**MacOS X 10.4**

**History**

Mac OS X 10.4 Tiger is the fifth major release of Mac OS X (now named MacOS), Apple's desktop and server operating system for Mac computers. Tiger was released to the public on April 29, 2005. Some of the new features included a fast searching system called Spotlight, a new version of the Safari web browser, Dashboard, a new ‘Unified’ theme, and improved support for 64-bit addressing on Power Mac G5s. Mac OS X 10.4 Tiger shocked executives at Microsoft by offering a number of features, such as fast file searching and improved graphics processing, that Microsoft had spent several years struggling to add to Windows with acceptable performance.

Mac OS X 10.4 Tiger was included with all new Macs, and was also available as an upgrade for existing Mac OS X users, or users of supported pre-Mac OS X systems.

Apple announced a transition to Intel x86 processors during Mac OS X 10.4 Tiger's lifetime, making it the first Apple operating system to work on Apple–Intel architecture machines.

**Function and features**

Apple advertises that Mac OS X 10.4 Tiger has over 150 new and improved features, including:

* Spotlight — Spotlight is a full-text and metadata search engine, which can search everything on one's Mac including Microsoft Word documents, iCal calendars and Address Book contact cards. The feature is also used to build the concept of ‘smart folders’ into the Finder. Spotlight will index files as they are saved, so they can be quickly and easily found through a search-as-you-type box in the menu bar. iChat AV — The new iChat AV 3.0 in Mac OS X 10.4 Tiger supports up to four participants in a video conference and ten participants in an audio conference. It also now supports communication using the XMPP protocol. A XMPP server called iChat Server is included on Mac OS X 10.4 Tiger Server.
* Safari RSS — The new Safari 2.0 web browser in Mac OS X 10.4 Tiger features a built-in reader for RSS and Atom web syndication that can be accessed easily from an RSS button in the address bar of the web browser window.
* Mail 2 — The new version of Mail.app email client included in TMac OS X 10.4 Tiger featured an updated interface, "Smart Mailboxes" which utilize the Spotlight search system, parental controls, as well as several other features.
* Automator — A scripting tool to link applications together to form complex automated workflows (written in AppleScript, Cocoa, or both). Automator comes with a complete library of actions for several applications that can be used together to make a Workflow.
* VoiceOver — screen reader interface similar to Jaws for Windows and other Windows screen readers that offers the blind and visually impaired user keyboard control and spoken English descriptions of what is happening on screen. VoiceOver enables users with visual impairment to use applications via keyboard commands. VoiceOver is capable of reading aloud the contents of files including web pages, mail messages and word processing files.
* Mac syncing — Though this is not a new feature, Mac syncing in Tiger is much improved over Panther. Syncing tasks in Tiger are now accomplished through the Mac system preferences pane rather than the iSync application.
* QuickTime 7 — A new version of Apple's multimedia software has support for the new H.264/AVC codec which offers better quality and scalability than other video codecs. This new codec is used by iChat AV for clearer video conferencing. New classes within Cocoa provide full access to QuickTime for Cocoa application developers. The new QuickTime 7 player application bundled with Tiger now includes more advanced audio and video controls as well as a more detailed Information dialog, and the new player has been rebuilt using Apple's Cocoa API to take advantage of the new technologies more easily.
* New Unix features — New versions of cp, mv, and rsync which support files with resource forks. Command-line support for features like the above-mentioned Spotlight are also included.
* Xcode 2.0 — Xcode 2.0, Apple's Cocoa development tool now includes visual modelling, an integrated Apple Reference Library and graphical remote debugging.
* New applications in Tiger
* Automator — Automator uses workflows to process repetitive tasks automatically
* Grapher — Grapher is a new application capable of creating 2D and 3D graphs similar to that of Graphing Calculator.
* Dictionary — A dictionary and thesaurus program which uses the New Oxford American Dictionary. It has a fast GUI for displaying the Dictionary, and allows the user to search the dictionary with Spotlight, to print definitions, and to copy and paste text into documents. Dictionary also provides a Dictionary service in the Application menu, and Cocoa and WebKit provides a global keyboard shortcut (ctrl-?-D by default) for all applications that display text with them. Its use was furthered in the next version of OS X by providing definitions from Wikipedia.
* AU Lab — AU Lab is a developer application for testing and mixing Audio Units.
* Dashboard — Dashboard is a widget application. Tiger widgets include: a calculator, dictionary, a world clock, a calendar, and more (full list). Users can also download and install more widgets.

**System requirements**

* A PowerPC G3, G4, or G5 processor running at 300 MHz or faster
* Built-in FireWire
* At least 256 megabytes (MB) of RAM, 128 MB can run it unofficially though (512 MB or 1 GB recommended)
* At least 3 GB of available hard disk space; 4 GB of disk space including the Xcode 2 Tools, 2 GB for the minimal install
* DVD-ROM drive (CD-ROM exchange was available; offer ended on March 20, 2007)

**Advantages**

1. Simple but powerful user interface: Both macOS and Windows have easy-to-use graphical user interface or GUI. But OS X offers a more straightforward approach to computing. Those who are accustomed with the GUI of iOS found in iPhone and iPad will find macOS somewhat familiar.

2. Fewer viruses and other security issues: One of the advantages of macOS is that it is considerably safer than Windows. Of course, some Apple loyalists would argue that Macs are completely invincible from viruses or malware. This is no longer true.

3. Seamless integration between OS and hardware: Apple is both a software developer and a device manufacturer. This means that they have optimised the macOS to work seamlessly with all of the hardware components of a Mac device. It also ensures that all hardware components work hand-in-hand.

4. Comes preloaded with productivity apps: Standard Windows OS usually does not come with Microsoft Office Suite. Both are sold separately most of the time. In addition, new Windows-based laptop and desktop computers come with random software or apps that merely bloat the entire system and external storage.

5. Effective and unparalleled multitasking feature: Multitasking is another notable advantage of macOS. Mac computers have hardware specifications designed for multitasking. And because macOS integrates seamlessly with Mac hardware components, the overall operation is smooth and responsive.

6. Integration with other Apple products: One of the strengths of Apple is that most of the products under the brand are completely integrated. The iPhone or iPad works best with a Mac computer. This advantage of macOS is exclusive for Apple users—or those individuals with several Apple devices.

**Disadvantages**

1. Mac computers are considerably expensive: The fact remains that Apple sells expensive computers whether it is the new MacBook Pro with Retina or a Mac Mini. This is more noticeable when comparing the price point of Mac computers with their Windows counterpart.

2. Inflexible when it comes to hardware upgrades: A standard Mac computer cannot be upgraded easily because most of its hardware components are integrated both at a design and engineering levels. This is a macOS disadvantage that is unacceptable for hobbyists.

3. Lack of game titles and advanced gaming experience: There are more game titles available for Windows than in macOS. This is another noteworthy disadvantage of macOS. Some titles from independent producers that have gained large following are unavailable for Mac computers.