

A photograph of a white apple and a pair of wooden chopsticks on a light-colored surface. The apple is positioned in the center-left, and the chopsticks are arranged in a 'V' shape around it. The background is a plain, light-colored surface.

A M I T I A E

**Graham K. Rogers -
eXtensions**

**OS X 10.7 Lion,
System Preferences**

Graham K. Rogers



Introduction

I first started writing about System Preferences in OS X, 10.5, Leopard, at the suggestion of a Bangkok Post reader, I expected that it would take a few weeks to complete. In the end, with interruptions, it took several months.

System Preferences saw several changes with the update to OS X 10.7, Lion. While certain of the panels had additions and some had major changes, some kept the same interface. There were one or two losses, such as QuickTime. Some of the preferences have been renamed, such as Accounts which is now Users & Groups. It is a bit thin to call this an A - Z as really we only have B - U.

There are a number of technologies installed which will only become active when specific devices are attached. For example the handwriting recognition software called Ink, is designed to work with attached graphics tablets; and FibreChannel (for which a preference pane is included with OS X installations) is an OS X server utility that will only work if a Fiber Card is attached. I have omitted these. I have also excluded the third party technologies that install preference panes, such as Flash or Growl. There are a fair number and these may be unique to a user's setup.

This guide is certainly not definitive. What I have written is a brief overview of the preferences as a way to help new users (particularly) overcome any problems they might have and to understand what is available in OS X. This is also aimed at those moving (or trying to move) from Windows where things are somewhat different and at those new to Leopard who may want to have a quick view of what is now available.

I have gone through each part again and rewritten the information totally. The original 10.5 System Preferences texts are [available online](#) in PDF format (and ebook).

Before trying anything new, such as changing settings or turning features on or off, users are urged to back up all data — you should be doing this anyway — and I take no responsibility for any havoc you might wreak on your own computer.

Preferences Panels

For most ordinary users, System Preferences is the core of the system: where much fine-tuning takes place. With OS X, Lion, there have been several changes to certain of the panels as well as software changes (under the hood).

When a user opens the panel icons are organized in five categories: Personal, Hardware, Internet & Wireless, System and Other. The last showing preferences installed for third-party system tools (see above).

Using the View menu, however, I organize my preferences alphabetically. The access to the articles I have produced on System Preferences are organised both ways. First is a list of the groups, while further below is an alphabetical list and a useful comment from John Martellaro on The MacObserver concerning organization.

Organized by Categories

- **Personal**
- General
- Desktop & Screensaver
- Dock
- Mission Control
- Language & Text
- Security & Privacy
- Spotlight
- Universal Access

- **Hardware**
- CDs & DVDs
- Displays
- Energy Saver
- Keyboard
- Mouse
- Trackpad
- Print & Scan
- Sound

- **Internet & Wireless**
- Mail, Contacts & Calendars
- MobileMe

- Network
- Bluetooth
- Sharing



- System
- Users & Groups
- Parental Controls
- Date & Time
- Software Update
- Speech
- Time Machine
- Startup Disk

Organized Alphabetically

- Bluetooth
- CDs & DVDs
- Date & Time
- Desktop & Screensaver
- Displays
- Dock
- Energy Saver
- General
- Keyboard
- Language & Text
- Mail, Contacts & Calendars

- [Mission Control](#)
- [MobileMe](#)
- [Mouse](#)
- [Network](#)



- [Parental Controls](#)
- [Print & Scan](#)
- [Security & Privacy](#)
- [Sharing](#)
- [Software Update](#)
- [Sound](#)
- [Speech](#)
- [Spotlight](#)
- [Startup Disk](#)
- [Time Machine](#)
- [Trackpad](#)
- [Universal Access](#)
- [Users & Groups](#)

Updated Information

In a useful article on the MacObserver [John Martellaro](#) reported on a way to tune which preferences are displayed in the main System Preferences panel.

Usually, I click on the Show All button just to take me from a panel to the main screen, but if you click and hold that button a menu appears with all the items and right at the bottom is "Configure". Click on that and the main panel changes

with checkboxes next to each icon: we can deselect what we want and then click Done (that button changes).

We can still get to any panel using that menu list: the panel is hidden, not deleted. We may also use the Configure option to make any icon we hide visible again.



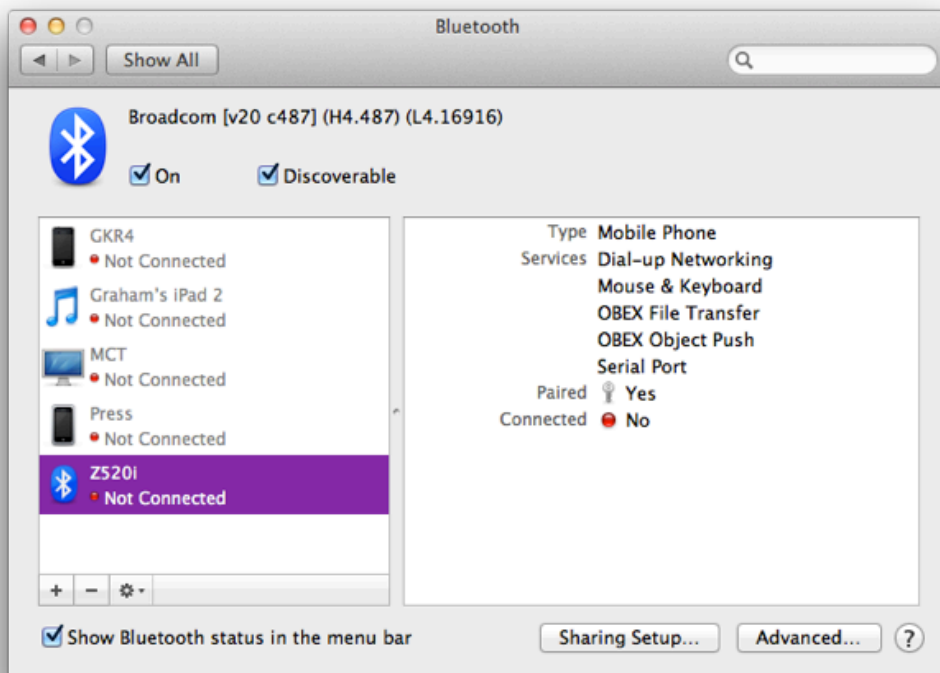
The information below is displayed in alphabetical order, but using the above indexes will bring up the page(s) as a user requires. Despite the use of screenshots in the sections, it is suggested that each part is examined with the relevant panel of System Preferences opened.

Bluetooth



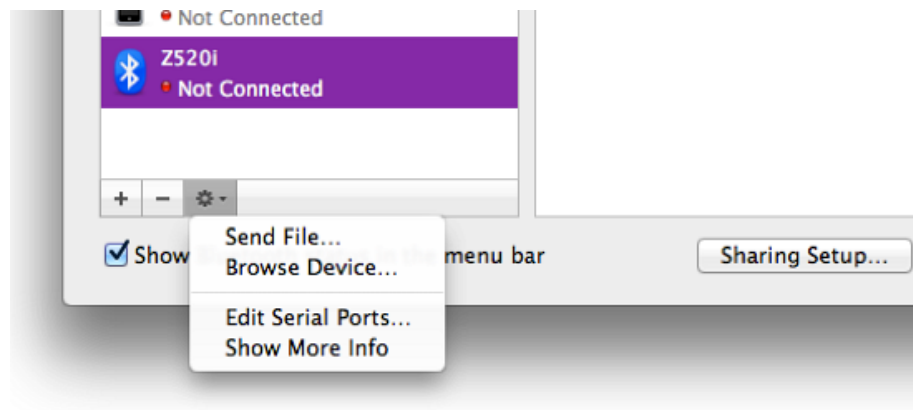
The **Bluetooth panel** has been cleaned up somewhat compared with earlier versions of OS X (pre-Tiger). The Bluetooth icon is displayed at the top left. Alongside this is information relating to the computer. The panel may open with information here about the name that other devices will see when making connections. We may click on (or near these words) and the information will change to show MAC number, manufacturer of the chip and other details.

Below this information and above the main panel are two checkboxes: On; and Discoverable. At the bottom of the panel (to the left) is a checkbox that allows the Bluetooth icon to appear in the menubar. When the top checkbox “On” is deselected, the icon is greyed out.



The main panel is in two parts. Paired devices are shown in the left section. The second part displays basic information about any highlighted device. This

information may be expanded by use of the “Show more info” item in the gearwheel menu (below). The gearwheel is one of three controls at the bottom of the left half-panel. The others are + and - for adding devices or removing a devices (or devices). When the - icon is clicked a panel appears asking if the user is sure about this action. The default button is Remove. There is also a Cancel button.



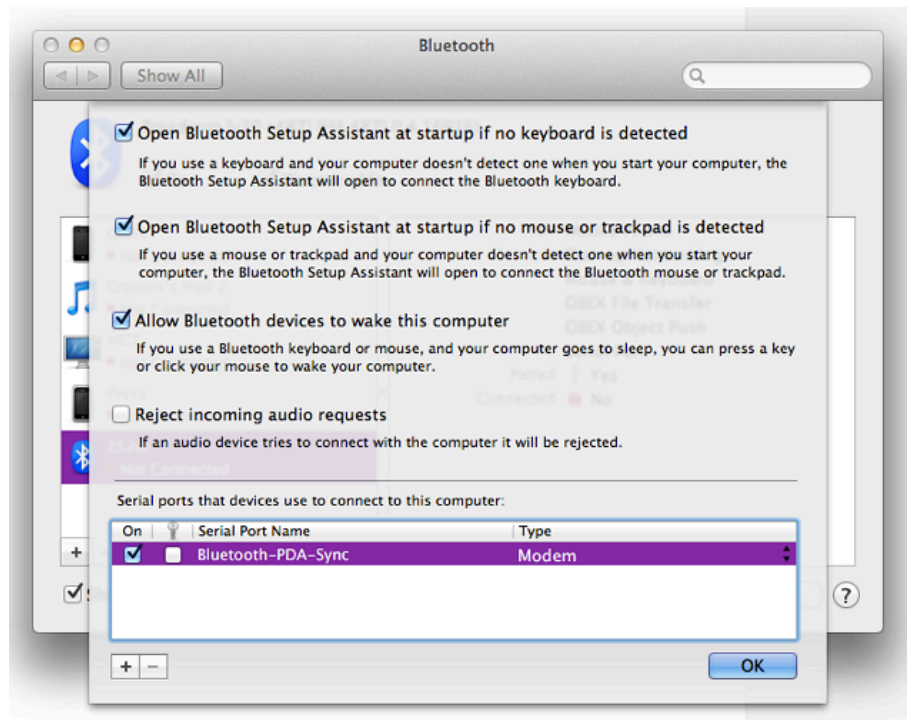
The gear icon allows actions, such as sending a file or browsing, plus configuration of devices, editing of serial ports and display of more information. When this last action is selected, the right half-panel (above) has full information of the highlighted device. “Send file” starts the application, Bluetooth File Exchange. Depending on the device, other actions may be displayed. An iPhone will show, “Connect to Network,” while an iPad or other computer will only offer editing of serial ports and display of more information. These actions will also be available by using the menubar icon.

The “Edit Serial Port” item is for the setting of the device itself (like a Bluetooth phone). The settings are usually created by OS X when initially pairing and should not be changed unless a user is familiar with the type of port or the service that is being modified. “Show more Info” in the gearwheel menu gives a full reading in the right panel of all the settings and features available on a device.

At the bottom right are two further buttons, Sharing Setup and Advanced ... The first of these provides a direct link to the [Sharing Preferences](#) panel in which there is a specific checkbox item for Bluetooth Sharing which may need to be selected for full services. The Advanced button reveals an additional panel in which there are four controls for when attaching or using Bluetooth devices:

- Open Bluetooth Assistant at startup if no keyboard is detected (for assistance in connecting to such a device);
- Open Bluetooth Assistant at startup if no mouse or trackpad is detected;
- Allow Bluetooth devices to wake this computer;
- Reject incoming audio requests.

At the bottom a panel (below) displays the serial ports used by devices. The + or - controls allow us to add (or remove) serial ports if required. OK closes the panel.



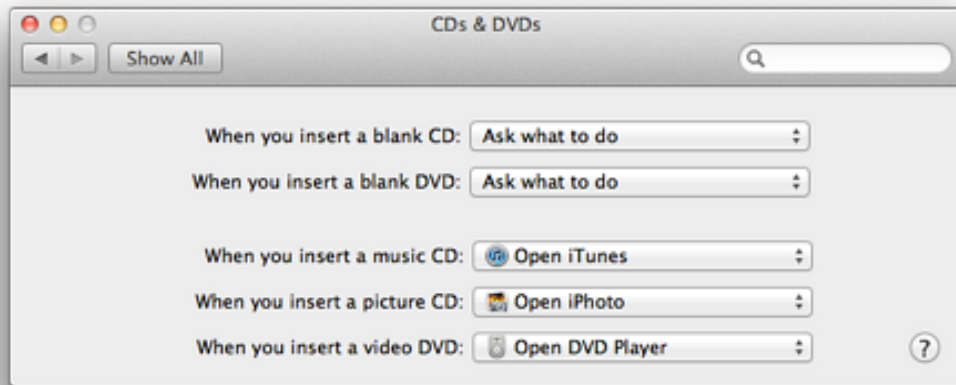
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CDs & DVDs extensions



The **CDs & DVDs** panel allows users to control how the computer will behave when blank disks or disks that have media on them are inserted in the drive.

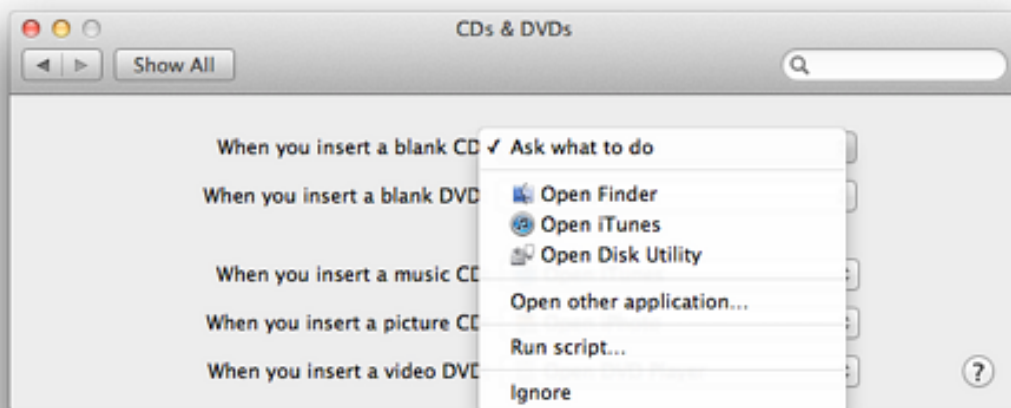
Five media are included in the control: blanks CDs, blank DVDs, music CDs, picture CDs and video DVDs. The blank disks are slightly separated on the panel from the media disks. The buttons for the blank disks have more options.



Beside each of the blank disk items is a button with a number of choices, the top in each being, “Ask what to do”: the Finder will alert a user and the user can then open an application, or deal with the disk in another way. Other options available are: Open Finder, Open iTunes, Open Disk Utility, Open other application, Run script, and Ignore. The blank DVD menu also has the additional item, Open iDVD.

The specific media items (music, picture, video) each have as the top selection what may be the default application for most users: iTunes, iPhoto or DVD Player (respectively). The user may select other applications, depending on what has been installed. The buttons also allow a user to run a script or “Ignore”.

extensions



Note

I am unable to confirm at this stage if this preference pane is available for machines that do not have a drive, such as the MacBook Air. I am also unable to confirm if it appears when a suitable drive is attached.

Date & Time

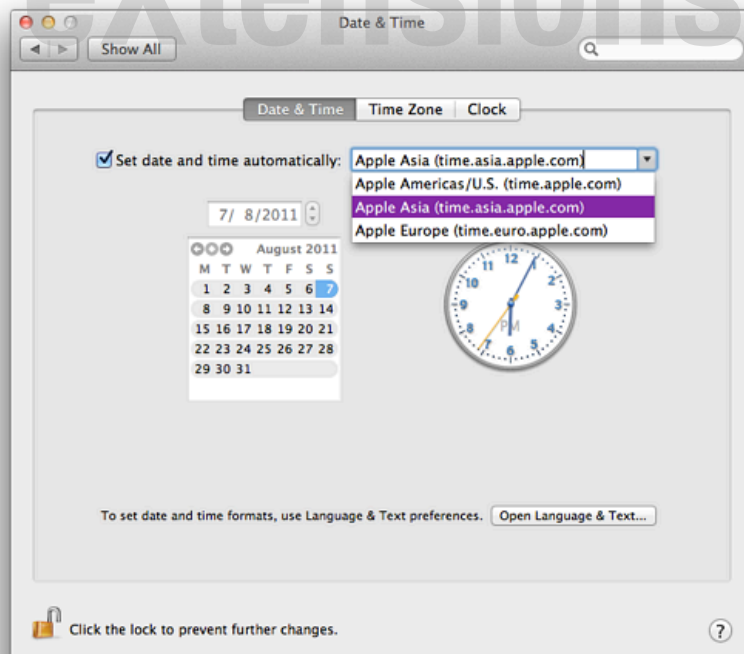


When OS X was updated to version 10.7, Lion, Date & Time preferences retained the same interface, but there was a visible change to the map used in Time Zone which also reflects the way the data for this is now accessed.

Date & Time preferences are in three parts, each selected using a button: Date & Time, Time Zone and Clock. The panel can be locked and as in other parts of System Preferences the padlock icon is at the bottom left of each pane.

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Date & Time



There are two main parts to the first section, Date & Time. To the left is a calendar to allow setting of the date. This should not be needed under normal

circumstances, but if a battery fails and there is no alternative power source, the date and time may be reset (sometimes to 1 Jan 1990 – see below).

Above the calendar is a small window with the date displayed. Highlighting each part (day, month, year) allows a quick change to be made with the scrolling arrows at the right. There are similar arrows above the analogue clock which allow us to change the time.

Both are inactive, however, if the check box above these (Set date & time automatically) is selected as the computer will check time when online using Apple's own services in Asia, Europe or the US. The date and time formats can be set via a button which links to the International preferences.

If the time is reset by a power failure, this checkbox should be deselected and the correct data and time can be entered. The checkbox can then be reselected.

Time Zone

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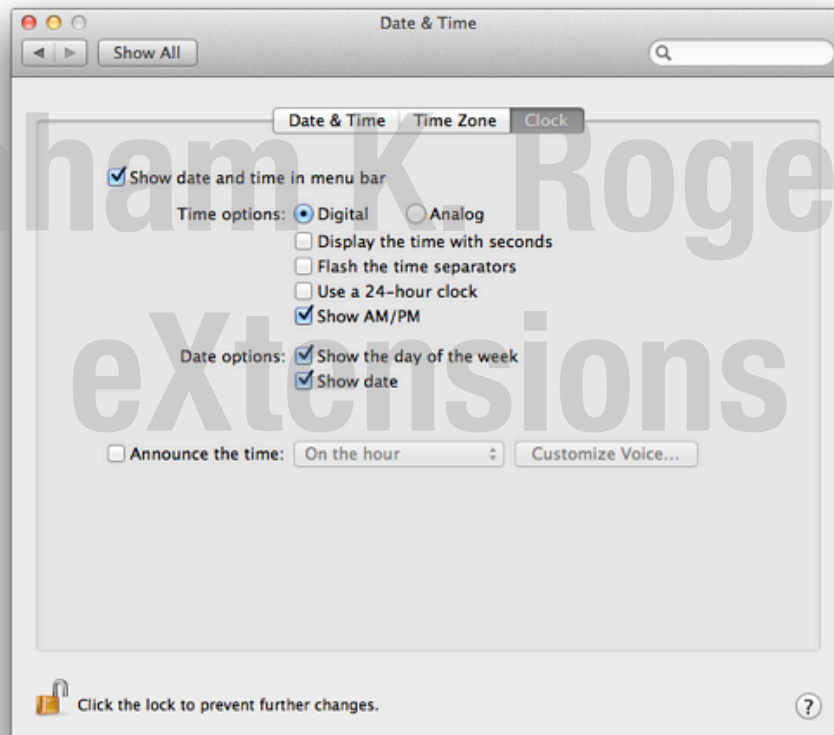


Time Zone reveals a panel with a map of the world displayed. The map has been updated and now comes from Geonames.org: a geographical database that covers all countries. The computer uses Location data to pinpoint where the computer is and selects the time-zone accordingly. The system links to iphoneservices.apple.com to make this determination (using "locationd").

