School of Art & Design

University of Michigan

Apple Laptop Initiative

Phase II: Graduate Students

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I. Introduction

This document introduces the second phase of the School of Art & Design's Apple Laptop Initiative. In the first phase of the initiative, over 70 sets of Apple Macintosh G4 laptop computers, peripheral devices, and an extensive bundle of software germane to work in the School were distributed to all full-time faculty and staff. In this second phase, all graduate students in the School are receiving similar sets of hardware and software.

The objectives of the initiative are to:

- provide expanded access to current communication and information processing technologies for all faculty, staff and students in the School,
- establish systems for maintaining and updating this access, and
- utilize the advantages of these technologies throughout all aspects of the School.

The following pages contain important information regarding obtaining and using the new hardware and software. Please read them carefully and retain this document for future use. It is the basis for the School's *Information Technology Handbook*, which will be updated annually.

Beyond the above objectives, this initiative is intended to develop a working partnership between the School and Apple Computer – an opportunity to grow an interactive, mutually productive relationship on many fronts.

During the coming years, I hope we are able to expand this initiative to the undergraduate students of the School. This poses a financial and organizational challenge of a different order of magnitude from the first two phases – 650+ sets of hardware and software as contrasted with 100+ sets in these first two phases. These systems must not only be deployed, they must be maintained and upgraded. And then, most challenging, they must be recycled, probably every two years to keep up with the changing technologies. This dictates significant additional funding not only for the hardware and software, but also for technical staff. It means more robust partnerships with Apple, other vendors, and the University, and some kind of subsidy of the initiative from students.

Bryan Rogers
Dean of the School

II. Acknowledgements

This project was made possible through the cooperative efforts of a number of individuals and organizations.

The School's Informational Technology staff, Kris Fazzari and Neil Clennan, have managed the extensive organizational and technical work, with input from Bill Manspeaker and Kevin Boyd along the way. This work has included not only the selection of hardware and software, but software loading, preparing and testing each computer, organizing the distribution, and preparing this handbook.

Apple Computer officials have provided support and guidance throughout this initiative from its inception. Most importantly, the company has provided us with significant discounts on their products. Special thanks are due to Sheri Schultz, long time resident Apple representative at the University, and John Hickey, Apple engineer working in the region.

Special thanks are also due to Microsoft, Inc., Adobe, Inc., and the University Purchasing Department for their efforts in arranging cost-saving site licenses for much of the software used in this initiative.

Support from the University of Michigan Information Technology Central Services has been critical to this initiative. Not only has generous funding been provided through the ITCS's partnership agreement with the School, but the ITCS Contract Services Group also assisted with the deployment of the hardware and software in Phase I of the initiative.

Finally, acknowledgement is due to the School's faculty, staff and graduate students for their extraordinary readiness to prepare for the future by engaging the present, thereby making this project an obvious and essential next step.

III.Hardware

The following hardware is being provided to all graduate students:

- Apple PowerBook G4 Computer
- Epson Color Printer
- SmartDisk VST External FireWire Hard Drive with Cable
- Iomega External USB 250 MB Zip Drive with Cable
- Extra Apple AC Power Adapter and Power Cord
- Kensington Security Cable and Key
- Carrying Case

Mac OS 9.2.2 has been loaded on each computer. The hard drive on the computer has been partitioned to allow for the eventual conversion to Mac OS X. At the moment, not all of the software we wish to deploy runs natively in OS X, and investigations determined that having both systems on the machine produced a problem-prone environment. As soon as feasible, a conversion to OS X will be made for all. It is a much improved operating system with numerous advantages.

IV. Software

Following extensive discussion, a variety of software was selected for installation on the computers. All installed software is the most recent edition available.

Almost all of the installed software has been purchased with price reductions made available through site licenses and educational discounts negotiated between the University and the manufacturer. The cost savings to the School vary from almost 100% off retail in the case of Microsoft Office, to much smaller percentages. Some of the software packages, even with site licensing agreements, remain quite expensive for the School. In most cases, the School pays for the exact number of users. This software has been purchased for these laptop computers and may not be copied to any other computers.

