applicants)

I certify that the information provided in this application is, to the best of my knowledge , correct. I also understand that Apple Computer, Inc. will treat all of the information which I have provided as confidential.

Name (Please print): _____

Title: _____

Signature: _____

Date: _____

==========

For Apple Use Only

Requestor (PM or OEM rep/SSA): _____ Date: _____

RSM or PPM: _____ Date: _____

OEM Sales Manager: _____ Date: _____

Developer Relations Manager: _____ Date: _____

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Apple Computer, Inc.
Discount Price List
Lisa Systems, Software and Peripherals

Item and Description	Part Number	Retail Price	Standard Discount	Maximum Available
LISA SYSTEMS				
Lisa System (includes six office applications, Profile, one megabyte memory, two 860 Kb disk drives, all cables and power cords, keyboard, mouse, user manuals)	A6P0001	$9995	6996.50	Two/Calendar Year
LISA SOFTWARE				
Pascal Workshop	A6D0101	$595	416.50	Two/Calendar Year
COBOL Workshop	A6D0104	$995	696.50	Two/Calendar Year
BASIC Workshop (all Workshops include software and manuals)	A6D0103	$295	206.50	Two/Calendar Year
LISA PERIPHERALS, CARDS AND ACCESSORIES				
Profile Drive (five megabyte)	A9M0005	$2045	1431.50	Two/Calendar Year
Profile Accessory Kit for the Lisa	A6C0005	$50	35.00	Two/Calendar Year
Dot Matrix Printer	A2M0058	$675	472.50	Two/Calendar Year
DMP Accessory Kit for the Lisa	A6C0350	(no charge with purchase of DMP)		
Letter Quality Printer	A2M0025	$2195	1536.50	Two/Calendar Year
LQP Accessory Kit for the Lisa	A6C0351	(no charge with purchase of LQP)		
Two-Port Parallel Card (required for extra Profile and/or Dot Matrix Printer)	A6BB101	$195	136.50	Two/Calendar Year
LISA MANUALS				
Hardware Reference	A6L0101	$65	45.50	No Maximum
Pascal Manual Set	A6L0111	$135	94.50	No Maximum
COBOL Manual Set	A6L0113	$135	94.50	No Maximum
BASIC Manual Set	A6L0112	$65	45.50	No Maximum

LISA 1

NOTE: THESE PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE

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RETURN TO:
Program Coordinator
Third Party Products
Personal Office Systems
Apple Computer, Inc.
20525 Mariani Ave MS-2S
Cupertino, CA 95014

Apple Computer, Inc.

Lisa Discount Order Form

RETURN TO:
Program Coordinator
Third Party Products
Personal Office Systems
Apple Computer, Inc.
20525 Mariani Ave MS-2S
Cupertino, CA 95014

Date _____

BILL TO:

Name _____
Company _____
Street Address _____
City, State, Zip _____
Phone Number _____

SHIP TO:

Name _____
Company _____
Street Address _____
City, State, Zip _____

QUANTITY	APPLE PART NUMBER	PRODUCT DESCRIPTION	UNIT PRICE	TOTAL AMOUNT

PURCHASE ORDER # _____

DEVELOPER'S SIGNATURE

_____

NAME TITLE

TOTAL PRODUCT ORDER $ _____
ADD LOCAL SALES TAX $ _____
SHIPPING CHARGES $ _____
TOTAL ORDER $ _____

SEE OTHER SIDE FOR TERMS AND CONDITIONS.
ALL ORDERS MUST BE ACCOMPANIED BY A PURCHASE ORDER.

FOR INTERNAL USE ONLY

LISA DEVELOPER RELATIONS APPROVAL _____

830901 NAME DATE

"112-16.PICT" 203 KB 2000-12-24 dpi: 300h x 300v pix: 2378h x 2941v

Apple Computer, Inc.
Lisa Discount Program
Terms and Conditions

1. All orders must be prepaid or will be shipped C.O.D.

2. Applicable local sales tax and shipping charges will be added for all orders. For prepaid orders, Apple will give the shipping charge upon request.

3. All shipments will be best way, F.O.B. Apple Distribution Center.

4. The purchaser agrees not to resell or otherwise transfer any items purchased for a period of at least one year from the date of shipment.

5. Apple will endeavor to ship items ordered within three to four weeks of receipt of order; Apple cannot, however, guarantee shipment within this time period.

6. A purchase order or confirmation of the order on company letterhead must accompany all orders.

7. All equipment ordered under the Lisa Discount Program will only be used for the purpose of developing software and/or hardware products which will be resold for use on Apple family products.

8. Developers agree to contact Apple Software Licensing before distributing any products that incorporate Apple-proprietary software.

9. A maximum of two Lisa systems may be ordered in any one calendar year. Each of these systems is offered at the standard discount set forth in the current Lisa Discount Price List.

10. A minimum of one Lisa system must be purchased in each order. Peripherals and languages may not be purchased separately.

11. Each Lisa system ordered must be accompanied by an order for a language Workshop (Pascal, Basic, or Cobol), and may optionally be accompanied by an order for a Dot Matrix or Letter Quality printer and an additional Profile.

12. All developers who order Lisa development systems do so with the understanding that Apple may include their **names** in promotional mailings to Apple Dealers, Apple National Account Executives and Apple Representatives as being among those who are developing third-party products for the Lisa. Apple **will not** divulge any information about the **types** of products you are developing for Lisa without your express consent.