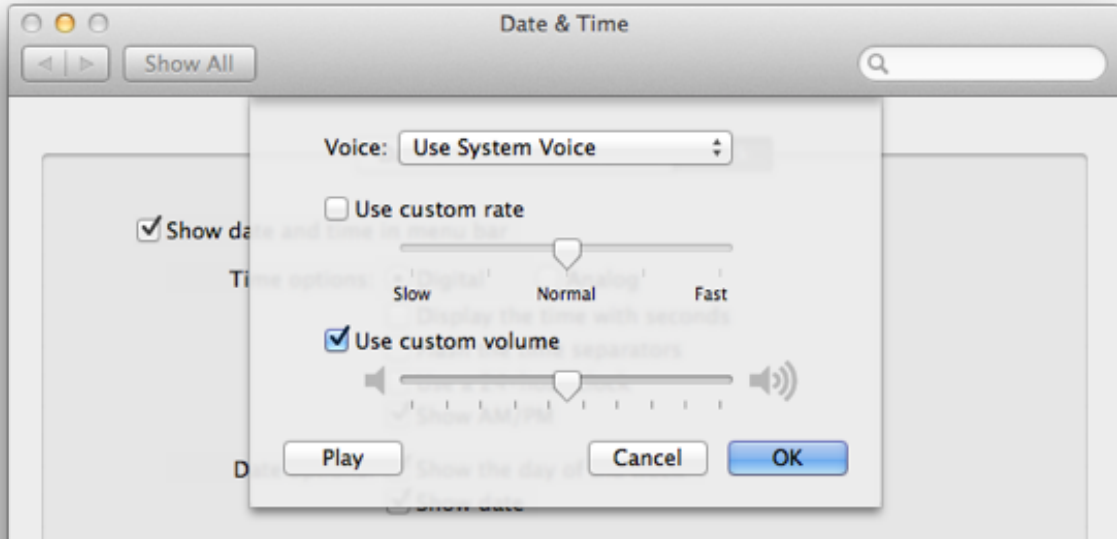
A check box above the map is to set the time zone automatically using the computer's location. If this is deselected, we may select another Time Zone (useful for short-time working abroad, for example).

Clock

The final section provides a number of options for displaying the clock. A check box at the top of the panel allows us to display the time and date in the menu-bar and the style of that display: for example, analog or digital; and using a 24-hour clock, or to show AM and PM. Other options for display are to include seconds and to flash time separators, like the colon between hours and minutes.



An additional checkbox may be used to announce the time at intervals: on the hour, half-hour, or quarter hour. The voice can also be selected here using the button to the left. This voice can be changed and may be independent of the system voice. The speed and volume of time announcements may also be changed in this panel via sliders. A Play button here allows us to check the voice delivery before pressing OK to confirm.



Graham K. Rogers - Desktop & Screensaver



The **Desktop and Screensaver** panel controls the appearance of two fairly visible parts of the OS X interface. The panel is in two sections: Desktop and Screen Saver.

Desktop

The Desktop pane is in two main parts. At the top is the current desktop image displayed as a thumbnail. Beside is a button that allows four ways for display of the image: Fill Screen, Fit to Screen, Stretch to Fit Screen, Center, and Tile.

Below the thumbnail and the button is a split panel for selection of a desktop picture. This can be selected from a standard set of system images under a menu item marked, Apple. The folders are:



- Desktop Pictures, which includes new images including the cosmos background and a lion's head;
- Nature;
- Plants;
- Art, with a selection of some famous images, including Hopper's Nighthawks and Hokusai's Great Wave off Kanagawa;
- Black & White;
- Abstract, which has images that have been available for a while;
- Patterns; and
- Solid colors.

The iPhoto albums are also included, giving access to a user's own photographs. I have also added Aperture to my list. Below these two menu items are Picture folders. Using a + icon at the bottom of the panel a Finder panel opens and we may also add our own folder selections. The - icon removes unwanted folders.

When a folder is highlighted, all images in that folder appear in the main panel. Clicking on any picture makes that the desktop picture within a second or so. The picture also appears as a thumbnail (above). There is no Undo button.

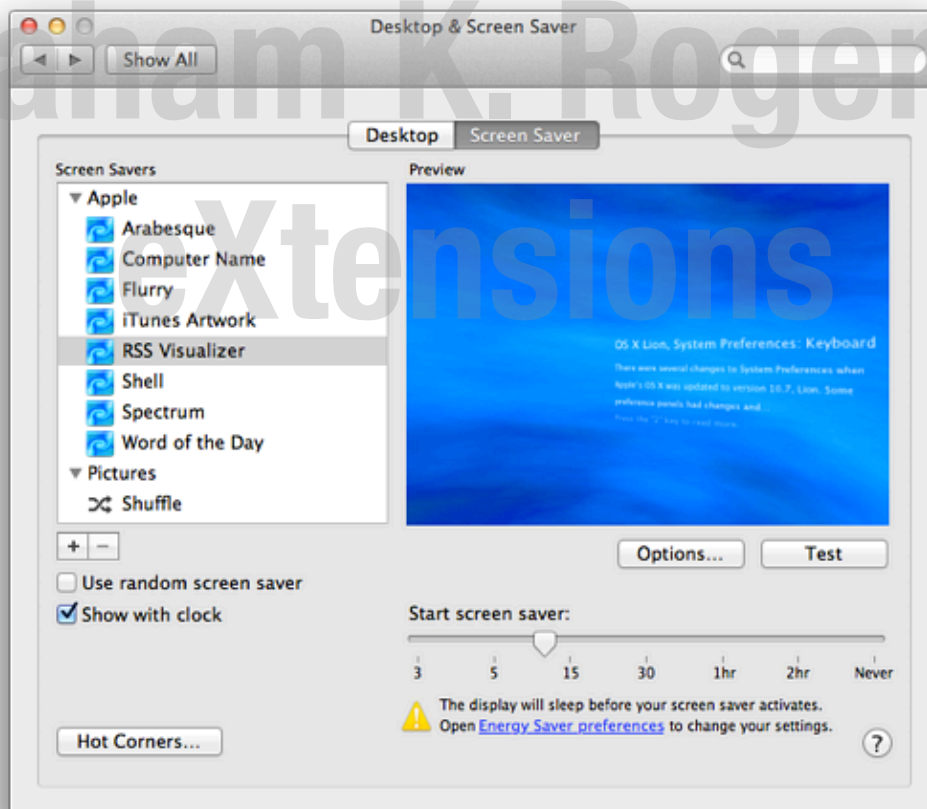
Below the panels are three checkboxes. Selecting the first makes it possible to change the picture with several time-settings, from 5 seconds up to a day. "At login" and "Waking from sleep" are also options here. A rotation of images every few seconds may slow the computer. When the Change picture box is checked, a

Random Order item just below becomes available. At the bottom of the panel is a checkbox that toggles the translucent menu bar (at the top of the screen) On or Off.

Screen Saver

Like Desktop images, Screen Savers are in two groups: Apple images and Pictures. As well as several screen-savers that were available in earlier versions of OS X, also in this grouping are iTunes artwork, for display of album covers, and the RSS feed screen saver.

The iTunes option is reported to be resource heavy although there are some attractions to this display of album art. The images are refreshed as they rotate, one by one. Running the cursor over a cover brings up an enlarged version with a “play” button. An Options button in this panel reveals two sliders for adjustment of the number of images and the rate.



The RSS Visualizer displays a blue cloud with items from a selected RSS feed moving over the screen. The specific feed may be selected using the Options button and the panel also has a slider to adjust duration.

The Pictures group of Screen savers again uses some of the earlier high quality photographs that come with the system, as well as the user’s own selections, including those in the iPhoto library. The iPhoto selections of albums have been

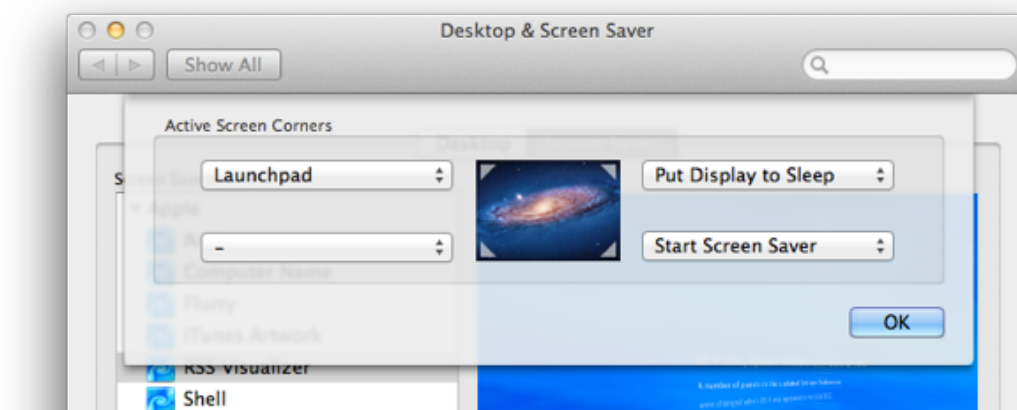
expanded to include Locations (the icon differs with country) as well as Faces. The same is so for the Aperture access. The + and - icons are available here.

With this group there are three display styles: Slideshow, Collage and Mosaic. When selected Collage first creates a mosaic database. A display begins with one picture as the core, then zooms out, adding scores of other images to the frame, so that each then becomes a tiny part of the next full screen picture. When that next image is almost complete, there is a brief rendering and the image is seen in its full form. A comparison might be the posters for the Jim Carrey movie, "Truman". The same effect was used there: stand back and the full picture is revealed; move in close and you could see the hundreds of individual photographs.

Selecting a screen-saver displays it in a small panel to the right of the list. Each of the screen saver selections (Apple and Pictures) has a Test button beneath the display panel so that users may see what the effect is full screen.

The panel has two checkboxes to the left: Use random screen saver; and Show with clock (a digital clock can be seen onscreen when the screen saver is used). Slightly below these checkboxes and near the center of the panel is a slider to select when the screen saver will start. There is a warning if the time selected is before the display sleeps. A link will take a user to the Energy Saver preferences to adjust this if necessary.

At bottom left is a button for Hot Corners, normally part of the [Mission Control](#) preferences. Pressing the button reveals a panel that enable a corner to be selected for a specific action, like Start Screen Saver, Put Display to Sleep, or Launchpad. As the cursor is moved to the specified corner, so the chosen action occurs.



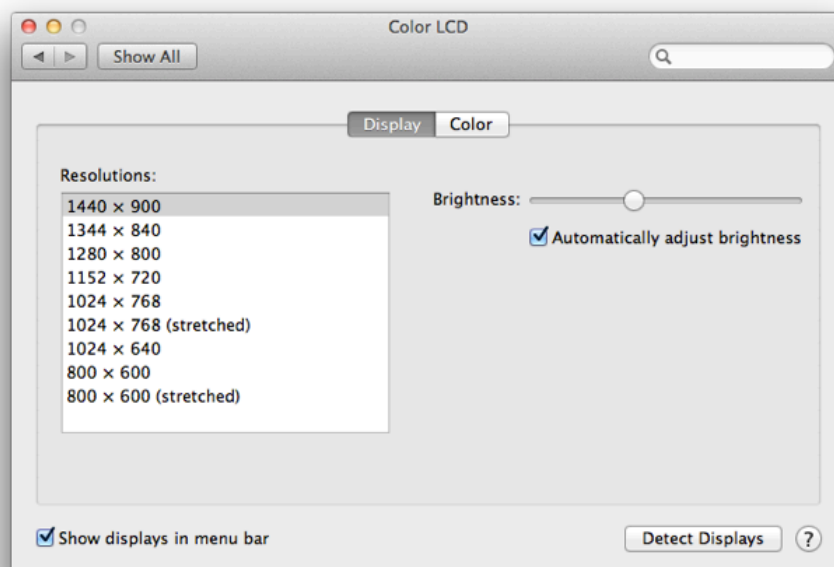
Displays



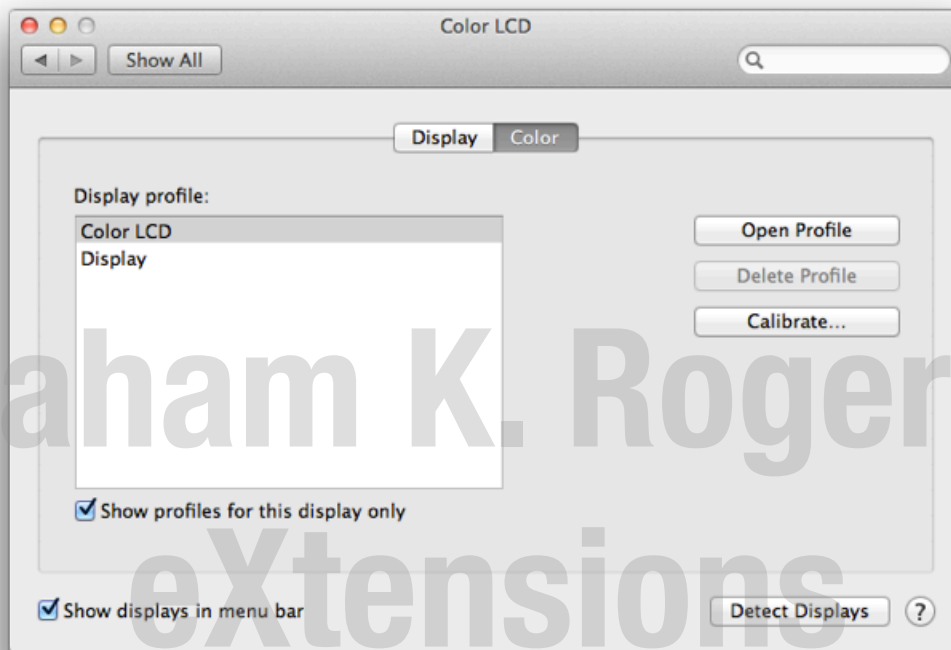
Displays preferences are in two basic sections – Displays (which includes display resolutions); and Color. When an external monitor is connected, there are additional panels and sections

Graham K. Rogers - Displays

The Displays preference panel provides access to the different screen resolutions that may be used. For example, for the MacBookPro, I am able to select from 800 x 600 right up to my usual 1440 x 900 with 7 options in between, including some “stretched” versions. In earlier versions of OS X there had been up to 11 resolutions available.



Brightness can be adjusted here with a slider (as well as using the F1 and F2 keys — with or without the Fn key, depending on computer and user settings). Just below the slider is a check-box to allow brightness to change depending on ambient light. At the bottom left of the panel is a check box allowing a Displays icon to be shown in the menu bar. This menu allows quick access to resolutions. We may choose the number of settings that can be displayed in the menu (0, 3, 5, 10), while at the bottom of this menu is an item to open the Displays Preferences panel.



Color

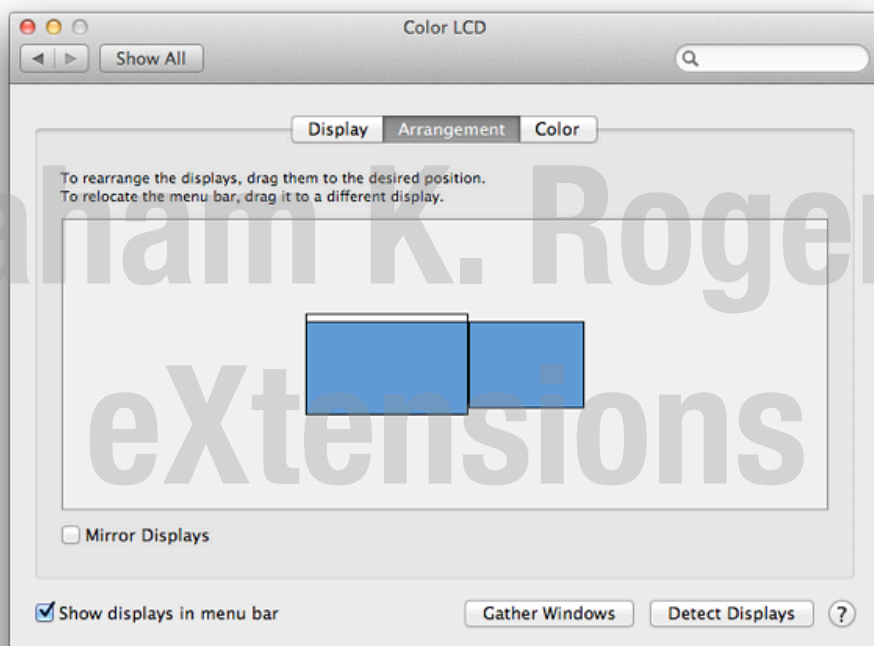
A button accesses the color profile for the display which can be adjusted if necessary. While professional photographers or print houses may need to check calibration regularly, they will have specialist knowledge and equipment to assist with this.

Both this panel and the Display panel have a button at bottom right marked, Detect Displays. This is for when connecting multiple displays, or a projector. In an [Apple Help document](#) we are told that, “If a display is not recognized, click the Detect Displays button in Displays preferences, or try putting your computer to sleep and then waking it.”

Arrangement (Additional Monitors)

When another monitor is attached, a second panel appears with a third button (as well as Display and Color): Arrangement. This allows either mirrored images (the two displays are the same) or side by side displays.

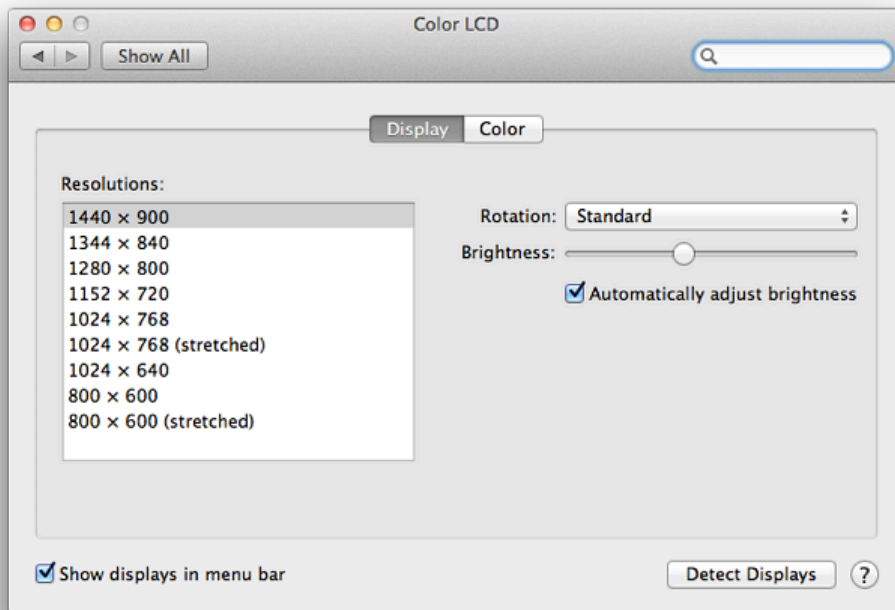
A blue monitor icon can be moved around the screen of the computer so that the second monitor (including projectors or TV screens) displays an output screen to one side (or above; or below) the main monitor. This is useful when several displays are used in work such as photography or with Final Cut. With Keynote presentations this allows a presenter screen that is different from the audience display.



At the bottom of the second panel is a button marked, Gather Windows. Pressing this brings any Displays preferences panels close together in one window as they may be moved to another window during work. A further button in the Displays section allows a user to rotate the display (90°, 180°, 270°): see note, below.

Note

We may also view the Rotation button in the normal Displays preference panel by opening the panel while holding down the Option and Command keys. I found that this did not work every time: three or four attempts were needed to make this appear. This is another hint that should be used carefully and only if needed.



We are grateful to [Megan Lavey-Heaton of TUAW](#) for this information.