When the manufacturer upgrades software, all who have that software will be notified by the School's IT office that an upgrade is available. Instructions will be provided for obtaining the upgrade, either online or directly, by bringing your computer to the IT office. Likewise, new software will inevitably become available and deemed generally useful for the School. It will be distributed as deemed useful and necessary.

The following software packages were selected as the most generally applicable for our use and were installed. A short description follows each listing.

Software Available for Distribution

Utilities	
Disk First Aid	Disk repair and file recovery
Folder Synchronizer	Hard drive data back up
Iomegaware	Zip disk copying and formatting
Norton Utilities	Disk repair and file recovery
Virex	Virus protection

Administrative	
Acrobat Reader	PDF file viewing
Microsoft Office: Word	Word processing
Microsoft Office: Excel	Spreadsheets
Microsoft Office: PowerPoint	Presentations
Microsoft Office: Entourage	Schedule and contact management
SimpleText	Text document processing

Internet	
BetterTelnet	Dumb terminal emulation (accessing Pine, ud)
Fetch	Internet file transfer
Microsoft Internet Explorer	World wide web browser
Mulberry	E-mail
Netscape Communicator	World wide web browser

Multimedia	
BBEdit Light	Text document editing with HTML editing tools
Adobe GoLive	Web site development
Adobe Illustrator	Object based image creation and editing
iMovie	Non-linear video editing
Adobe Photoshop	Pixel-based image editing

V. Basic Use Information

The following sections explain some of the basic functionality of the computer, and describe how to care for the computer and the data on it.

a. Backing up Data

The data on the computer should be backed up on a regular basis. If the computer is used daily, backup should be performed daily. The external hard disk and a piece of software called *FoldersSynchronizer* have been provided to make the process simple and quick so that daily backups will not be a chore. We have pre-configured the software to backup both partitions of the internal hard disk to specific folders on the external hard disk. To perform a backup, just follow these steps.

Step 1: Connect the SmartDisk VST FireWire Hard Drive to the PowerBook G4 using the provided FireWire cable.

Step 2: Launch the *FoldersSynchronizer* software. It can be found in the Launcher under the Disk Utilities category.

Step 3: Click on the **Backup** button. A warning message will be displayed. Click on the **Continue** button. The backup will begin and should take just a few minutes.

Step 4: From time to time a warning may be displayed stating that both the source and destination file has been modified. If you have not been editing documents on the external hard drive directly, it is safe to click the **Replace** button.

The external SmartDisk VST FireWire Hard Drive has been provided solely for the purpose of backing up valuable data from the computer, not for additional storage space. If it is used for additional storage space, the backup process could be corrupted and data lost.

b. Using Location Manager

The Location Manager lets a person create different groups of system software settings for a computer. Each group is called a "location", and allows for easy switching from one group of settings to another. This computer has been setup with three locations defined to handle the three kinds of networks it may be connected to. They are:

Ethernet: This is the location to use when the computer is connected to an Ethernet cable such as those found in the Art & Architecture building.

Modem: This is the location to use when the computer is connected to the phone line at home.

AirPort (wireless): This is the location to use when there is no network cable connected to the computer, but it is within range of one of the wireless network base stations in the school. (The wireless network is currently under construction.)

For other networking needs (cable modem, DSL, etc.) the IT staff can create additional locations.

The computer is set to ask which location to use when it starts up. Simply respond by selecting the appropriate location from the pop-up menu provided. To change locations after the computer has started up, use either of these methods:

Control Panel: Select **Location Manager** from the **Control Panels** sub-menu under the  menu. Then select the appropriate location from the pop-up menu where it says **Current Location**.

