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A Brief Overview of Operating Systems:

Linux, Windows, and MacOS

The computer operating system world is massive with hundreds of *flavors*, yet small at the same time with only three popular – or at least recognizable – systems: Linux, Windows, and Mac OS (mainly X today). While there are many different types of operating systems, they are all used – often times *at least* two operating systems are interacting with users each day, much of the time behind the scene. There are two major client-focused operating systems: Windows and MacOS. Each different operating system has some sort of focus towards the server side; however, the vast majority of servers use some form of the Linux kernel, with the least popular being Mac OS.

Linus Torvalds started the Linux Operating System in 1991. The operating system is a “Unix-like operating system” (“Linux kernel”), UNIX being the operating system used by the telecom industry. Perhaps what made Linux so popular is the license that it uses (the GPL – GNU **G**eneral **P**ublic **L**icense), which has made the system free to use, modify, and distribute. Linus Torvalds never, by all indications, thought the Linux Kernel would be as complex as it is today. He wrote in August 1991 that he was “doing a (free) operating system (just a hobby, won’t be big and professional like gnu) for 386(486) AT clones”

(Torvalds 1). The Linux mascot is a Penguin (named “Tux”) created in May 1996 by Larry Ewing. The first version of Linux, released in September 1991, was version 0.01. The latest version, as of 17 April 2006, was released 20 March 2006 and is 2.6.16. A few of the most popular Linux distribution (or “flavors”) are Fedora Core (to an extent this is the successor to the Red Hat 9), Mandriva (name changed from Mandrake), Xandros, and SuSE. Some, not all, are free to use. Some form of Linux or Unix-like server powers the majority of websites on the internet – thus many users interact with such operating systems, although indirectly, daily.

The most popular operating system is Microsoft Windows. The first version of Windows debuted in 1985 as an MS-DOS add-on. The first popular semi-popular release of Windows was version 3. However, the version that *really* put Windows on the map was Windows 95. The 9x family, as it is commonly called, consists of Windows 95, 98, and ME (Millennium Edition). The Windows 9x family – 16/32-bit hybrid operating systems – will no longer be supported by Microsoft by the end of this summer. Microsoft also maintained an NT family of their Windows Operating Systems. These NT systems ran Windows without MS-DOS and were 32-bit (not hybrids). The NT family is currently what Microsoft maintains. The most recent version of Windows, that is available to consumers, is XP (NT 5.1) and was released in the latter part of 2001. The most current versions of Windows now support both Intel and AMD 64-bit processing architecture (older versions supported other, less common, 64-bit processors such as MIPS) (“Microsoft Windows”). The most recent version of Windows,

Windows Vista (as of 24 March 2006: NT 6.0.5342), is currently still in its early beta testing stages. Windows Vista (code named "Longhorn"), whose schedule has been moved back several times, is slated to be released in January 2007 (RTM in late 4th quarter 2006). It is believed that around 90% of all personal computers use the Windows operating system ("Microsoft Windows"). Microsoft Windows comes preinstalled on almost all consumer personal computers purchased. Microsoft also maintains a server version of Windows based on NT. The current version is Windows Server 2003 R2 (NT 5.2.3790).

The final major operating system is Mac OS. Mac OS, or **Macintosh Operating System**, dates back to 1984. Apple is credited with creating the first fully graphical user interface for a computer system ("Mac OS"). The last release for the "Classic Mac OS" system occurred in the last part of 2001. The newer versions of Mac OS, Mac OS X, contain a CLI (Command Line Interface), and have commands similar to those found in UNIX. Mac OS X is widely different in its code base from that of the "Classic" Mac OS systems ("Mac OS X"). One of the common uses for the Mac OS is that of photo and video editing. Currently, the operating system only support Apple computers, so installing on a non-Apple computer is impossible (without an emulator for a host operating system). As of early 2006, Apple has started using Intel processors for their systems. This has caused debate whether Apple should allow non-Macintosh hardware to be allowed to use the operating system. With a recent patch, Apple has also opened the possibility of installing Windows on its hardware. The next version of

Mac OS is 10.5 (Leopard) and is scheduled to be released in last 2006/early 2007.

The operating systems currently available offer a wide range of choices for users and system developers. The actual usage of each operating system is based, highly, on the task needed to accomplish. Some users prefer a certain system to the other. Some enjoy security debates – debates about which system is more secure. Some have legitimate claims while others do not. The debate over which system is better than the other or who will use what system for what task may also be debated – but for a large part, it comes down to what's needed for the job and what software is written for each system.

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