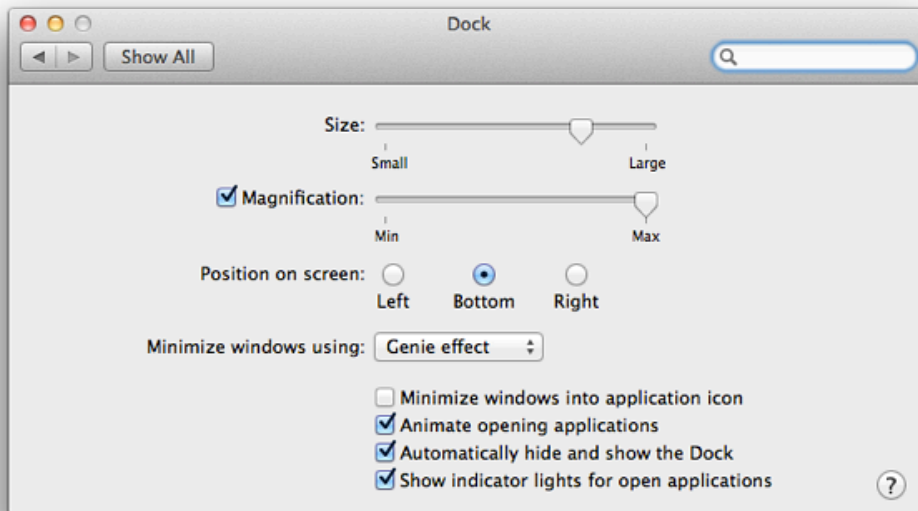
Dock eXtensions

Dock



With the update to OS X, 10.7, Lion the Dock preferences panel saw a number of small changes. As before, however, there is a single panel. The simple Dock preference pane provides a number of ways to make adjustments to this feature. Some of the changes may be made directly in the Dock by clicking on the divider line (towards the right side) and using the Control key.

Near the top of the panel is a slider for Size. Below this is a check box for Magnification. When this is selected, we may use the adjacent slider to increase or decrease the level of magnification.



Three radio buttons in the middle of the panel are for the user to select the Dock's position on the screen. Only one may be selected. The default is Bottom. We may also choose to place the Dock to the Right or the Left. In earlier versions of OS X it was possible to place the Dock at the top by editing a hidden file or using a third party utility (Like Marcel Bresink's [Tinker Tool](#) - now v.4.61). This placement is no longer possible. It is from Tinker Tool that the icon that heads this section was taken.

A button below the three position selectors determines the effect used when Windows are minimized. The default effect is Genie, which makes a file appear to shrink as if it were going into a bottle-neck. The reverse happens when it is clicked in the Dock and becomes large again. This effect (and others) may be slowed by pressing the Shift key at the same time. The Scale effect uses less processing power and as the panel becomes smaller, the width and height keep proportion.

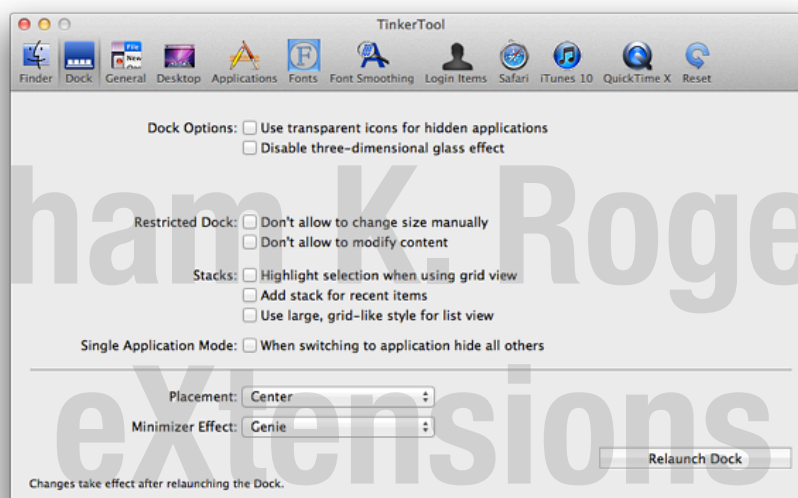
The bottom of the panel has four checkboxes. In earlier versions of OS X there were only two.

- **Minimize windows into application icon.** When a file is minimized it is not visible on the Dock as a separate file. When the application icon in the Dock is clicked, a list of files related to the application are shown. A minimized file is marked with a diamond.
- **Animate opening applications.** When checked, an application that is started (whether permanently in the Dock or not) will bounce a number of times while opening. When unchecked, the icon remains still.
- **Automatically hide and show the Dock.** When checked, the Dock appears from the bottom (or sides, if so located) as the cursor is moved near the edge of the screen. When this is unchecked, the Dock is visible at all times.

- **Show indicator lights for open applications.** When an application is active, a small blue icon appears below the Dock icon. When this is unchecked there is no indication in the Dock.

Note

Tinker Tool, which accesses preferences not usually available (for the Dock and other Preferences), also provides an effect called, “Suck in” which — as the name suggests — sucks the minimized panel towards the Dock in a manner halfway between Genie and Scale. For this and other effects to be applied, the Dock needs to be relaunched, which may take more than a minute.

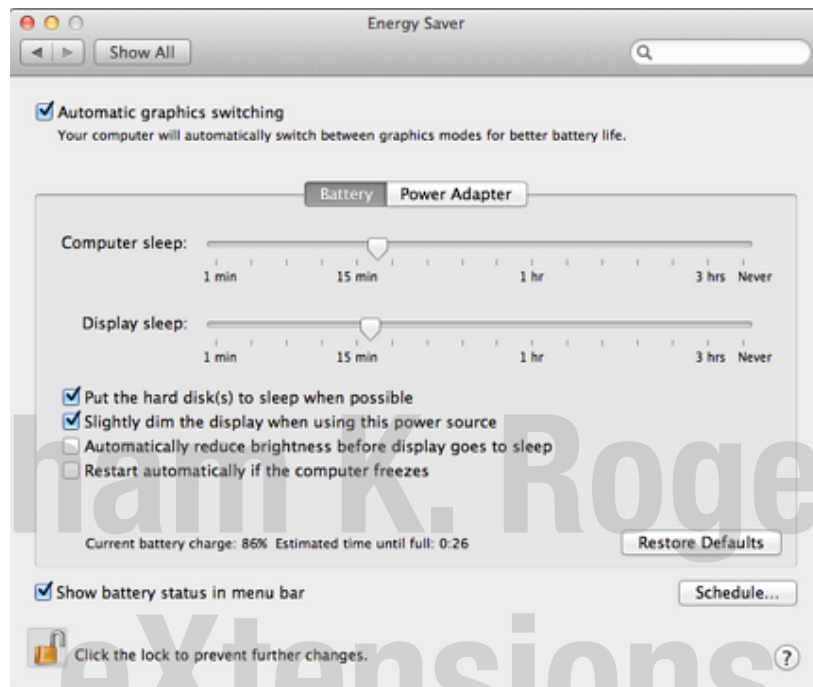


Energy Saver

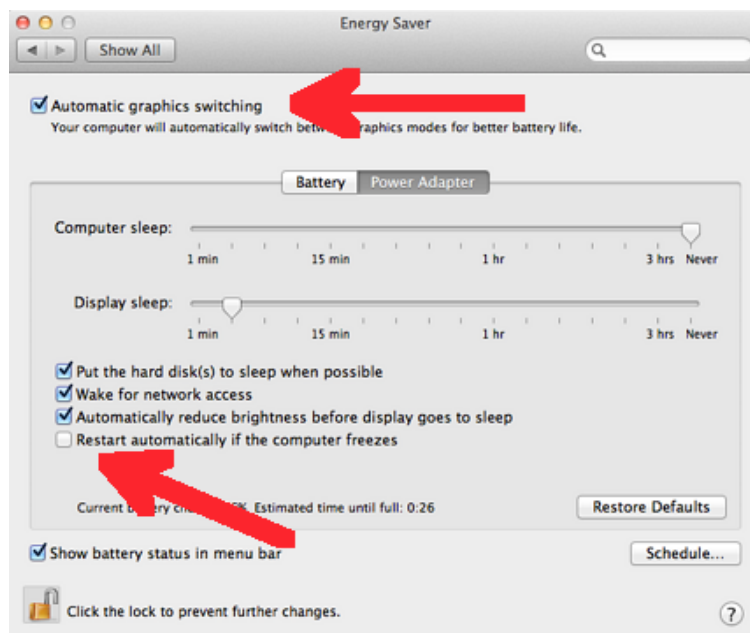


The Energy Saver panel is used to control sleep, displays and the hard disk. Some computers with two graphics cards have a check box at the top of the panel for Automatic graphics switching: the integrated card is used normally, while

some applications need the more powerful graphics card. Lion has also seen the addition of a checkbox that enables the computer to restart automatically if it freezes. There are separate settings for Battery and Power Adapter for notebook computers. If the checkboxes for automatic restart and graphics switching are used for Power Adapter, they are also on for Battery.



The main section of the panel has two sliders: Computer sleep and Display sleep. These operate independently for Battery and Power Adapter. While Apple has defaults for both, users may want to adjust these for specific conditions. Times are between zero and three hours, plus Never.



The Computer sleep slider works independently, but the Display sleep links with Computer sleep when the time selected is increased past the latter's selected time: the display cannot be selected to sleep after the computer. When using the Battery panel I found that a warning was given about power use if the Computer sleep slider passed 18 minutes.

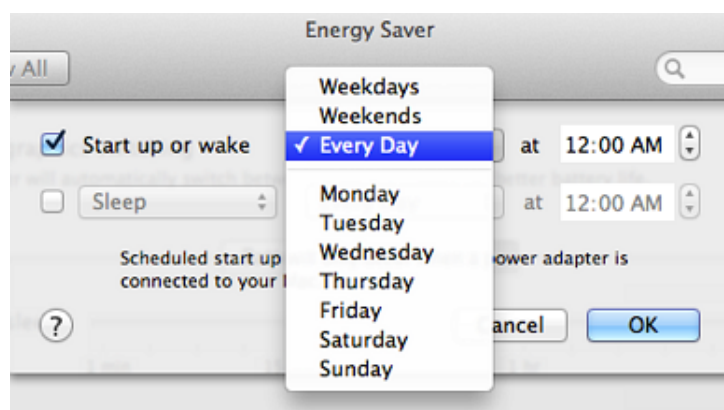
Below the sliders there are check-boxes for administration purposes. These are slightly different for Battery and Power adapter settings.

Both panels have Put the hard disk(s) to sleep when possible", and (the new option) "Restart Automatically if the computer freezes".

The Power adapter panel only has a checkbox, "Wake for Ethernet access", while the Battery settings only have "Slightly dim the display when using this power source".

Below the checkboxes is a display of the current battery situation: current charge and estimated time until full. To the right of this is a button that is marked Restore Defaults; while below another checkbox allows the battery status to be displayed in the menubar. The icon itself has access to display options: Icon only, Time (until full) or Percentage.

At the bottom right is a button marked, Schedule. This opens a panel allowing users to select specific start or wake times. The default is Every Day with a time box alongside. The button also allows the computer to start (or wake) on Weekdays or Weekends, or any specified day.



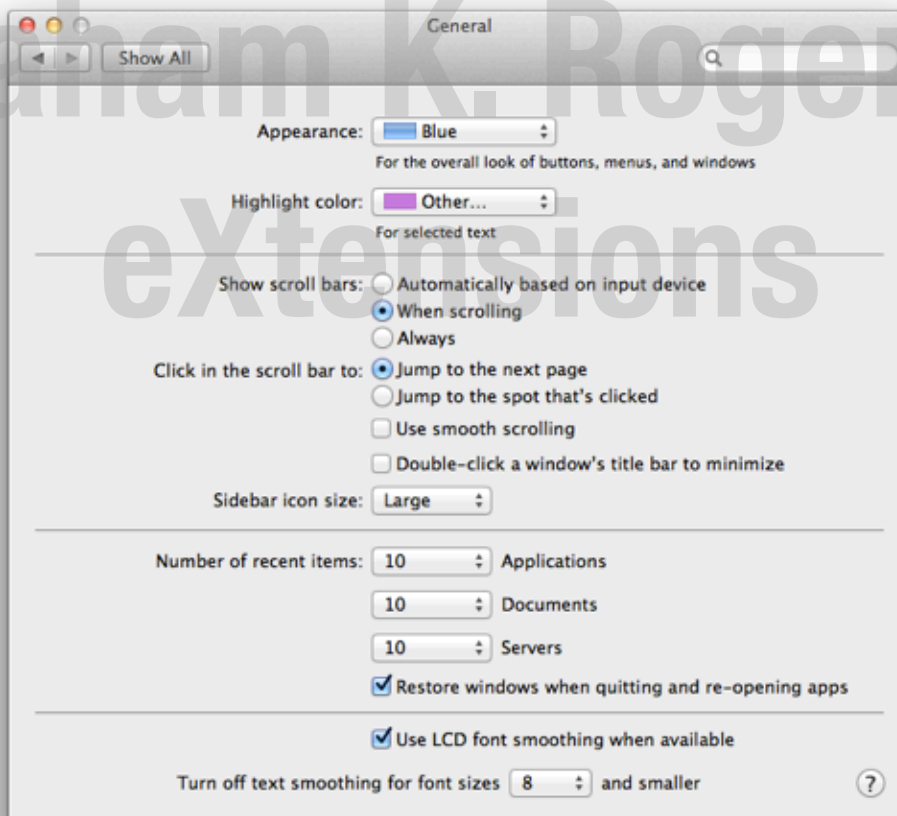
Below this checkbox is a second for Sleep. We may also choose Restart or Shutdown. The default again is for Every Day, but there the same day-choices as for Start are available via the selector button. When any setting is changed we may accept with OK, or Cancel.

The bottom left of the panel has the standard OS X padlock icon: Click the lock to prevent further changes.

General

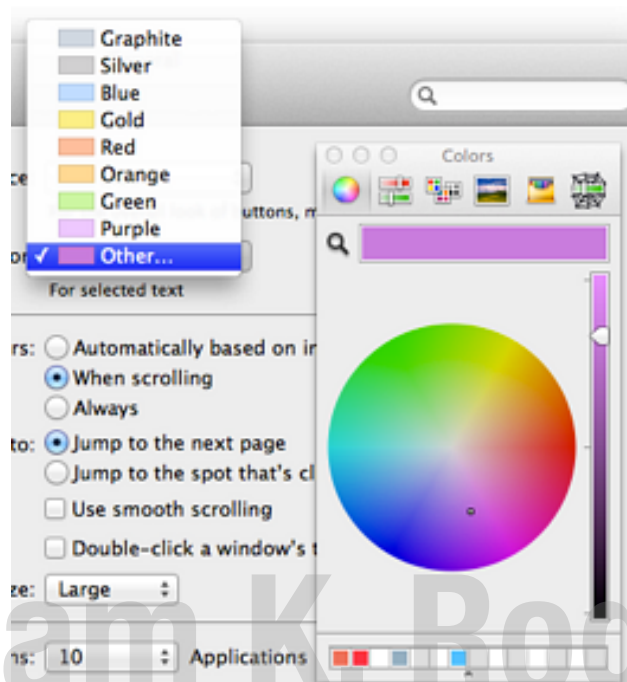


Among the changes to System Preferences in the update to OS X, 10.7 Lion, was the renaming of “Appearance” to “General”. While the panel has the same basic format, there are two important additions.



General preferences has four sections which control the way that the Finder displays panels. The first item is named Appearance and this has two selections: blue and graphite. These change the color of things like download progress bars. Selecting “Graphite” also changes the color of the red/yellow/green controls at the top left of a panel (for close, hide and minimize) to the dull graphite color. This was intended to help those who work in graphics.

The Highlight color below controls the way that a highlighted file name is displayed in the Finder, or the color of highlighted text. There are eight default colors, but “Other” allows a user to choose any color using a selector.



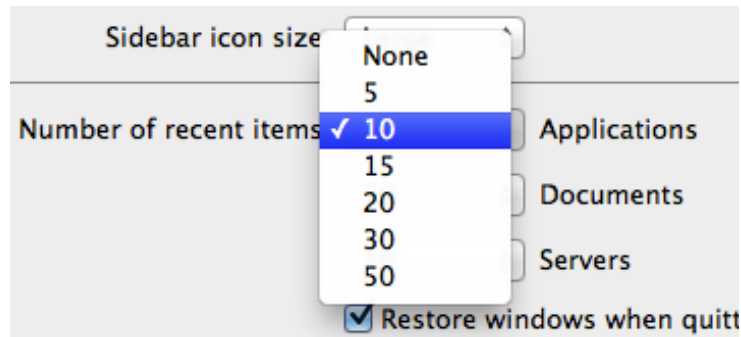
The second section controls the placing of scroll bars at the side of a panel as well as the way the scroll bar operates. There are no longer arrows at top and bottom. Instead Apple has three choices for how and when the scrollbars appear: Automatically based on input device; When scrolling; and Always.

The first two are similar and I have yet to find any difference. With some applications (such as Safari or Preview) the normal onscreen display shows no scrollbar, nor is it visible when the cursor is simply over a page. When the trackpad or mouse input is moved, the scrollbar appears. Some third-party applications display this whatever is selected. When Always is clicked, the scrollbars are visible in all applications. The “Natural” scrolling direction which some find less intuitive, may be turned off in Trackpad preferences.

Below these controls are two items that control where the content moves to when the scrollbar is clicked: to the next page; or to the spot that is clicked. This may not operate accurately with pages that display RSS Feeds. A further control turns Smooth scrolling on or off.

Unrelated to scrolling, a last check box here will allow a user to minimize a page or panel quickly by just clicking on the top of it. It then disappears into the Dock in the same way as if the orange minimize button (top left) is clicked. The final control in this second section is a button to select the size of the sidebar icons in the Finder: Small, Medium or Large (Added later: this also affects the display of icons in the sidebar of Mail).

The next section (3) controls the number of “Recent Items” that can be listed. These are revealed in Recent Items in the apple menu (top left of the screen). This assists a user with a swift way to re-open a program or file. In addition, the Servers item allows a quick reconnection to a network connected disk or computer. Selections are None, 5, 10, 15, 20, 30 and 50.



Below the three selector buttons is a new check box: Restore windows when quitting and re-opening apps. This may be turned off by deselecting the item, but it has some value particularly if an application quits accidentally.

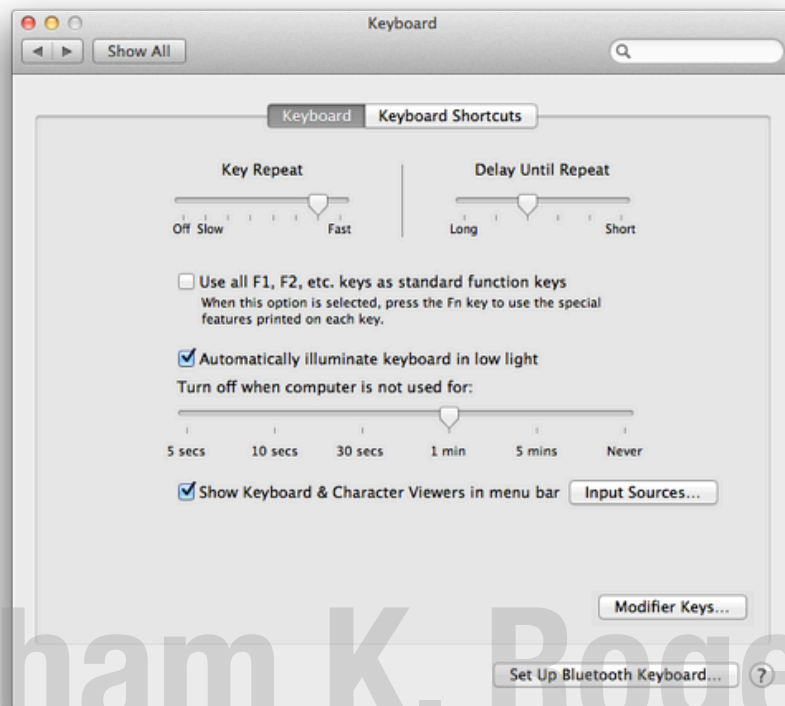
Last in the Appearance panel are two controls for the way fonts are displayed. LCD font smoothing (when this is available); and lastly a control to turn off this feature for smaller fonts — the size may be changed by the user — as this feature may affect clear display of text.

Keyboard



In earlier versions of OS X, what is now the Keyboard Preferences panel also included Trackpad, Mouse, Bluetooth and Keyboard Shortcuts. Now the panel focuses on the Keyboard. There are separate preference panes for [Bluetooth](#), Mouse and [Trackpad](#). The Keyboard panel now has only buttons for Keyboard and Keyboard Shortcuts.