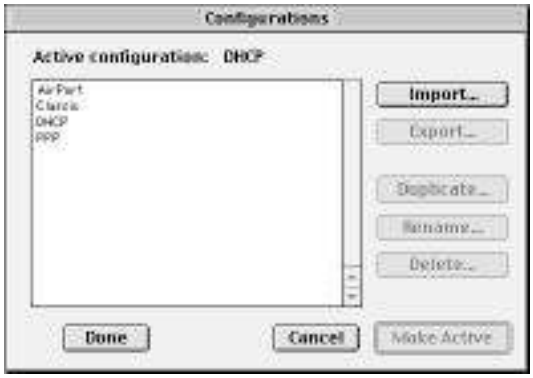
Control Strip: Select the appropriate location from the Location Manager portion of the Control Strip. It looks like this 

The Location Manager has been set up to change settings in two control panels. Those two control panels are **TCP/IP** and **AppleTalk**. If the settings in one or the other of these control panels are reconfigured, it could interfere with the correct operation of the Location Manager. If this happens, the following steps will set things back to the way they should be.

Step 1: Select the location that is causing problems using either the control panel or control strip (as explained above). For testing purposes, it is best to do this at the location where the problem exists.

Step 2: Select **TCP/IP** from the **Control Panels** sub-menu under the menu.

Step 3: Select **Configurations...** from the **File** menu. The following window appears.



Step 4: Consult the configurations table (below) and select the indicated configuration from the list.

Location	TCP/IP	AppleTalk
AirPort (wireless)	AirPort	AirPort
Ethernet	DHCP	Ethernet
Modem	PPP	Ethernet

Step 5: Click on the **Make Active** button.

Step 6: Close the **TCP/IP** control panel. If warned that the active configuration has been changed, click the **OK** button.

Step 7: Select **AppleTalk** from the **Control Panels** sub-menu under the menu and repeat steps 3 through 5.

Step 8: Close the **AppleTalk** control panel.

Step 9: Restart the computer by selecting **Restart** from the **Special** menu. If prompted to update the location, click on the **Update** button.

c. Connecting to the Network

There are three kinds of networks you may want to connect to: Ethernet (in the office), modem (at home), or wireless (near an AirPort base station). The steps to take are described for each case below.

Ethernet

Step 1: Connect the Ethernet cable in your office to the Ethernet jack on the back of the computer. 

Step 2: Select the **Ethernet** location in the Location Manager (details for using location manager are in section V.b.).

Modem

Step 1: Connect the phone cable to an active wall jack in your home.

Step 2: Connect the other end of phone cable to the modem port on the back of the computer. 

Step 3: Select the M**odem** location in the Location Manager (details for using location manager are in section V.b.).

Step 4: Open the **Remote Access** control panel (select Remote Access from the **Control Panels** sub-menu under the  menu or look in the Launcher under the Internet category).

Step 5: Type your password into the **Password** field. The **Name** and **Number** fields should already be filled in for you. If not, use <uniqname>@umich.edu for the **Name** field (substituting your uniqname for <uniqname>), and 489-2222 for the **Number**, if you are in Ann Arbor. Michigan numbers outside of Ann Arbor can be found on the web at http://www.net.itd.umich.edu/dialin/michdial.html.

Step 6: Click on the **Connect** button. The connection has been established when the **Connect** button changes to a **Disconnect** button.



You can now close the Remote Access control panel and use internet software normally. Note that a modem connection will provide access to internet resources such as the web and e-mail, but will not provide access to AppleTalk resources such as printers and file servers. To disconnect from the network, open the **Remote Access** control panel again and click on the **Disconnect** button.

Wireless

Step 1: Select the **AirPort (wireless)** location in the Location Manager (details for using Location Manager are in section V.b.). There is no step 2.

d. Using the Zip Drive

The accompanying Zip drive is a USB (Universal Serial Bus) device, which means that it must be connected to the computer via a USB cable. The USB cable used by the Zip Drive has a flat connector at one end, and a square connector at the other end. Connect the flat end of the cable to the computer and the square end to the Zip drive. The USB port on the computer is marked with a . The port on the Zip drive is not labeled, but there is only one port. Power is supplied to the Zip drive by the computer through the USB cable, so no separate power cable is needed.

