



Battle of the Operating Systems

Introduction

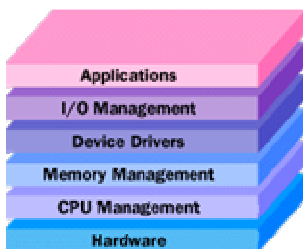
This report will look at the contrast and differing functionality between the two operating systems, Mac OS X and Microsoft Windows 2000. It will give details of arguments for both systems and look at areas such as Installation, Interface, Hardware compatibility and Internet support incorporating networking, multitasking, file management and utilities. The report will also include feedback on the comparisons between the systems from CNET.com.

It is important to understand that the Mac OS X system is produced by and will work only with Apple Mackintosh machines, whereas Microsoft have developed their operating system to work with most independent made computers and do not produce their own hardware in order to run the operating systems and software that they develop.

First of all though we need to understand what is an Operating System (OS) and Network Operating System (NOS) so that within the report we can look at the different functionalities of the two OS systems in question.

OS and NOS

What is OS? – OS is the Operating System that all computers have nowadays and it enables the PC to function by doing two main things which are listed below:



- It manages the hardware and software resources of the computer system. These resources include such things as the processor, memory, disk space, etc.
- It provides a stable, consistent way for applications to deal with the hardware without having to know all the details of the hardware

What is NOS? – NOS stands for *Network Operating System* and is piece of software that is installed onto each PC that requires network access. It monitors the exchange and flow of files, electronic mail and other network information.

NOS are classified according to whether they are peer-to-peer or client-server NOSs. Peer-to-peer NOSs like Windows XP, 2000 are best for small office use as they work well with sharing applications, data, printers and other localised resources across a few PC's. Client-server NOSs like Windows NT, Linux and NetWare are ideal for large-scale organisations that require fast network access.

Section One – **INSTALLATION**

Mac OS X	Windows 2000
First Unix-based operating system and is easier to install. Will automatically install from CD and does not need activating code.	Windows normally pre installed with systems, If installing need to set the PC to boot from CD ROM also product code is needed.
The installer automatically creates a dual-boot system so that it can run from either OS X or OS 9.1.	A dual boot system can be created in windows but is extremely technical and time consuming to do so
With OS X two operating systems for the price of one and in the upgrade installer keeps original setting to running classic applications.	Only given one operating system
The installer will automatically find and recognise hardware thus no driver problems.	Plug and Play facility will detect new hardware but drivers need to be installed on to the PC.
Configures and installs automatically USB printers and networks and their printers.	Not installed automatically would need setting up.
Automatic search and download from the internet update	Automatic web search for updated and patches and easily installed.
System requirements Mac with built-in G3 or G4 processor, 128MB RAM	Pentium class processor or equivalent, 1GB of disk space and 64MB RAM or more.

Overview – From the information obtained above and the comparisons made it seems like the installation side of the OS X system is much easier than that of the Windows environment. Through its automatic restarts from CD and the methodical way it walks you through the entire process demonstrates it's advancement on Windows 2000.

Section Two – **INTERFACE**

Mac OS X	Windows 2000
Contains a few converted windows features such as menu windows that stay open	Contains menu features but do not stay open, this has not changed much from earlier version
Use of Quartz graphics via the "Dock" thumbnails, which allows dragging and dropping of icons to open thus Few step to accomplish opening software by the use of few clicks	Uses GUI in the same way but not as impressive as the features of the "Dock". Need to double click to open application thus taking longer.

Customisable toolbar where single click take you to any location. Ability to add controls to a toolbar by dragging and change location, move folders or files	To customise toolbars would have to go into option, customise and select the required function, even changing properties taking longer to complete takes and more understanding and knowledge of the system needed
Command line interface which accepts standard Unix commands, protection from doing damage unless logged in as root user which in impossible to do by accident.	No protection from doing damage and system files, driver and exe files can be deleted easily. Thus causing the system or hardware not to work

Overview – The OS X system has developed with leaps and bounds and has produced an excellent user interface enabling multitasking capabilities, File management facilities and is easily compatible to setup and use via a network. This version show flexibility like no other of the Mac’s operating system but Windows 2000 still offers the familiar menus, facilities and hierarchical folder structure that most of us have grow to know and love. Overall it is felt that the OS X system is still too confusing and has a steep learning curve, but this could change through if it manages to get a better hold on the market.