Keyboard



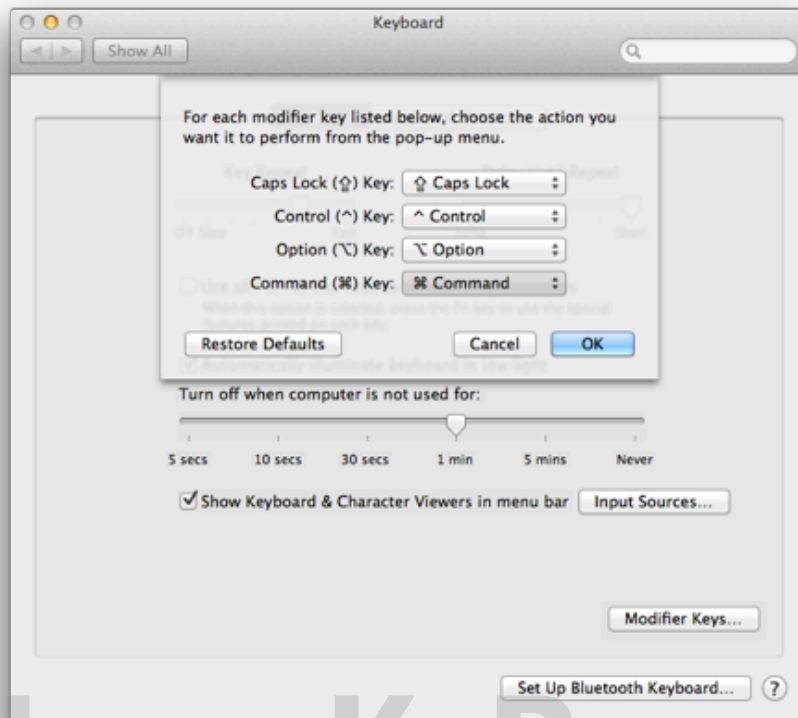
At the top of the Keyboard panel are two sliding scales: Key Repeat (renamed from Key repeat rate), which adjusts the length of time between a character being repeated as a key is held down; and Delay Until Repeat. This adjusts the time before the first repeat begins. The delay may be adjusted between short and long, or off: the character is not repeated when the key is pressed.

On notebook computers, which have a limited-width keyboard, below the sliders is a check-box to turn on or off the use of function keys as standard function keys. When active the Fn key must be pressed as well to use the function key for its additional purpose. This then allows the F-key to have a second use, which can be allocated in the Keyboard Shortcuts section.

An example might be the F12 key which is marked with the speaker symbol and increases sound volume. When the Fn checkbox is used, Dashboard is revealed when the key is pressed. When the Fn key is pressed with F12, the volume is increased. Care should be taken when selecting this. Users should make sure they are aware of what pressing a Function key will do.

A check box below this turns on and off the keyboard illumination in poor light. A slider bar below the checkbox selects how long this lighting feature operates when the computer is not being used.

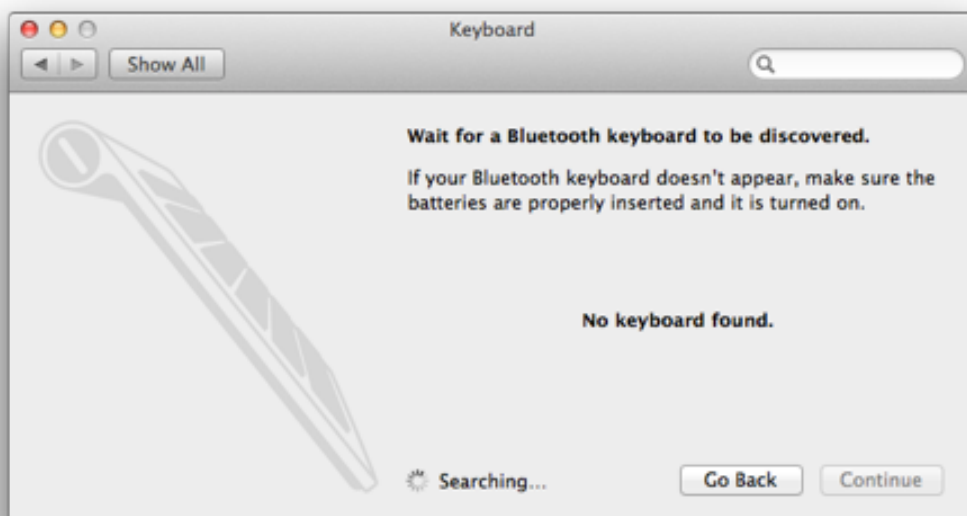
A checkbox below the slider allows the Keyboard and Character viewers to be displayed in the menu bar. This is the same menubar item for selecting different language keyboards. To the right of this checkbox is a button marked "Input Sources". This opens the relevant section in the [Language & Text](#) preferences.



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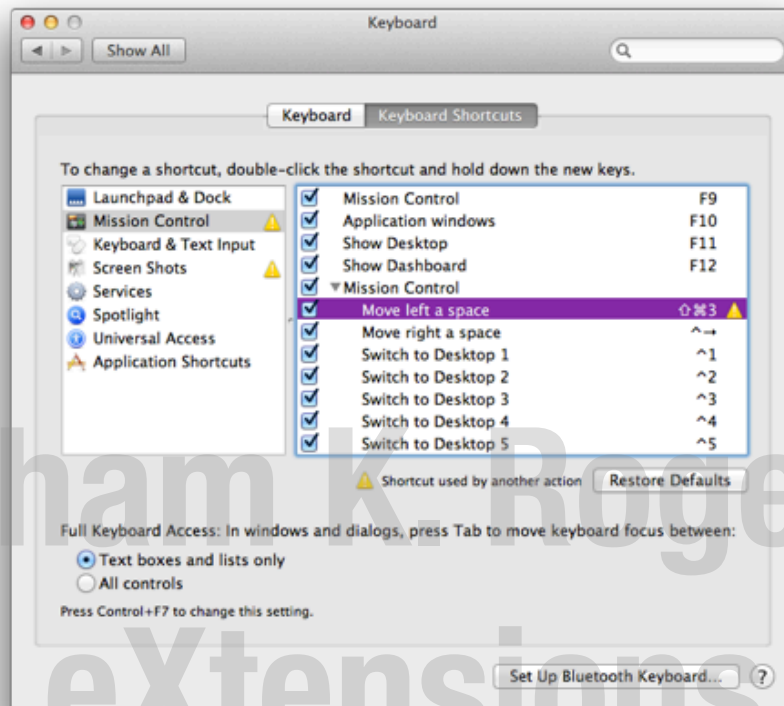
A Modifier Keys button at the bottom left allows a user to re-allocate the uses of certain keys: Caps Lock, Control, Option and Command. For example, the Caps lock key can be changed to operate as the Option key. Care should be exercised when making such changes. The panel also has a Restore Defaults button.

At the bottom right of the panel is a button marked, Set Up Bluetooth Keyboard. When pressed, a panel appears (similar to the panel for setting up a Magic Trackpad, which also connects via Bluetooth). The system searches for a Bluetooth keyboard and initiates pairing if one is found.



Keyboard Shortcuts

The final section of this preference pane is for Keyboard shortcuts. It is in two sections. To the left is a panel that lists the type of shortcut (including Launchpad, [Mission Control](#), Application Shortcuts). When one of these is highlighted, a complete list of shortcuts for that feature is displayed.



To change a shortcut, we may double-click over the key commands. This reveals a small box in which we may type new key combinations. If there is a conflict (the combination is already being used), yellow warning triangles appear: by the command, under the panel, by the current section and by the section which is already using the keys (see image below).

By default, Launchpad showed no key command on my MacBook Pro for “launch”. By clicking the area to the far right of the panel, the key commands box appeared and I entered the combination Fn + F2 (see above for Keyboard and Fn key use).

We may also add commands using the + icon below the panel. For example in Safari there is a menu item (in History), “Reopen all Windows from Last Session”, which had no keys allocated. Pressing + reveals a panel and we may select All Applications or specify. We type in the menu title (the words for the command) then allocate a key combination. I specified Command + Option + H for this and the key commands now appear in the Safari, History menu.

Finally, controls at the bottom refer to the focus of the keyboard within applications: by pressing the Tab key a different part of a panel or window is highlighted. With “Text boxes and lists only” the focus is only where we may enter text (such as Search boxes or address fields in Safari). “With All controls” the focus cycles round text windows and other controls like buttons, sliders (and bookmark entries in Safari).

Note

I had written earlier on how to use Keyboard shortcuts:

- Key Commands on a Mac (1): [Outline and Applications](#)
- Key Commands on a Mac (2): [Startup keys and Some Suggestions for Their Use](#)
- Key Commands on a Mac (3): [More Startup keys and Suggestions](#)

Language & Text

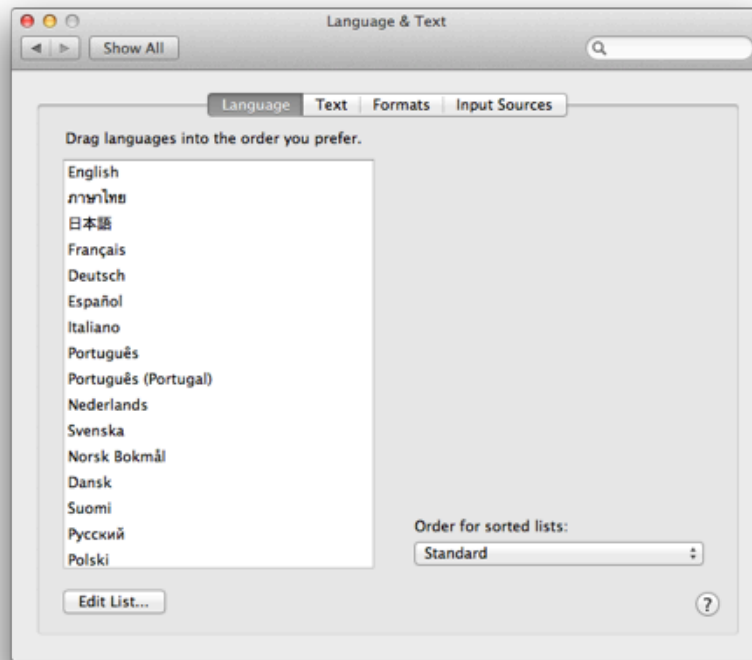


With OS X 10.7, Lion, what used to be called the International menu is now Language & Text. It controls the use of languages as well as other settings for those who are not in the US. It is in four parts: Language, Text, Formats and Input Sources.

Language

The main section of the Language panel displays a list of languages that can be used on the Mac. The top language in the list is the display language. Macs can display menus in several languages and can input text in many more. If the Mac does not support the first language the second language will be used.

The default language will depend on the country that the Mac was originally sold in. In some countries, like Thailand where I am, the default is US English. Thai is not one of the selected languages. This language needs to be added by first clicking on the Edit List button, then checking the box next to the Pasa Thai item, which is initially close to the bottom, along with Persian, Nepali, Dzongkha and others: 117 in total. The language can then be dragged to the required place in the list.



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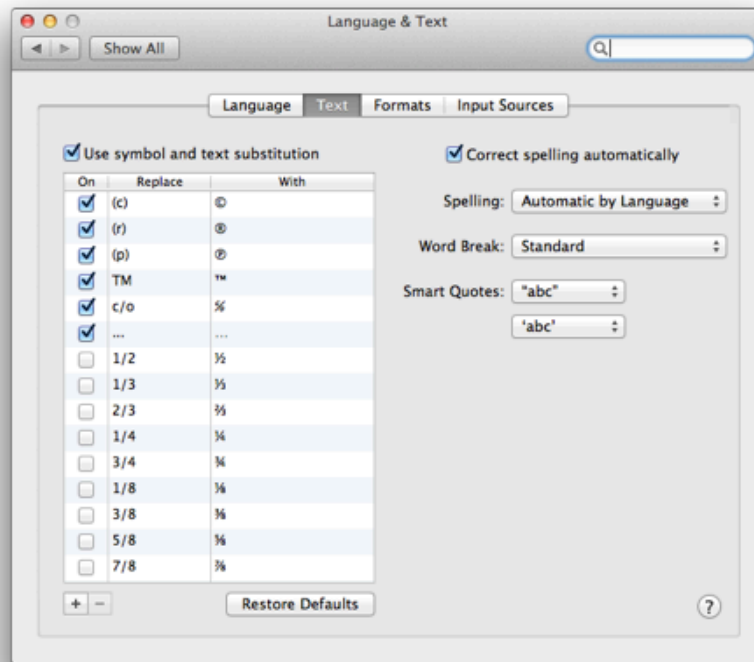
The main language panel allows sorting order to be specified by use of a button at bottom right.

eXtensions

Text

The panel marked Text helps users when typing and provides a number of shortcut methods. The main panel to the left is activated with a checkbox. Items available here are shortcuts to typing symbols and fractions. The top entry, for example, allows the copyright symbol (©) to be included in a text when the user types (c). There are six such symbols which work in most word processors (but not a text editor), as well as nine fractions: half, quarters and eighths. Each may be selected or deselected with a checkbox.

To the right of the panel are controls for typing. At the top is a checkbox for spelling to be corrected as we type. In Lion this seems to have been improved and the suggestions displayed appear similar to how they are shown on an iPhone. Spelling corrections may be made automatically by language which is selected by a button below. This button also has several specific language/dictionary choices and at the bottom of the menu there is also a Set Up option. This opens a panel which allows access to a number of other languages. Apple tells us we may add more by copying dictionary files (.aff and .dic) to the Spelling folder in the Library folder.



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As languages may break words at the end of a line in different ways, a button allows selection from Standard (default) and six specified languages. There is no option to add others, like Thai or Arabic which have specific rules on line-breaks. Standard would be selected in these cases and the language installation would control the breaks.

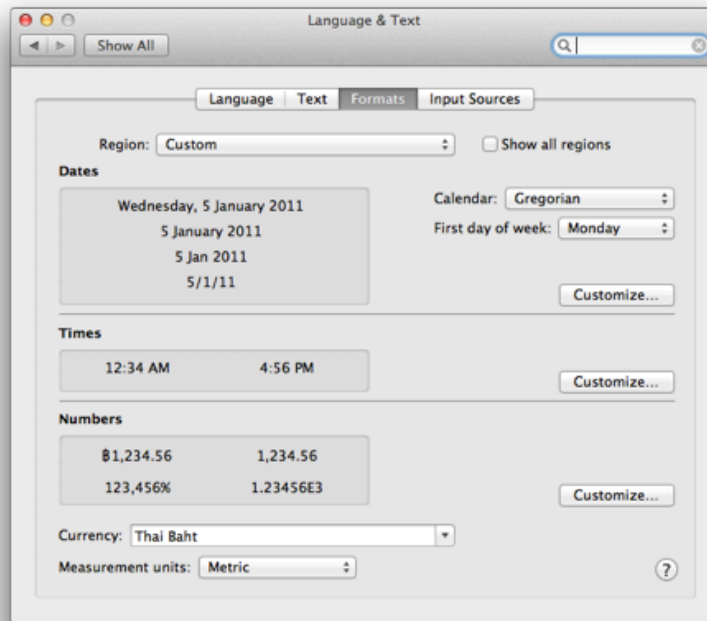
Like line-breaks, different languages have their own ways to use quotations and two buttons are available to select the user's preference: with double speech marks (“”) and single (”).

Formats

The Formats panel accesses ways to change displaying information, for example in messages and documents. At the top of the panel is a large button for Regions. 28 are shown by default, plus Custom. All regions may be displayed if the user activates the checkbox alongside. This adds about 100 more, many with options: for example Afrikaans has selections for Namibia and South Africa.

If one selects Thai, Thai characters are displayed for the day and month. The year will also display as B.E. I choose Custom, although I do select the default currency as “Thai Baht”.

There are three main sections below: Dates, Times and Numbers.



In the first, Dates, a button to the right allows selection of calendar with Gregorian as default (top). There are 10 other calendars to choose from, such as Buddhist, Coptic and Japanese. We may also select the first day of the week in a button below the calendar. Customize, the bottom button, allows a total selection/reorganization of the day and date display. The settings chosen are displayed in the main panel in the Dates section.

Time shows the way the hours of the day are displayed. The single, "Customize", button reveals a panel like the Dates customize button and users may amend the ways in which hours, minutes and seconds appear. Note that the way the region (or GMT relationship) is displayed can be changed here, but changing the region itself is a function of the Date & Time preferences.

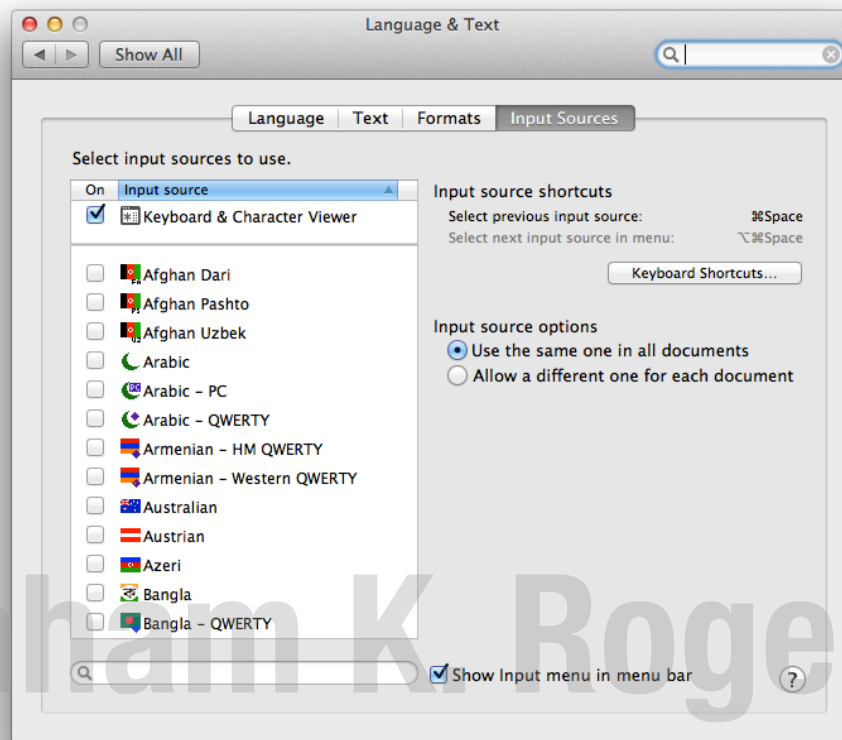
Numbers effects the way decimals and currency are displayed and these may be changed using Customize. Normal separators are the period (.) or comma (,) but we may type in others, such as a dash (-) easily. When a change is made we click OK to accept or Cancel.

At the bottom of the panel are two other selections: currency and measurement units. The currency may either be selected from a list revealed by a button or typed in. The measurement units can be selected from Metric or US.

Input Sources

The Mac has a number of keyboard options available that may be selected in this panel. The default is US English and when no other languages are selected there is no icon in the menu bar. We may add this by using the checkbox at the bottom of

this panel. The current keyboard language may be changed using this. We may also use a keyboard shortcut.



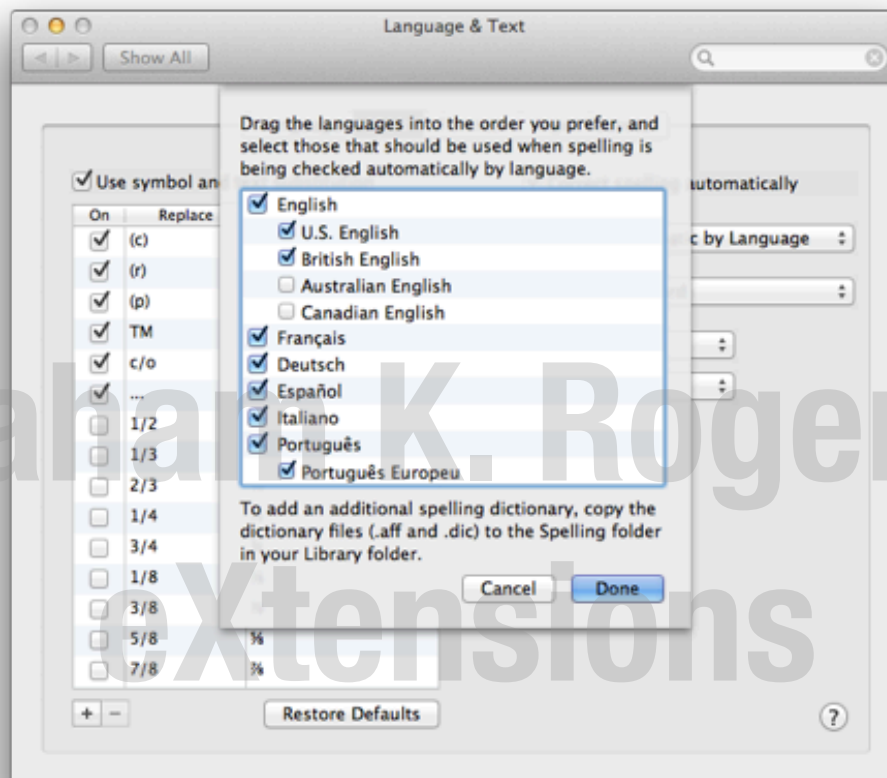
There are over 140 keyboards to choose from (including several Chinese, Japanese and Vietnamese), right down to Welsh. Adding a keyboard is simply done by clicking the checkbox. Also available is a Keyboard and Character viewer. When active this also appears in the languages list in the menubar. The keyboard viewer shows what each key (or combination) represents when pressed. The Character viewer brings up a panel with the hundreds of symbols that are available to users. These may be entered into a text (or file) with a double click on the symbol.