The Zip drive can read both 250 MB disks and 100 MB disks. It should be noted that while using 100 MB disks provides the greatest level of compatibility with other Zip drive models, this Zip drive reads and writes to 250 MB disks faster than it does with 100 MB disks.

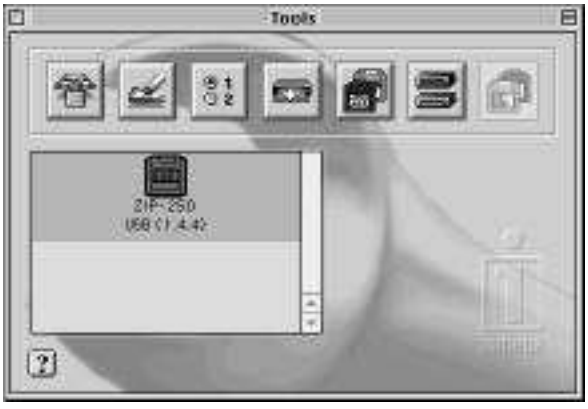
If a Zip disk inserted into the Zip drive does not show up as an icon on the desktop, run the **Iomega Guest** software located in **Applications (Mac OS 9):Utilities:IomegaWare:Tools:** and in the Launcher under **Disk Utilities**.

To reformat (erase) a Zip 250 MB disk, follow these steps:

Step 1: Insert the Zip disk into the Zip drive.

Step 2: Run the **Tools** software located in **Applications (Mac OS 9):Utilities:IomegaWare:Tools:** and in the Launcher under **Disk Utilities**.

Step 3: Select the icon for the Zip disk by clicking on it.



Step 4: Click on the Erase Disk button. 

Step 5: Type a name for the disk.



Step 6: Select a format. **Mac OS Standard** is more compatible with older systems while **Mac OS Extended** can store a greater number of small files.

Step 7: Click on either the **Short Erase** button or the **Long Erase** button. Short erase is faster, but long erase verifies the surface of the disk and is good for disks with suspected damage.

Step 8: When the warning appears, click the **Erase** button.

Step 9: When it is finished, click the **OK** button and select **Quit** from the **File** menu.

Zip disks are somewhat prone to failure, which means it is important that you have backups of all files on Zip disks. Backup copies can exist on the hard disk of the PowerBook (which is, in turn, backed up to the external hard disk) or on another Zip disk. An exact duplicate can be made of an entire Zip disk using Iomega's **Copy Machine** by following these steps:

Step 1: Connect the Zip drive to the computer.

Step 2: Run the **Copy Machine** software located in **Applications (Mac OS 9):Utilities:IomegaWare:Copy Machine:** and in the Launcher under **Disk Utilities**.

Step 3: Insert a source disk into the Zip drive. A source disk is a Zip disk that you want to copy.

Step 4: Click on the **Start** button.

Step 5: When the drive ejects the source disk and prompts you, insert a destination disk. The destination disk should be blank or OK to erase. All data currently on the destination disk will be lost.

Step 6: When the warning message appears, click on the **OK** button.

Step 7: If the software asks you to switch between source and destination disks, do so. Do this as many times as requested.

Step 8: When the message "Your disk is safely copied" appears, click on the **Quit** button.

e. Using the Printer

The accompanying printer is a USB (Universal Serial Bus) device, which means that it must be connected to the computer via a USB cable. It must also be plugged into a power source. The USB cable used by the printer has a flat connector at one end, and a square connector at the other end. Connect the flat end of the cable to the computer and the square end to the printer. On both the computer and the printer, the symbol that marks the USB port is

Once the printer is connected to the computer, it can be selected for printing. To select it, follow these steps:

Step 1: Select **Chooser** from the  menu.