Section Three – **SOFTWARE COMPATIBILITY**

Mac OS X	Windows 2000
Behind Windows in this area and still is. Microsoft have adapted Office to run on the operating system and is developing versions of their software to be compatible	Used on more PC’s than Mac and have developed their programs to run along side the operating system. Able to run older version as well as newer ones of software programs.
Easier to create software for this system as uses standard XML and Java and graphic based on PDF, OpenGL and Unix, but lack of products at present.	
Developing the use of using Windows operating system and available possible later on in the year, making it more compatible.	Unable to run Mac operating system

Overview – The biggest weakness for the OS X system at present lies in the lack of software and compatibility of the well know makes. Although this is being corrected by Microsoft stating to make it’s well know brands available for the system. The older applications run

slowly and not as stable. Meanwhile Window 2000 is compatible to most software programs and new software is written to run along side it.

Section Four – **HARDWARE COMPATIBILITY**

Mac OS X	Windows 2000
Incorporates fundamentally with its own hardware and therefore does not need to support different types and makes of components.	Microsoft does not build computers thus the system has to be compatible with a vast amount of hardware. However 2000 does not support as much hardware as previous versions.
Integration of FireWire means total support for the future multimedia packages	When first out it failed to recognise a lot of newer-wave hardware, some types of USB printers, scanners and DVD all had problems
Supports fully wireless networking through its own AirPort. PCI, AGB, USB, IDE, SCSI and BSD Unix are all supported	
Capable of multi tasking thus the need for a G3 processor.	

Overview – The problem lies here for Windows 2000 through the variety, availability and sheer volume of cheap hardware for PC’s and the support for new peripherals arriving on the market each day. OS X on the other hand fits with the computers that run it as it and all the hardware of the Mac are created by Mac and for Macs. It also supports FireWire and an ever-growing base of peripherals created for its use, unfortunately Windows 2000 can not make the same promise or commitment.

Section Five – **INTERNET**

Mac OS X	Windows 2000
Very internet friendly in regards to an FTP server being build into the system and quick	.Take two to four times longer to get on line
Integrated application makes it possible to search lots of search engines at once without the use of a browser	On line software with the facility of Internet explorer
Flawless wireless Internet connections with very little setup and supports DSL, cable modem or modem links	Will support the same Internet connections but takes longer to set up

Overview – From the information above and research it is apparent that Windows 2000 is out done by Apple Mac's as the OS 9 and OS X demonstrates its convenience of connecting to the net by wizards making it so easy and with the integration of Apache and Unix stability is maintained making this a winning combination.

Conclusion

Lot of major changes have taken place from the Mac OS 9 operating system making the new OS X a much more innovated with revolutionary changes. This has made the system easy to install, smooth integration of hardware due to being made by themselves and the integration of FireWire making it notably enhanced for media use in digital video creation and editing etc.

Although the system has problems relating to shortcomings within the application software, this is about to be addressed, but may still fall behind in the Microsoft Windows domination.

Within the Internet provision OS X is already in the fore running for becoming the best system this has been helped by its Unix development in the terms of performance and stability.

Not many major changes or improvements are over apparent within Windows 2000 operating system but what must be remembered is that Microsoft dominate the majority of PC users today and until the Apple Mac's can increase its share of the market the vast amount of user's will stay with Microsoft and probable not even use or see the OS X system to its full potential. What we must also remember it that Microsoft has now developed another more innovating operating system more dynamic and user friendly that will give the OS X system a run for its money with "The all new, All singing Windows XP" it will be interesting to see how and what effect this will have on the ever developing and increasing market of computer technology.