To the right of the panel is the current key combination for fast switching between keyboards. I use the command key plus the space bar which is usually default for Spotlight searches, but there is a button for access to all Keyboard Shortcuts so that this may be changed to suit the user.

Radio buttons allow the same source to be used for all documents or for this to be different, depending on the document. A search window at the bottom gives quick access to any one (or more) of the keyboard languages. For example, using “af” displays the three Afghan keyboards, or “bu” shows two Bulgarian entries (Burma is shown under Myanmar).

Spell Check

Something I missed in the Language & Text settings was the ability to add languages and language priorities. [OS X Daily](#) wrote online about this. In the Text tab there is a setting marked “Automatically” for spell checking. A menu reveals a selection of the usual languages, but at the bottom is an item, Set Up. In there we may check extra languages and drag them into the order we want.



Comments

With the Languages & Text preference pane, particularly, it may be that initial settings will differ according to region or country. It would be useful if there were feedback on this, especially from users in Europe, Japan or other countries.

Displayed at the bottom right of all of the panels is a question mark icon (?) which gives access to Apple’s online Help page for the particular panel being used.

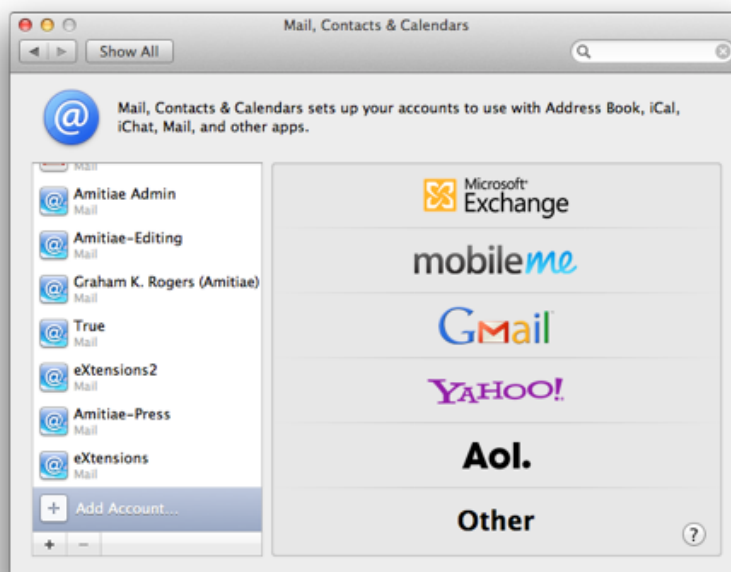
Mail, Contacts & Calendars



System Preferences saw many changes with the update to 10.7. There was a new preference panel with the arrival of Mail, Contacts & Calendars, which at first glance may seem redundant: the information seems to duplicate data carried by applications and in other parts of a user's installation. It simplifies the creation of new accounts and appears to have been created for those who use online services: the cloud.

Interface 1

When first opened the interface is in two parts: to the left, a panel that lists services that have already been joined; and to the right a list of the most popular online services. The order is not alphabetical: Microsoft Exchange, MobileMe, Gmail, Yahoo!, AOL, and Other. MobileMe is expected to change to iCloud and this may bring about other changes to this panel.



If the user is already using services such as mail, or has one of the online accounts, the details will have been automatically entered when Lion was installed.

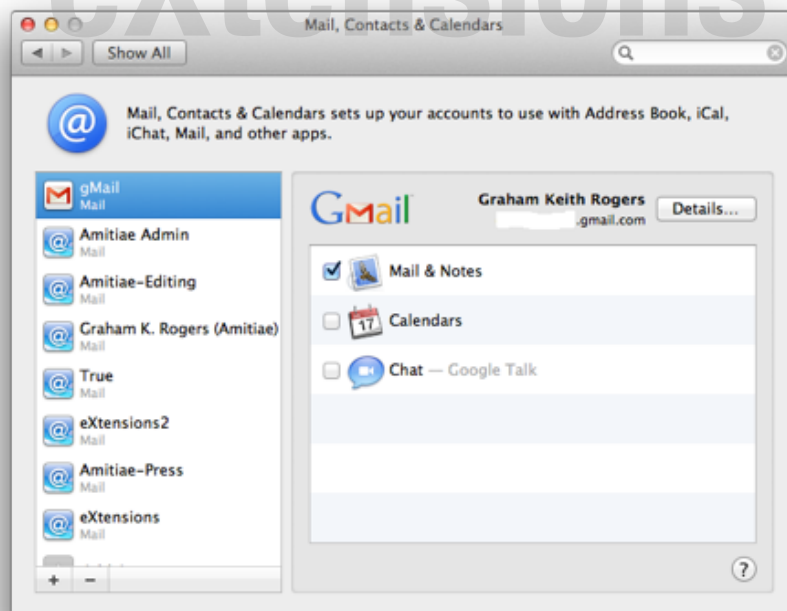
To add an account, we click on the + Add Account item at the bottom of the list of services. On a new computer — or new user account on a computer — to create an account, we press the same + Add Account item in the otherwise empty list.

Clicking on any of the listed services reveals a panel with Full name (usually already entered by the system), other identification details, depending on the service (e.g. Apple ID, Yahoo! ID, email), and password.

When these are entered (again depending on the type), the computer connects to the specific service and a panel with account details is opened. A user may then continue and create the account.

Interface 2

When an account exists and is listed in the panel to the left, highlighting the account name opens a panel with account details: email address, full name, description and password (only bullets are shown).



With some services, like MobileMe or Gmail, more information is displayed and a list of specific parts of the service (mail, calendars, chat) are shown with a checkbox beside each to show if it is in use. A button to the right opens a panel with account details.

If we choose to add a different type of service from those already specified, we may use the Other button and a panel opens that has several selections for the type of service:

- Mail account. Full name, email address and password are required.
- iChat account, depends on the provider/type. Names accessed using a button are AIM (default), Mobile Me, Mac.com, Yahoo!, Google Talk and Jabber. Screen name and password are required to start the process.
- A CalDAV account is a type of account that allows multiple users to access calendar data on a remote server using the iCal format. The panel revealed requires User name, password and server address. This is now used instead of MobileMe synchronization.
- A CardDAV account (like CalDAV) allows users to access calendar data on a remote server and is based on HTML. The panel revealed requires User name, password and server address.
- The LDAP account uses a protocol for accessing and maintaining distributed directory information services over an Internet Protocol (IP) network. The panel has the following data fields: Description, Search base (people, company), Scope — Subtree, One Level or Base — Server Address. A triangle below Server Address opens a Server Options box for entering port number; there is a checkbox for SSL (secure Sockets Layer). Below the data entry fields is a button for Authentication with options of None (default) or Simple.
- Mac OS X Server account allows a user enter server details running OS X 10.7 or newer. When the server address is entered a Continue button becomes live and pressing this opens a panel with server information and text boxes for Full Name, Account and Password.



Notes

Although some of the connection or account methods are self-explanatory and may be easy to complete for users with the information, some (like the LDAP account and the OS X Server account) which are more likely to be used by companies or organizations may require assistance from a system administrator.

Mobile Me is included for now although it is possible that this will change in the near future when iCloud comes on line and certainly in 2012 when Mobile Me is due to be closed down. Any suggestions as to what form the changes may take would be speculative.

Some of the entry types in Mail, Contacts & Calendars can be duplicated in Apple's Mail, through online web pages of the specific services, or via other applications. It is presumed that this preference is available as a form of central clearing in order to add new accounts easily and without going through the separate applications/sites, and as a way to assist users who are increasingly expected to access online such cloud services.

Some information (above) concerning account types was found on Wikipedia.

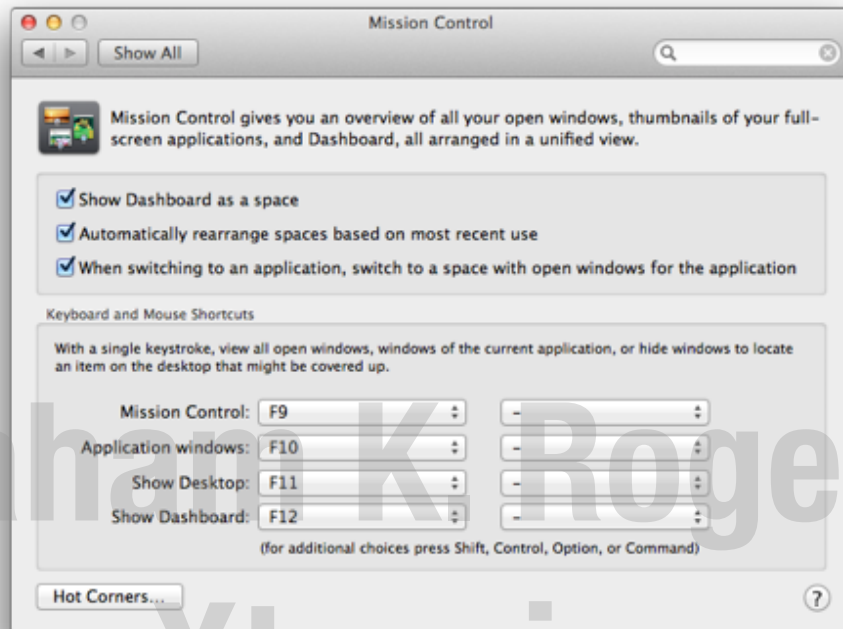
Mission Control



With OS X 10.7, Lion, Exposé & Spaces was replaced by a new, trimmed down feature: Mission Control which is displayed in System Preferences with a single panel, in two sections. At the top we have checkboxes for Mission Control. At the bottom are Keyboard and Mouse shortcuts, with a button for Hot Corners at bottom left.

Mission Control

Mission Control may be controlled by using the icon in the Dock, gestures (in [Trackpad Preferences](#)), or Key Commands: these commands are the same as for Spaces in Snow Leopard, although Apple now uses this word with a lower case “s” (spaces).



There are three checkboxes for activating features with Mission Control:

- Show Dashboard as a space. When Mission Control is used, users see a thumbnail display of Dashboard alongside the thumbnails of any desktops. When deselected, to access Dashboard the F12 key is used (by default).
- Automatically rearrange spaces based on most recent use. This can be used in conjunction with the Dock menu which allows a user to specify a space for an application (see Notes).
- When switching to an application, switch to a space with open windows for the application.

Keyboard and Mouse Shortcuts

Within the Mission Control Panel users may allocate specific keys for some of the operations which are similar to those that had been available in Exposé. Four commands are available.

- Mission Control: default key is F9 (fn + F9 if the fn option is used on notebooks). Mission Control activates, showing all open applications and desktops
- Application Windows: default key is F10 (or fn + F10). All open panels of the front application are shown. Any minimized panels are shown as smaller thumbnail panels.
- Show Desktop: default key is F11 (fn + F11). All application panels are moved off to the sides and the desktop is visible.
- Show Dashboard: default key is F12 (fn + F12). The desktop is moved to the right and the user has access to the Dashboard and any Widgets installed.

When clicked, each button reveals a list of keys which may be used to reallocate the command. For example, instead of the default F9 for Mission Control, we may choose Right Shift. This re-allocation takes affect immediately.

We may also add to these commands by pressing Shift, Control, Option and/or Command keys as we allocate the keys. For example, with Show Dashboard, we may press the Command button to change the key display and press the mouse (or trackpad) to accept the change (pressing the command key and clicking again removes the additional key from the combination).

Alongside each of the key command selectors is a second button, marked - (no action) by default. Users may choose to have the feature activated by specifying a mouse click. On my installation I may only choose Secondary Mouse Button or Middle Mouse button.

Hot Corners

A specific action may be allocated to each of the four corners of the screen. As the cursor moves to the corner, an action is carried out. Options available are Mission Control, Application Windows, Desktop, Dashboard, Launchpad, Start Screensaver, Disable Screensaver, Put Display to Sleep and - (no action).

Notes

- On new installations there is a single space (plus Dashboard) and the number of spaces should increase as more applications are opened. On some Macs that I installed Lion on, there were 6 spaces before (in Snow Leopard) and the same number with Lion. If Spaces was not used before, the default single space is available.

- At this stage, it is unclear exactly how the checkboxes in Mission Control are affecting the placement of applications. This may be due to the legacy code that has given me 6 spaces in Lion.
- New spaces can be added when Mission Control is being used by moving the cursor towards the top right of the screen. A new, semi-transparent desktop appears. By clicking in that new space, it becomes a new active desktop and is allocated a consecutive number (e.g. Desktop 7).
- When an application icon is shown in the Dock (open or not), a user may use the Options menu and Assign the application to “All Spaces” or “This Space” or “None”. The last is available when the application is already assigned to a specific desktop.
- Desktops may be removed in the same way we may remove apps in iOS or Launchpad, by putting the cursor over the top left of the desktop icon when Mission Control is active and clicking on the remove icon.

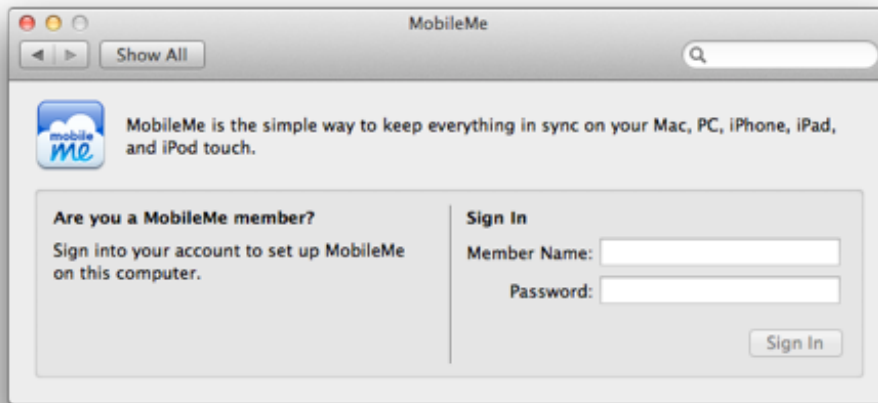
Graham K. Rogers -

MobileMe



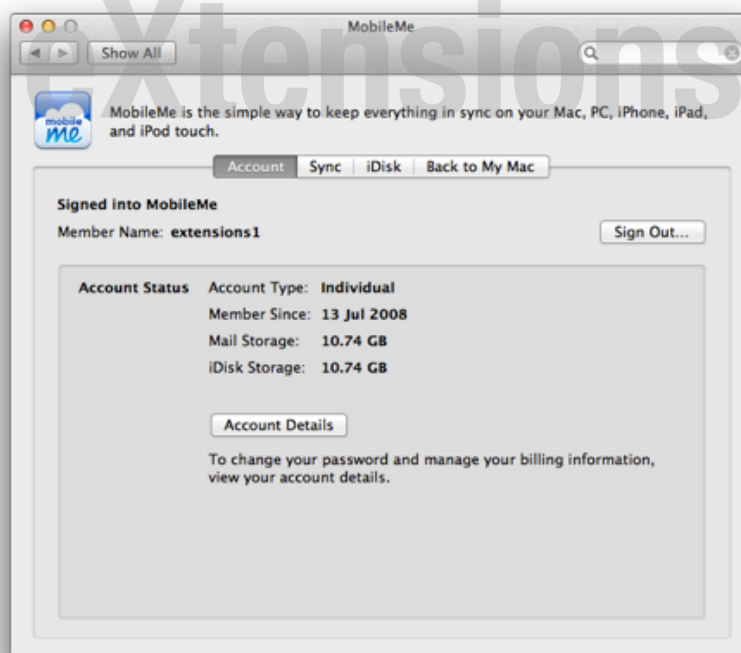
Mobile Me is a service that evolved from iTools and .Mac. It is intended to synchronize data between several computers and devices: Macs, iPhones, the iPod touch and PCs. As part of the changes that are to be brought to OS X and to iOS (with the iOS 5.0 release) a new service, called iCloud is to be introduced and this will replace the current MobileMe.

Several changes will be made to the synchronization services. At this time, however, MobileMe is still available in System Preferences for current users.



Account

When the panel first opens and the user is not logged in to MobileMe, there is only an option for a current user to sign in. It is no longer possible to subscribe to this service as a new user. When a user is logged in, the preference panel is split into four parts: Account, Sync, iDisk and Back to My Mac. The first section is used for displays details of the account.



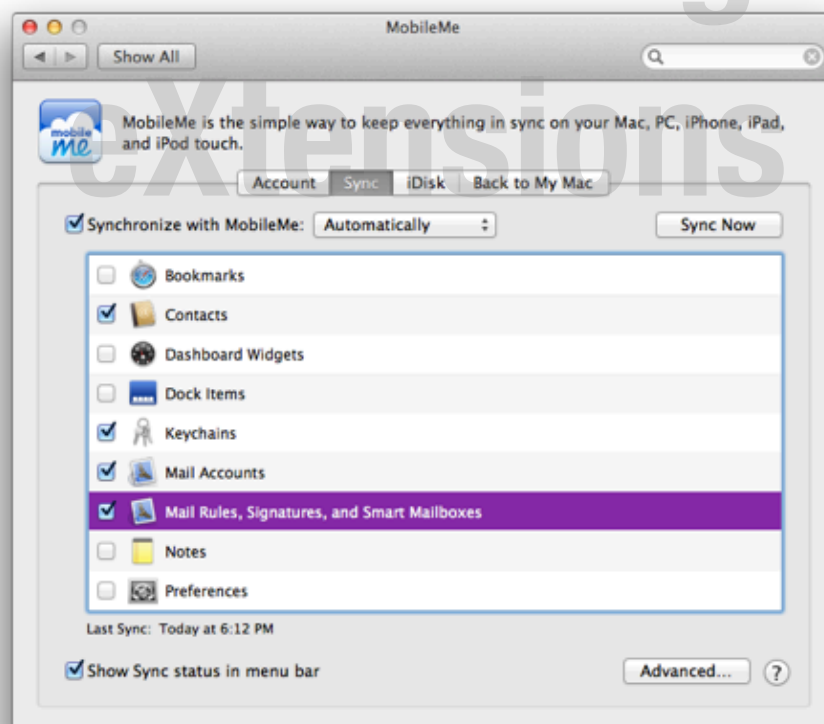
A button to the right is to sign out of the account. A button near the bottom of the panel is for Account Details and clicking on this opens a secure web page. This allows a user to manage the account: password and (currently) billing details. Current information on billing reveals that my account has been extended until Jun 30, 2012 at no extra charge, which is when MobileMe is expected to cease.

Sync

The second pane, Sync, is used to select the specific services that are to be synchronized between the various computers and devices. Examples of these are contact addresses, Mail Accounts, as well as bookmarks and keychains. In all 9 services are listed and each is activated using a check box. Synchronization of calendars (iCal) is no longer listed. This function is now done via an iCalDEV setting in iCal preferences (Accounts) and Mail, Contacts & Calendars preferences.

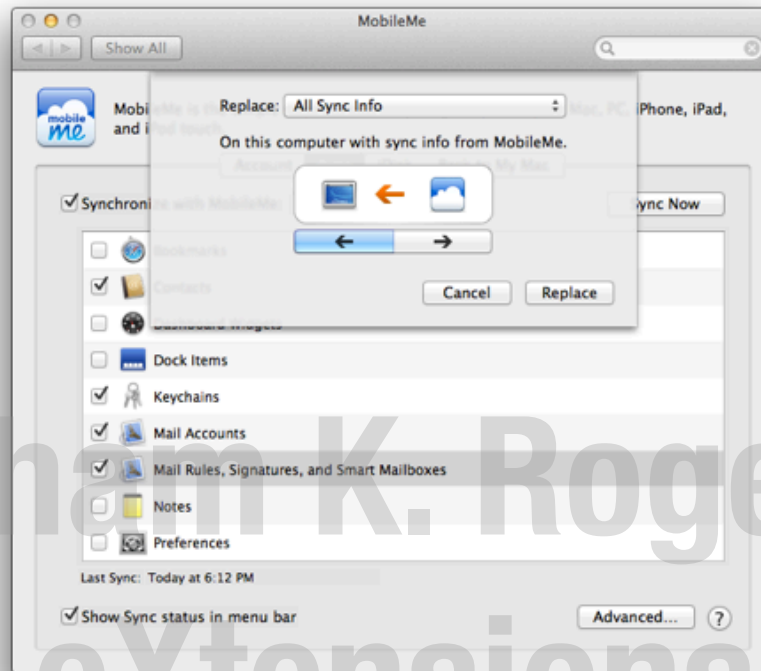
Above the list the method of synchronization may be selected: manual or automatic. Choosing the latter also requires a time period to be entered (every hour, day or week) or Manually. To the right of the selector, is a button marked Sync Now, which may be useful for a first time connection, or to update when data has been changed.