Step 2: Select the **C60 Series** icon from the box on the left.

Step 3: Select the USB port from the box on the right.

Step 4: Close the **Chooser**.

The printer documentation (located in the box with the printer) describes how to change ink cartridges and load paper. Conserve ink by following some basic tips:

- Preview documents on screen before printing them.
- Print in "draft" or low quality mode for all except the final version of a document.

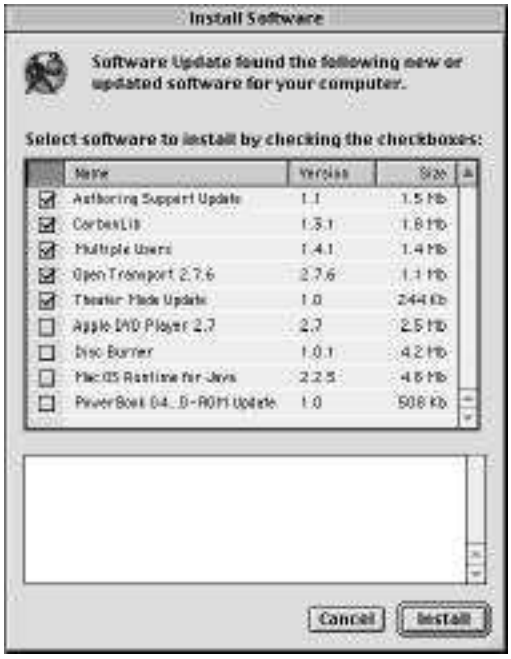
f. Updating Software

The operating system on the computer (Mac OS 9.2.2) has a utility for updating itself automatically anytime the computer is connected to the internet. The computer has been configured to perform these updates only when you authorize them. The IT staff would like to review these updates before having them applied to the computer, so from time to time they will notify you that one or more useful updates are available and instruct you to apply them. When you receive one of these messages, these are the steps you should take. This may take some time, but will work much faster from an ethernet or wireless connection.

Step 1: Open the **Software Update** control panel (select Software Update from the **Control Panels** sub-menu under the menu).



Step 2: Click on the **Update Now** button. The computer will search Apple's servers for available updates and display a list of them.



Step 3: Select the updates which the IT staff have instructed you to apply by putting a checkmark in the box next to them. Remove checkmarks from the boxes next to all other updates.

Step 4: Click on the **Install** button. The computer will begin downloading and running the installers.

g. Maintaining and Protecting the Computer

The PowerBook G4 has a titanium case. Note that this does not mean it's indestructible. It must still be handled carefully to avoid damage. The accompanying carrying case provides padding to help protect the computer. Make sure there are no loose items (such as paperclips or coins) in the same compartment as the computer that could scratch or penetrate the computer through the slot for the CD/DVD drive.

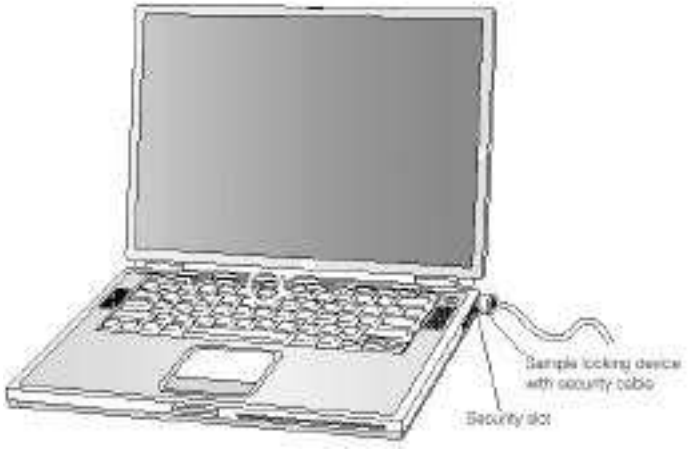
Use a damp, soft lint-free cloth to clean the computer's exterior. Avoid getting moisture in any openings. Don't use aerosol sprays, solvents, or abrasives.