At the bottom of the Sync panel is a check box to allow the addition of a menu bar icon which itself may be used to activate a sync or to open the preferences panel.



An Advanced button to the right, reveals a panel that displays computers that are registered for the user and which synchronize data. When an item is highlighted a button appears that allows a highlighted entry to be unregistered.

Below the panel is a checkbox to show an alert. A button sets a parameter for this: when any, more than 5%, more than 25% or more than 50% of the data is changed. Below are two further buttons. The first is to reset the data being synced. When clicked the user is prompted to select a computer to act as master (master/slave) by using a direction button. This is activated by a Replace button. Cancel is also available. A final button is marked, Done.

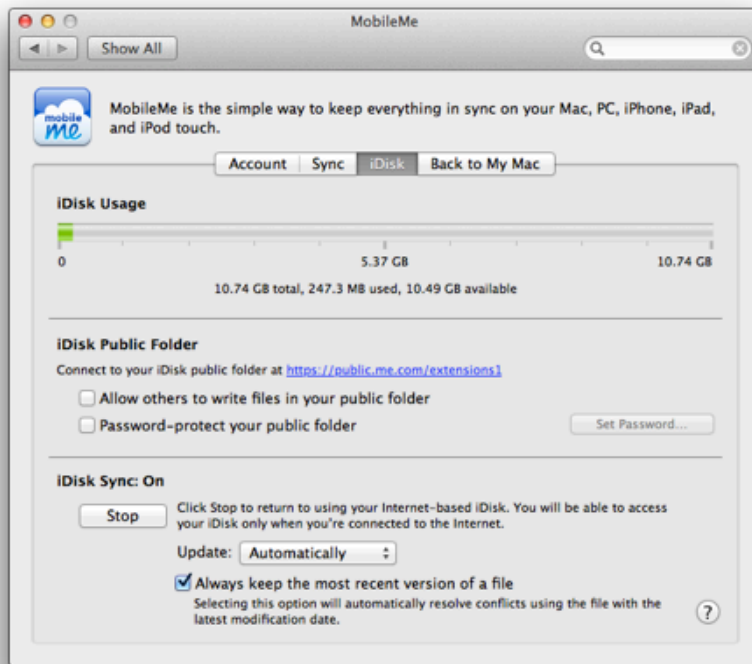


iDisk

iDisk is a virtual hard disk that synchronizes data between computers. A file placed in the iDisk on one computer will appear on any other computer with the same feature active (and allocated by the user). An iDisk app is also available for iOS devices. A progress bar indicates the amount of space used and free. The default space is 10GB. This may no longer be increased and the Upgrade Storage button has gone.

There is also a Public folder so that a file dropped in the disk, may be accessed by others. The URL of the public folder is shown in the panel and this is a live link. A checkbox below this allows others to write files in the public folder. A second check box turns on password protection. When this is on, a button to the right allows a user to create the password.

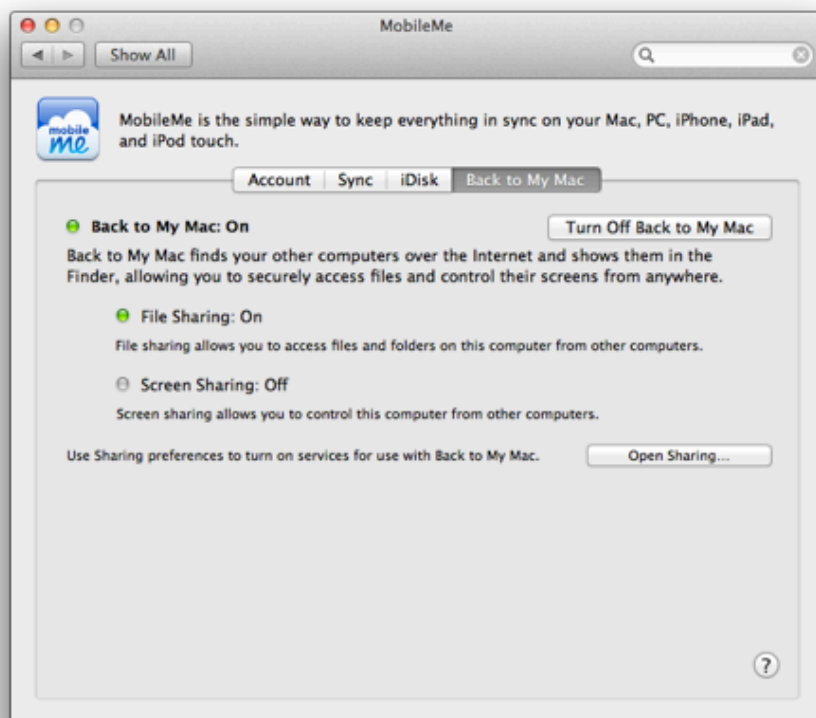
The lowest section of this panel is for turning the iDisk feature On or Off. A button allows either manual or automatic updating of iDisk. A final checkbox is to help avoid conflicts and ensures that the most recent version of a file is kept.



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Back to My Mac

The final panel in the Mobile Me preferences is Back to My Mac. This allows remote access to a computer, although in practice this may depend on the network connection method.



Either NAT port mapping protocol (NAT-PMP) or Universal Plug and Play (UPnP) need to be supported by a router for this to operate effectively. In the past not all networks/routers supported this.

This panel has only two main controls and a light icon to show if the service is on. When off, this icon shows a grey color. When on, green. If the service is on but not properly connected the icon will show amber.

A large amount of the panel displays a text explanation of the feature above a Start button — Turn On Back to My Mac. This changes to Turn Off Back to My Mac once the service is activated. Any problem brings up an additional text explanation with a yellow warning triangle.

There are two services possible when this is active: File Sharing which gives access to files; and Screen Sharing, which enables control of the computer remotely.

These features are turned on or off in [Sharing Preferences](#) and a button at the bottom right allows direct access to this preference.

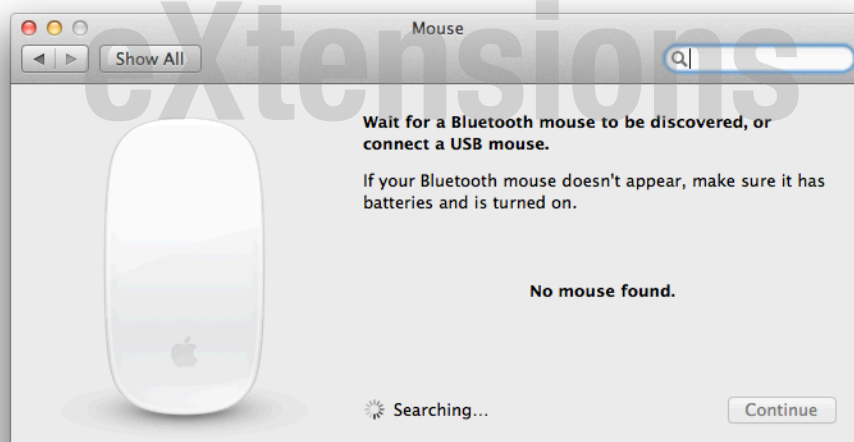
Note

At this stage there is a considerable amount of speculation about how the MobileMe replacement, iCloud, will work. As has been seen already iCal has been moved to a perhaps more effective location. It is not known which parts of the synchronization services will survive or if any will be taken over by other applications (or even third party solutions). As and when there is concrete information, I will update or amend the text here.

Mouse



Mouse preferences have evolved in the last couple of releases of OS X from Keyboard & Mouse preferences. At one time this panel also controlled the [Trackpad](#). The panel will change depending on which devices are attached. On a MacBook Pro, which only has a trackpad, the Mouse panel opens with a generic image of a white mouse displayed to the left.

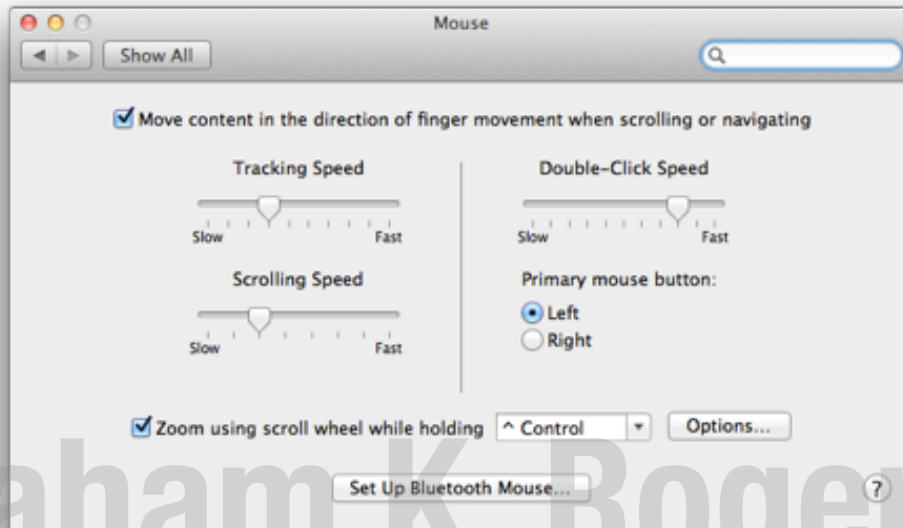


A caption indicates that the system is searching for a Bluetooth mouse, or asks for a USB mouse to be attached. Added advice suggests that if the Bluetooth mouse does not appear, a user should check that it has batteries and is turned on. While the panel is open and no mouse is connected, a gear-wheel spins near the bottom of the panel. Alongside is the word, "Searching. . . ."

When any mouse is connected to the computer, the panel changes. The new one will depend on the type of mouse connected.

Two-button Mouse

In the screen-shot below the panel changed from the “no mouse” display to the settings for a two-button mouse in under 2 seconds when I attached a Microsoft Basic Optical Mouse that was in my office.



We have two sliders to the left of the panel for Tracking Speed and Scrolling Speed, while on the right of the panel is a single slider for Double-click speed. Below the Double-click speed slider are two radio buttons for selection of the primary mouse button. Some prefer this to be the Left click, while others prefer the Right click.

An additional feature with the Mac for a while has been the ability to zoom using the scroll wheel. There is a check box below the sliders to turn this feature on. By default this works when the user presses the Control key. A box to the right of the check box allows selection of other keys (we may also type in combinations — not all keys are available).

An Options button alongside allows options to the way the screen works with a zoomed image:

- Continuously with pointer — the screen seems to float around as the cursor is moved;
- Only when the pointer reaches an edge — the screen display moves only when the edge of the screen is reached by the cursor; or
- So the pointer is at or near the center of the image — the cursor stays at the center of the screen while the screen moves up/down, left/right.

A checkbox at the bottom of this panel turns on Smooth Images. When deselected we see jagged edges of enlarged display images. Smoothing makes these edges less-pronounced. We may use Option + Command + \ to turn this feature on or off.

At the bottom of the mouse panel is a button marked Set Up Bluetooth Mouse. This takes us back to the opening panel (above).

Magic Mouse

Apple's Magic Mouse combines the functions of a trackpad with the mouse. It connects to the computer via Bluetooth.



When the device is recognized by the Mouse preferences a new panel appears with a display that shows mouse functions and options for gestures. The pane is in two parts: Point & Click; and More gestures.

Point and Click: To the left are three options settings selected using checkboxes:

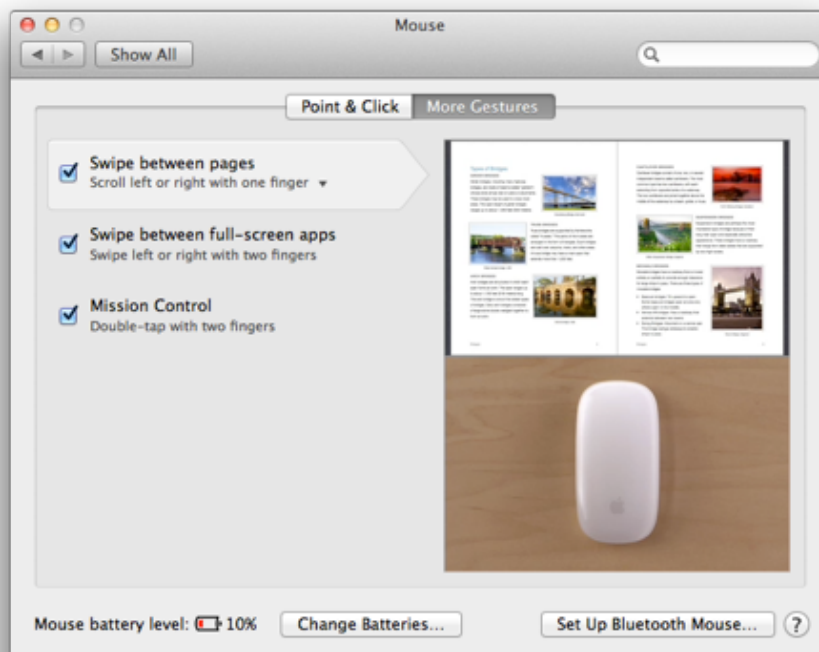
- Scroll direction which like the Trackpad preferences allows the use of the scroll gesture to be natural (like the iPad); users who find this unsettling may deselect this;
- Secondary Click allows the selection of either the left or right side to be used for this;
- Smart Zoom is a new gesture (also in Trackpad preferences) to allow a panel in some applications to zoom in and out. Only some applications (e.g. Safari) will allow this.



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As each of the checkboxes is highlighted by a cursor, a video of the action is shown in the right hand side of the panel. Below the three checkboxes is a slider for tracking speed.

More Gestures has three checkbox options:



- Swipe between pages allows the user to swipe left or right with one finger (other options are available for swipe)
- Swipe between full-screen apps is a gesture that uses 2 fingers. There are no options, unlike the Trackpad which uses 3 or 4 fingers for this action.
- Mission Control is activated with a double-tap using two fingers.

At the bottom of both panes there is a display to indicate the power remaining in the batteries of the mouse. If this is low a user will need to change the AA batteries. The Change Batteries button displays battery icons and instructions.



A button at bottom left, like on other panels, is available to set up a Bluetooth mouse. This brings up a small panel in which any nearby units are identified and may be selected.

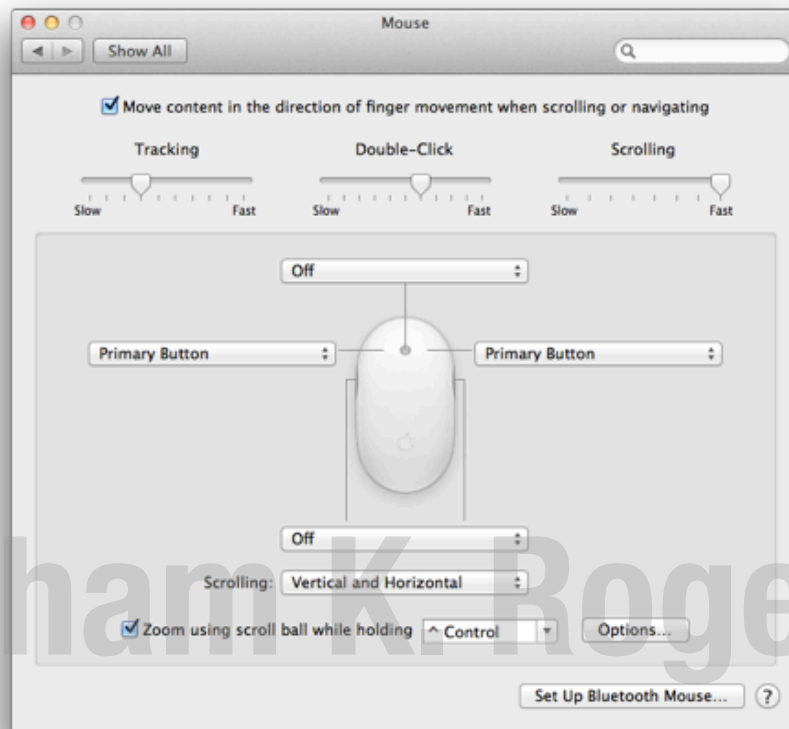
Mighty Mouse

The Apple, “Mighty Mouse” (USB) was an earlier attempt to provide more functions to a mouse and has several tunable options giving a similar output to a 4-button mouse. Instead of a scroll-wheel it has a small scroll wheel which was its Achilles Heel. It is now no longer sold, but some are still used.

The Mouse preferences panel for this device is in two main sections. The top displays the three sliders: Tracking, Double-Click and Scrolling. The main area of the panel shows a diagram of the mouse and the tunable functions for each type of input.

The normal mouse clicks for primary and secondary buttons may be allocated to left or right sides (angling the devices activates the click). However as well as these normal functions, these clicks can also be used for Exposé (All Windows,

App Windows, Desktop), Dashboard, Application Switcher, Spotlight, Mission Control, and Other. When Other is selected, a Finder window opens a Scripts folder thus making this highly tunable.



The scrolling button can be used for scrolling in several ways and a checkbox beneath the mouse diagram allows selection from Vertical & Horizontal, 360°, Vertical only, and Off. The button options are the same as for the right/left buttons with the addition of Button 3 and Off.

At the waist section of the mouse are buttons both sides. When pressed — the action is like squeezing — this acts as one button. This does not have Primary or Secondary button options, but the other selections (Exposé, Mission Control, etc.) are available plus Button 4 and Off.

Like other panels, there is a checkbox at the bottom for Zooming with the scroll-ball. The default as normal is the Control key. Other keys may be allocated and Options may be chosen in the same way as for the 2-button mouse (above). There is also a button that takes a user to the panel for setting up a Bluetooth mouse.

Single-button Mouse

These are less common now but there are enough surviving to provide a panel specifically for the type. There are two controls: sliders for Tracking Speed and Double-Click Speed. Below is the button for setting up a Bluetooth Mouse.

Notes

OS X System Preferences will have the ability to handle input with most mice (and I have checked the dictionary — the device plural is mice). I have used a number of generic mice with Macs as well as the Microsoft mouse (above). None needed additional drivers for my purposes. I would suggest that if users wish to use such a 3rd party input device, they try connecting the mouse first before installing any additional software, which itself may cause conflicts initially, or later when the operating system is updated.

Network



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eXtensions

Network preferences saw no external changes with the update to OS X 10.7, Lion. There were, however, a couple of changes to the Advanced sections.

Locations

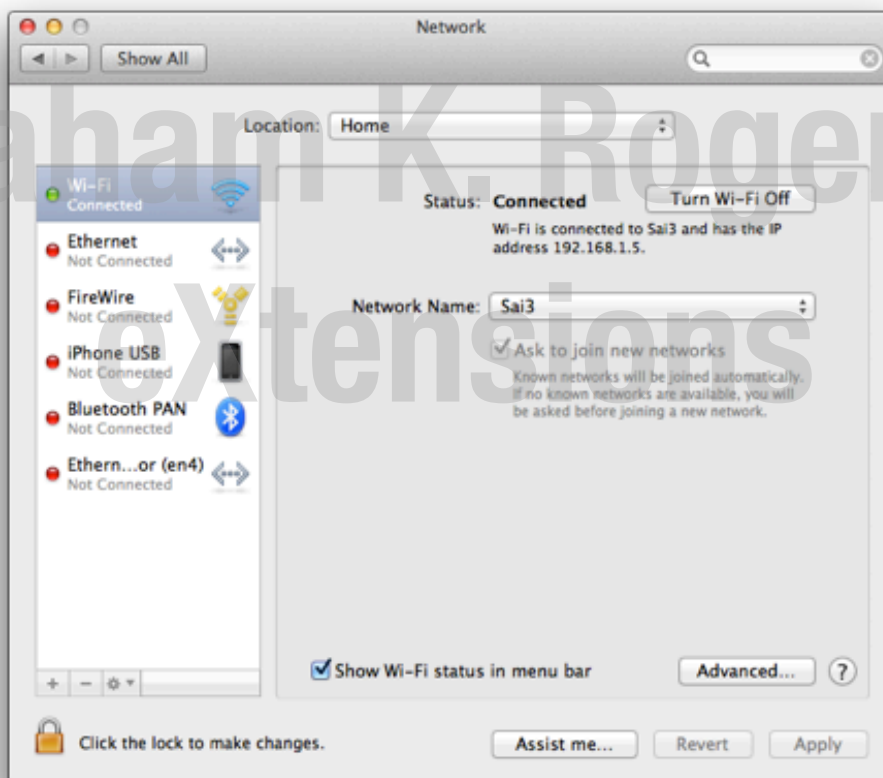
Network Preferences is used to set or change parameters for linking a computer to a network and to the Internet. This section for making connections to the outside world was completely rewritten for OS X, 10.5 and remains basically the same when first viewed, however there are some cosmetic differences and the Advanced panel has lost the Ethernet pane and a new Hardware pane is now added. There are some changes “under the hood”.

When the Network preference panel is first opened, at the top is the Location button. With the Mac, the default location is “Automatic”, but those who use a computer in a number of places — home, office, hotels — may want specific settings for each. This is strongly suggested. Settings change depending on the connection being used and there is no one-size-fits-all.

Once set up, the new location is activated either in System preferences or, more easily, by an item in the apple menu (top left of the menu bar). Once these are added, the menu shows the locations, plus a link to Network Preferences. The Location button at the top of the Network preferences panel has the locations list plus “Edit Locations”. In the Edit section a click allows users to add or duplicate a location set.

Connections

Below the location button, are two major parts to the panel. The left side displays the installed connections (for the particular Location) and the right, details of the highlighted (current) connection.



The connection types are as in earlier versions of OS X although the icons seem slightly clearer. Each connection type has a colored “light” alongside: either red (off), green (connected) or yellow (on but not connected). We see the yellow when WiFi is turned on but not linked to a system, for example; or when the Ethernet cable is plugged in but the router has not allocated an IP number.

The bottom of the panel has three small icons: + (plus), - (minus) and a gear-wheel for changes to be made. When any changes are made to this or any other setting, the Apply button on the main Network Preferences panel becomes active and must be pressed before the changes take effect.

The + icon allows a user to create a new service. Options are Wifi, Firewire, Ethernet, Bluetooth DUN (“a Bluetooth profile . . . designed to link an Internet-enabled device such as mobile phone to a device such as a laptop or PDA” — [PhoneScoop](#)). Below a dividing line in the Service types panel are three other types VPN (virtual private network), PPOE (Point to point protocol over Ethernet) and a new addition, 6 to 4 - a transition method for migrating from IPv4 to IPv6. It is advisable to check with the service provider or a system administrator if users are unsure of which method to use.

Once a connection method is selected, a user will type the name in the box below and click on the Create button. There is also a button marked Cancel.

The - icon will remove the highlighted service. This will occur immediately and there is no warning. If this is not correct, a Revert button beneath the main panel will restore the setting.

The gearwheel icon has several useful functions:

- Duplicate service — the service settings are copied when a new name is entered in a text box;
- Rename Service: the connection may be given a new name by typing in a text box
- Make Service inactive. The connection type is listed as inactive and the information is shown in the main information panel. This gearwheel item changes to Make Service Active, so this may easily be changed back.
- Set Service Order. A small panel appears and the services are listed. They may be dragged into the user-preferred order (e.g. Wi-Fi above Ethernet).
- Import Configurations opens a Finder menu and users may select from a file that has the required data. This may be useful when connecting to corporate networks.
- Export Configurations is currently greyed out on all the connection types shown on my computer.
- Manage Virtual Interfaces. When selected, this opens a panel in which any such interfaces would be listed. There are three icons: +, - and a pencil icon which is for editing list item when highlighted. Pressing + allows a user to select from a new VLAN — Virtual Local Area Network — or new link aggregate (use of multiple Ethernet ports together). These are aimed at corporate network connections and would not usually be available to a home user.

Status

The larger panel changes depending on the selected connection. At the top is the condition of the service: Connected or Not Connected. A short description of the service is below and displays the method of configuration (which can be changed) and basic details of the connection, such as IP numbers. To the right of the Status display is a button marked Turn Wi-Fi Off (or Turn Wi-Fi On). In earlier versions of OS X this used the proprietary term, Airport. Apple now refers to Wi-Fi.

What is displayed below will depend on the type of service highlighted (not necessarily in use), so is linked to the Advanced button at the bottom of the panel.

Editing changes to a service are made by pressing the lower button marked, "Advanced", where there is detailed information concerning Wi-Fi, TCP/IP, DNS, WINS (Windows Internet Naming Service), AppleTalk, 802.1X (for authentication), Proxies and Hardware.

To the left of that Advanced button is a check box for display of a Wi-Fi status icon in the menu bar. This reveals a menu that allows selection of any visible networks. Users may also turn Wi-Fi Off (or On if already off), Join Other networks, Create a network (the ad hoc computer to computer network), or open Network Preferences.

eXtensions

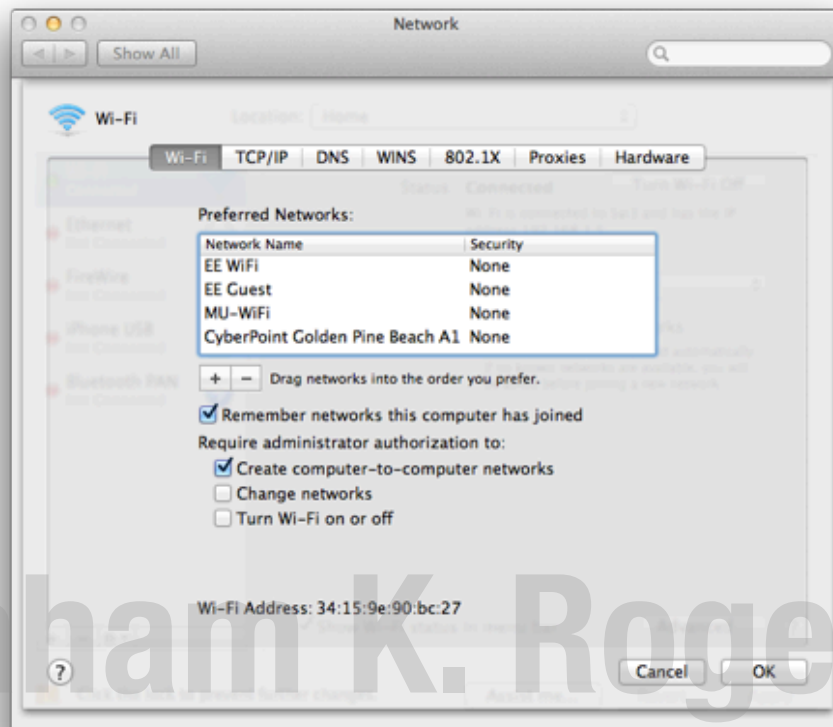
Advanced

The sections most commonly needed are TCP/IP, DNS and (sometimes) Proxies; the rest are usually configured automatically or display settings created elsewhere in Network Preferences. Once the settings are entered, we return to the main panel and press Apply.

Wi-Fi displays a list of networks that the computer has connected to. As users move to different hotels or other places where they may access the internet, the list will grow. If the users home network is not at the top (click and drag), the system will search through all others before making a connection. This will take time and may delay (or prevent) proper access. There are + and - icons below the list to add or remove networks. It may be useful (particularly for those who travel) to cull the list occasionally.

A checkbox below, "Remember networks this computer has joined", is useful in that a speedier connection may be created when using a regular link, but (above) there is a negative side to this too. A series of checkboxes below will make it necessary to have Administrator authorization to create computer to computer networks (see also, Sharing for setting up such ad hoc links); to change networks; or to turn wi-fi ON/OFF.

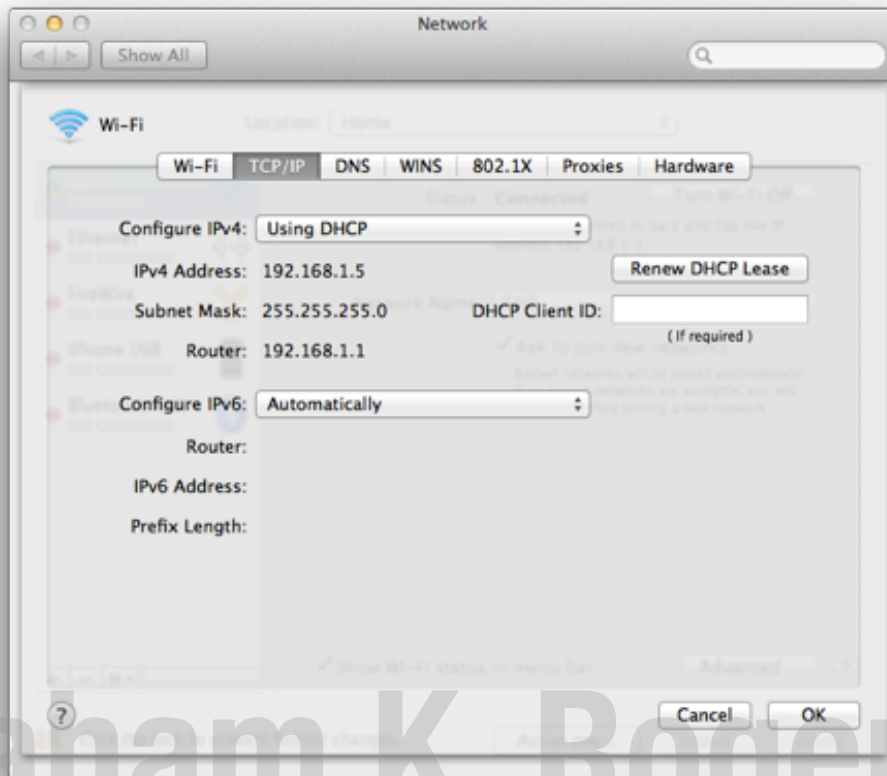
At the bottom of this panel is a display of the Wi-Fi Address (also called the MAC number — see Hardware, below). A button marked OK accepts any changes. There is also a Cancel button.



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TCP/IP (Transfer Control Protocol/Internet Protocol) is used to connect a computer to the internet. A number (IP number) is allocated to the specific connection by the router. In most cases we use DHCP, a dynamic (automatic) allocation. In some cases, we may want to specify the IP number and a button at the top of the panel allows four methods to allocate IP numbers: Dynamic, DHCP with manual address, using BootP (an older protocol), Manually and Off.

Users should be wary of changing these settings if they are not aware of the possibilities, or are not acting under advice of someone who is. Below the button is a display of the current IP and router settings. A button further down is for the way IPv6 (a newer type of IP recognition) is configured. The default setting is Automatic. We may also select from Manually and Link-local only (for use in LAN connections). If IPv6 is connected, the settings are displayed below the button, similar to those for IPv4.



DNS is used to help identify a website name as machines only work with numbers. A URL is converted to an IP number invisibly by a server. The numbers may be assigned automatically by the router or added by the user. The service provider should have settings available for users. There are other numbers that may be suggested, including [OpenDNS](#).

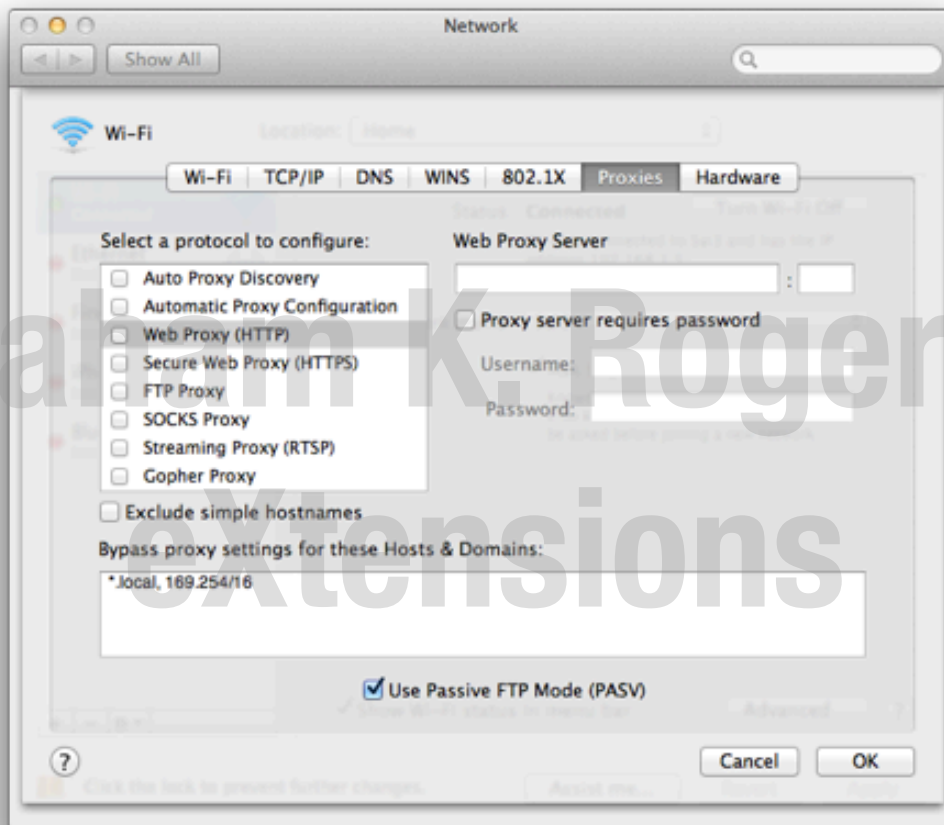
Depending on the carrier, some DNS numbers may be more or less effective. In the DNS pane, the left panel lists any DNS numbers entered. The right panel is for search domains that a user wishes to include. Clicking the + icon reveals a text box in which either an IP number or a domain name may be entered. These are servers on the internet that direct DNS searches (not Google searches).

WINS (Windows Internet Naming Service) is used for support of NetBIOS over the internet and assists when connecting to remote networks that use NetBIOS Names. [Microsoft Technet](#) has an explanation of this online and lists several benefits. New Macs may have a NetBIOS name added automatically to the panel, with a generic Workgroup name of “WorkGroup”. These may be edited. A list of WINS servers may be expanded with the use of the + icon at the bottom of the panel.

802.1X is a standard for access control to enhance security. Users may add a profile to the panel and details of any profiles used will be shown in the right side of this pane. A system administrator will advise of the need for this.

Proxies (or proxy settings) are a way for a system administrator to protect the network by filtering all requests for internet access. Home users do not usually need to worry about these. A system that has proxy settings should provide the details to authorized users.

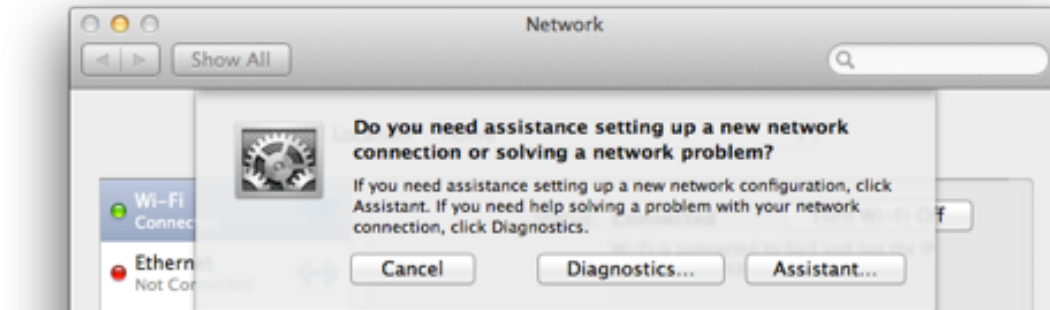
Some settings will require authorization to ensure that the connection is being made by a user with a legitimate reason to access via the service. When one of the items in the list is selected or highlighted, text boxes are available to the right in which a user may enter relevant information. Details may include a URL and a specific port number (like 8080).



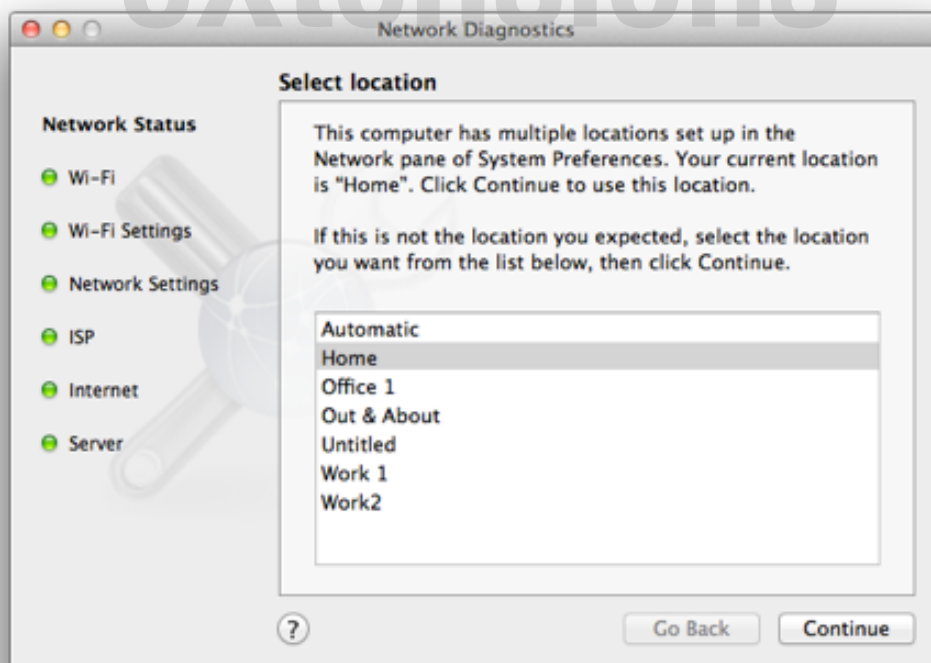
Hardware is a new panel and has three items: MAC Address, Configure and MTU.

- MAC Address is a network identifier specific to the computer (or other device)
- Configure has a button with the default setting of Automatically. Manually is also available.
- MTU or maximum transmission unit is a setting concerned with the largest protocol data unit or (internet) packet size. When Configure is set to Automatically, this is greyed out and shows Standard (1500). When Configure is set to Manually, users have an MTU choice of Standard or Custom. The usual health warning applies here.

When any settings in the Advanced panel are changed we need to click OK to accept and return to the main panel. To have the changes take effect we press the Apply button at the bottom of the panel. Two other buttons are available, Revert, and Assist Me. Revert (as this implies) should remove the last change.



Assist Me provides help in two ways: for those setting up a network, or for diagnostics of a network that is not behaving itself. Pressing Diagnostics starts the Network Diagnostics utility which runs through a series of checks and reports on the status, or advises where a problem may be. Assist Me, starts a Network Setup Utility that helps a user set up a new connection in easy to follow steps.

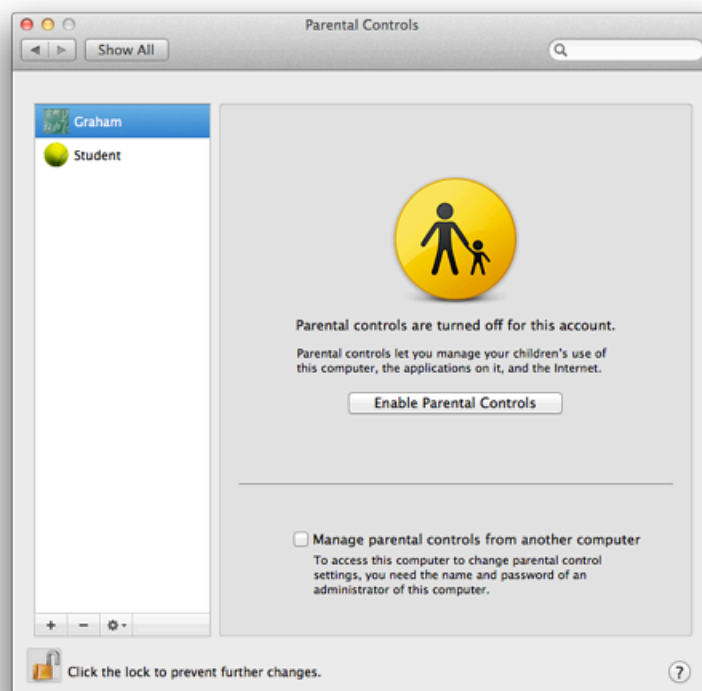


Parental Controls



Parental Controls is an important section that has a number of uses over and above allowing mothers and fathers to apply any protections they see fit. It may also be used in a school or even an office environment to restrict access to applications and to internet use, so may have a commercial value as well.