To clean the PowerBook screen, with the PowerBook shut down, dampen a clean, soft, lint-free cloth or paper with water only and wipe the screen. Do not spray liquid directly on the screen.

Always leave space around the power adapter. Do not use it in a location where airflow around the power adapter is confined.

When using the PowerBook or when charging the battery, it is normal for the bottom of the case to get warm. The bottom of the PowerBook case functions as a cooling surface that transfers heat from inside the computer to the cooler air outside. The bottom of the case has small rubber feet that raise it slightly to allow airflow that keeps the unit within normal operating temperatures when used on a hard, smooth surface.

Please use the accompanying security cable, lock and key to secure the computer to some stationary object when using it in a public location.



h. Preventing Data Loss

Several pieces of software have been installed on the laptop to help prevent data loss. They are **Disk First Aid**, **Norton File Saver**, and **Virex**. Together with regular backups, this software goes a long way toward protecting data. There are a few things you should know about these programs to use them effectively.

Disk First Aid

Disk First Aid is provided by Apple on every computer they ship. It is used to repair corrupted data on the hard drive. If the computer is shut down improperly, such as when the system crashes, Disk First Aid will run automatically the next time the computer starts up. It is important to let it complete the scan and repair; do not click on the **Stop** button. When it finishes, click on the **Done** button.

Norton File Saver

Norton File Saver is a piece of software included in Norton Utilities. It is configured to automatically save certain disk information periodically, such as at system shutdown and during periods of inactivity. This information is useful for recovering data later if something goes wrong, so it is best not to click on the **Stop** button when it runs at system shutdown.

Virex

Virex protects the system and files from known viruses. In order for it to be effective, it needs to have a current set of virus definitions. Virex is configured to look for these new definitions automatically once every month. The Virex software will automatically start up, download the new definitions if it is on a network, apply the update, and then quit, all without any interaction from the user.

i. Bookmarks for Web Browsers

A collection of bookmarks has been added to both the Netscape and Internet Explorer web browsers. They are listed below.

School of Art & Design
http://www.art-design.umich.edu/

Taubman College of Arch. & Urban Planning
http://www.caup.umich.edu/

College of Engineering
http://www.engin.umich.edu/

Media Union
http://www.ummu.umich.edu/

School of Music
http://www.music.umich.edu/

U-M Home Page
http://www.umich.edu/

U-M Online Directory
http://www.directory.umich.edu/
Online faculty/staff/student & organization directory page

Wolverine Access
http://wolverineaccess.umich.edu/
Web page providing access to the U-M course catalog and student business.

U-M Computing Help
Web pages of information and help for using the U-M technology systems.

Getting Started on the Web
Collection of web resources for learning to create web pages.

World-Wide Web Search Engines
Collection of some of the most popular sites for searching the web.

Interesting Links
Collection of web pages covering a wide range of interesting and useful information including libraries, museums, politics and health issues

VI. Technical Support

Several procedures exist for receiving technical assistance for your computer and software.

a. 4-HELP Connectivity Assistance: For most needs concerning internet connectivity, telephone support is available from ITCS by calling 764-HELP (764-4357). They support the internet connectivity software distributed on the University Blue Disk, which includes dial-in access, Netscape, Internet Explorer, Mulberry, Pine and other internet tools.

b. E-Mail Assistance: For issues not needing immediate attention, or any issue not resolved by other methods, you can get assistance by sending questions and requests to a&d.help.desk@umich.edu.

c. Direct Assistance: For issues that require the technical support staff to work directly with you and/or the computer, you can schedule a time to bring the computer in to the Help Desk. Appointments can be scheduled by e-mail (preferred) or in person. Please understand that fixing problems with the computer will most often involve erasing the internal hard drive and reinstalling the software, making regular backups of your data even more important.

d. House Calls: Not possible.