Although there was some ability to limit user access in OS X versions 10.2 and 10.3, Parental Controls arrived fully as part of the standard setup for home users' Macs with OS X, 10.4, Tiger. With the preferences, it was possible to restrict access to any applications and also specified URLs: in essence allowing access only to approved sites. With OS X, 10.7, Lion, this facility has been more revised and strengthened. As well as the ability to prevent use of certain applications, the limits that may be set to URLs include both specifics and types of sites, while email access (sending and receiving) can also be controlled.



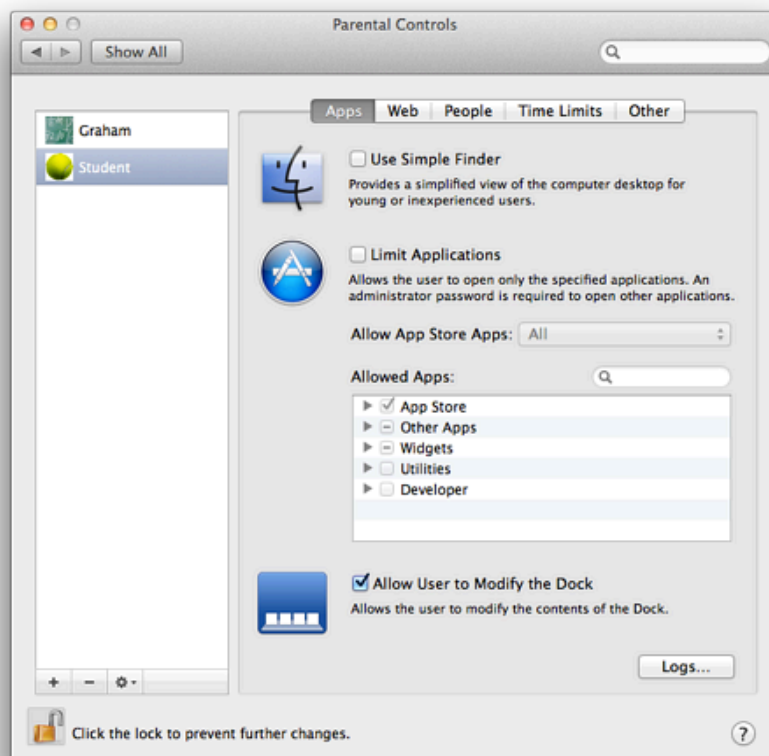
Logs of such activities may also be monitored. On top of these restrictions, is the ability to limit the number of hours that the child's account is used, including beginning and end times. This will help those families with those addicted to playing games non-stop.

Parental Controls is off by default and does not apply to an Administrator account. When the preference is opened, other accounts are shown in a panel. When one of these is selected the controls can be activated. The panel then displays five buttons: Apps, Web, People, Time Limits and Other.

As a guide to how this feature has been changed, the sections were previously, System, Content, Mail and iChat, Time Limits and Logs. Using the "gear" icon that accesses shortcuts for actions, settings for one account can be copied and pasted to another. The + and - icons here will add (create) a new account or offer to delete the highlighted account. This is not to turn off Parental Controls.

Apps

The first button (Apps) controls the Finder and applications. It is in two sections. The upper panel turns on a simple Finder using a checkbox: in the account a basic panel displays icons for permitted applications. When parents work in that account, they can turn on the full Finder with an Admin password.

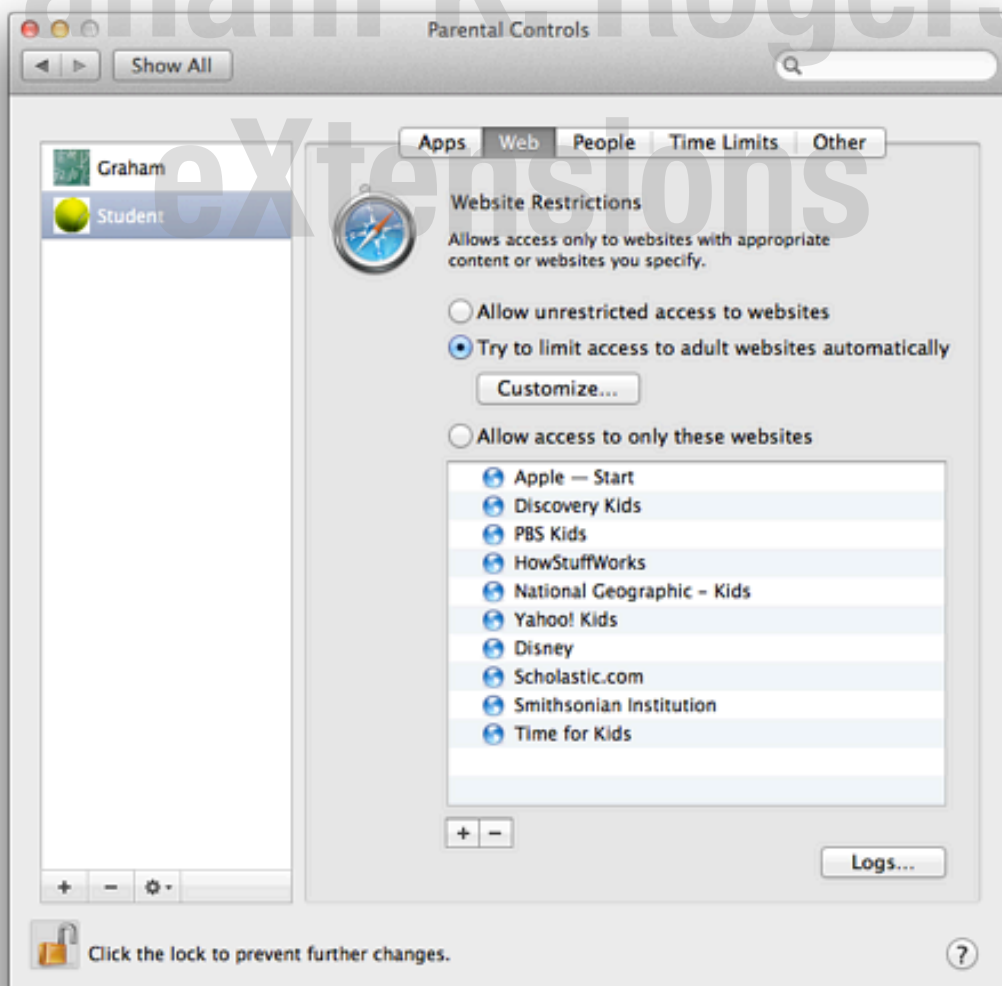


A second checkbox turns on application limits: the user in that controlled account may only open specified applications. When this is on, a button marked Allow App Store apps is live, with selections from “All” to “Don’t Allow” with age limits between (Up to 4+, 9+, 12+, 17+).

The lower panel controls programs that may be used (with or without the simple Finder). By default, all are allowed. By unchecking boxes any or all may be deselected. At the bottom of this panel is a checkbox to allow the user to modify the Dock, if the parent allows this.

Web

This section controls web restrictions which are in three parts: all allowed; limited access, which tries to use recognized content filters, and can be customized to allow certain sites that are erroneously blocked, or block those that have been wrongly allowed

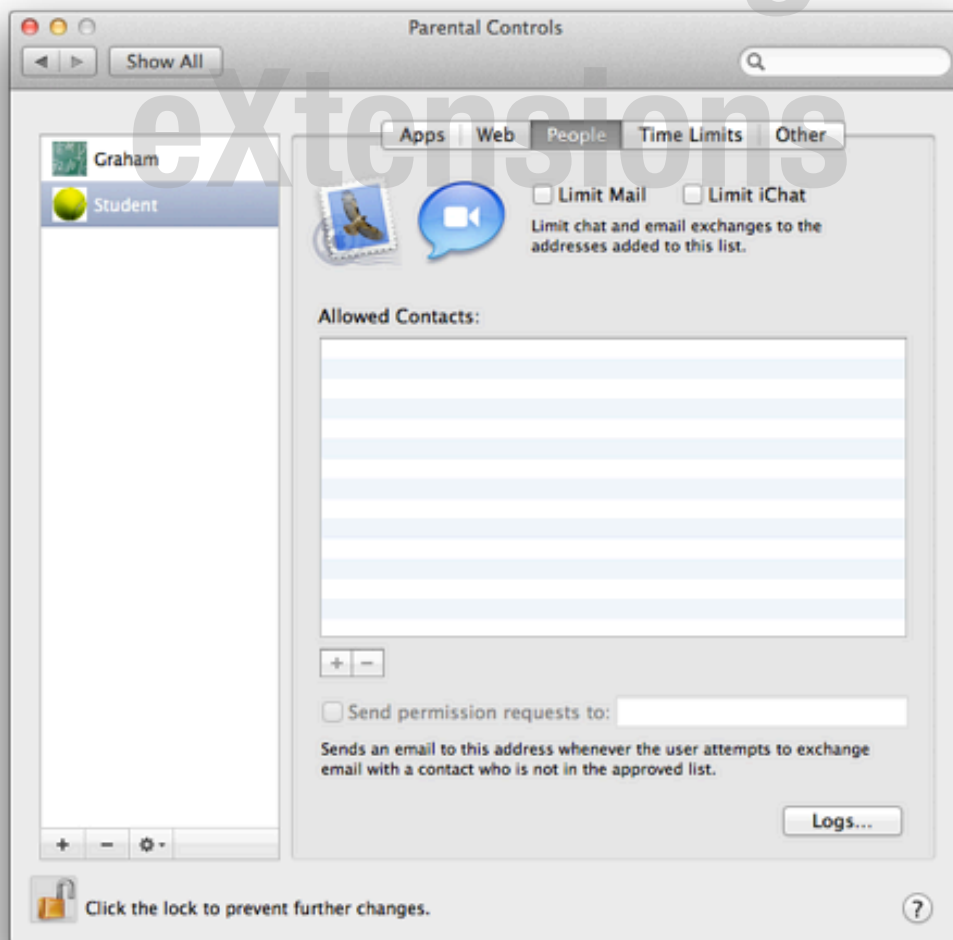


A third selector allows access only to specific sites (a “whitelist”). The whitelist already contains a number of sites that may be considered safe, such as National Geographic, Disney and the Smithsonian Institute. Apple – Start is also included. At the bottom of the panel are + and – icons so that parents may add suitable sites and any sites on the list may be removed.

For more information on restricting internet access, there is a useful [Knowledge Base Document](#) available online. It was updated for OS X 10.6.

People

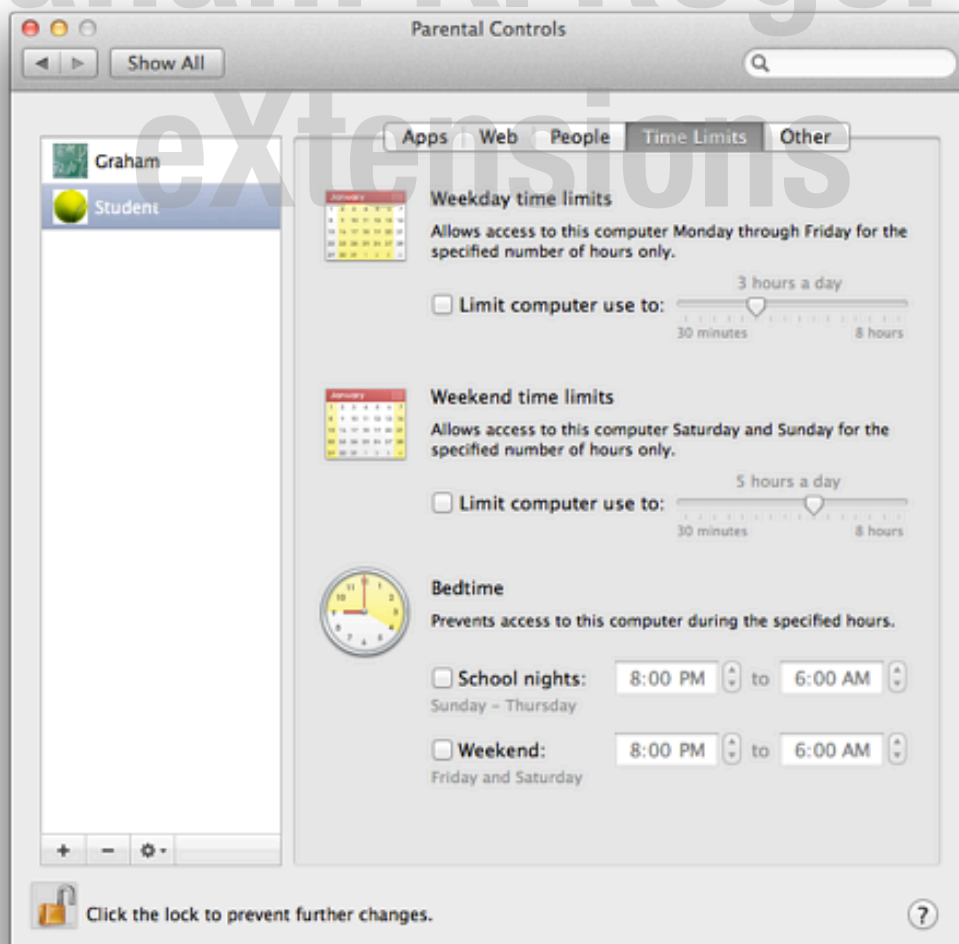
As important as these limits to websites, are controls on using e-mail and chat. Using a checkbox, the parent can specify addresses which a child can send to, or receive emails from. With another checkbox to the right, address restrictions are also applied to the Apple messenger service, iChat. Other message services (such as MSN) are not restricted via this panel. A checkbox in this panel notifies a parent if the child tries to exchange mails with someone not authorized.



Time Limits

There are three sections to the Time Limits panel: Weekday and Weekend limits, and Bedtime.

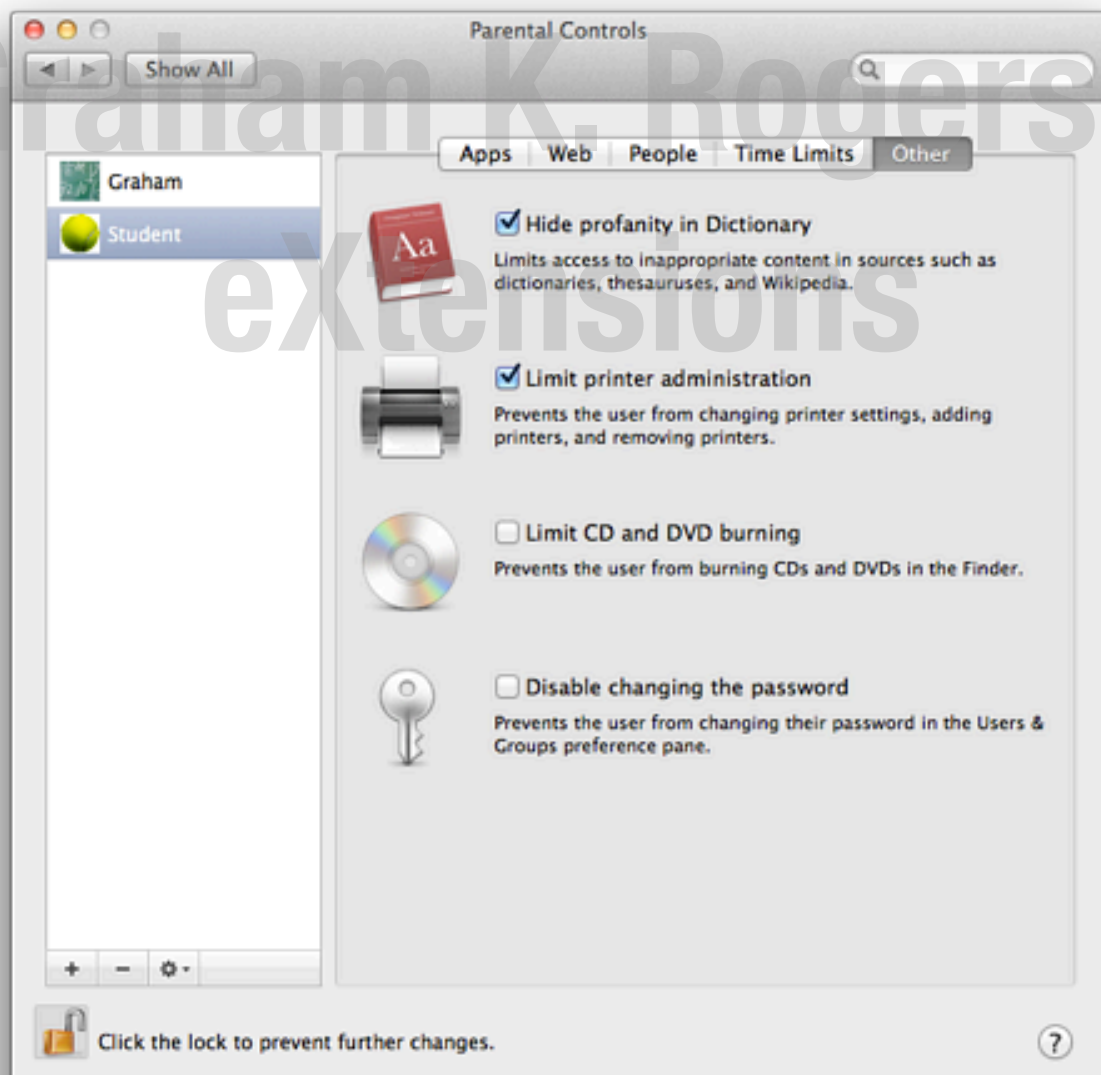
- The Weekday section restricts computer use to a pre-selected number of hours each day. The hours may be adjusted using a slider from 30 minutes up to 8 hours.
- The Weekend panel is identical to Weekday, but recognizes that Saturday and Sunday are not school days and the child may have more free time. The decision is the parent's. As above, the slider runs from 30 minutes up to 8 hours.
- The Bedtime section prevents access to the computer during certain hours. Cleverly, it is in two sections, selected by checkboxes: Sunday to Thursday, and Friday and Saturday. The default times in the windows for each are 8:00 am and 6:00 am. Both may be changed to any time within the 24 hour day. As earlier, this section does not take into account that some cultures do not have a Saturday/Sunday weekend.



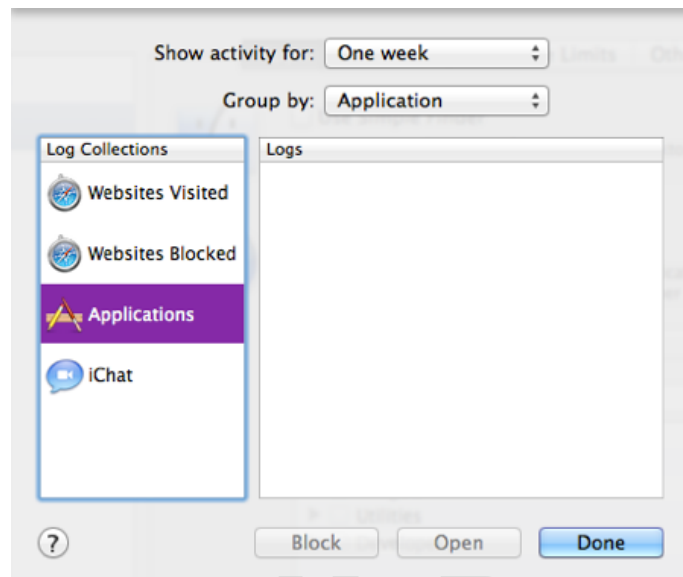
Other

The final pane in Parental Controls has four checkboxes, each of which controls access to a specific feature or function.

- Hide profanity in Dictionary will limit access to what is called “inappropriate content” found in dictionaries, thesauruses and Wikipedia. This was ON by default.
- Limit printer administration controls the printer administration and a user may not add or remove printers or change printer settings. This was ON by default.
- Limit CD and DVD burning prevents the user burning a disk via the Finder. This was OFF by default.
- Disable changing the password, when checked, will not allow the user to change the account password. This was OFF by default.



The last item in Apps, Web and People panels (not Time Limits or Other) is marked Logs and reveals the activity in that specified account. It may only be accessed by a user with Admin privileges.



Sadly, these days, while the internet has developed into a fabulous resource of news, research sources and information, it has also become a risk for the same young users who could benefit most from its use.

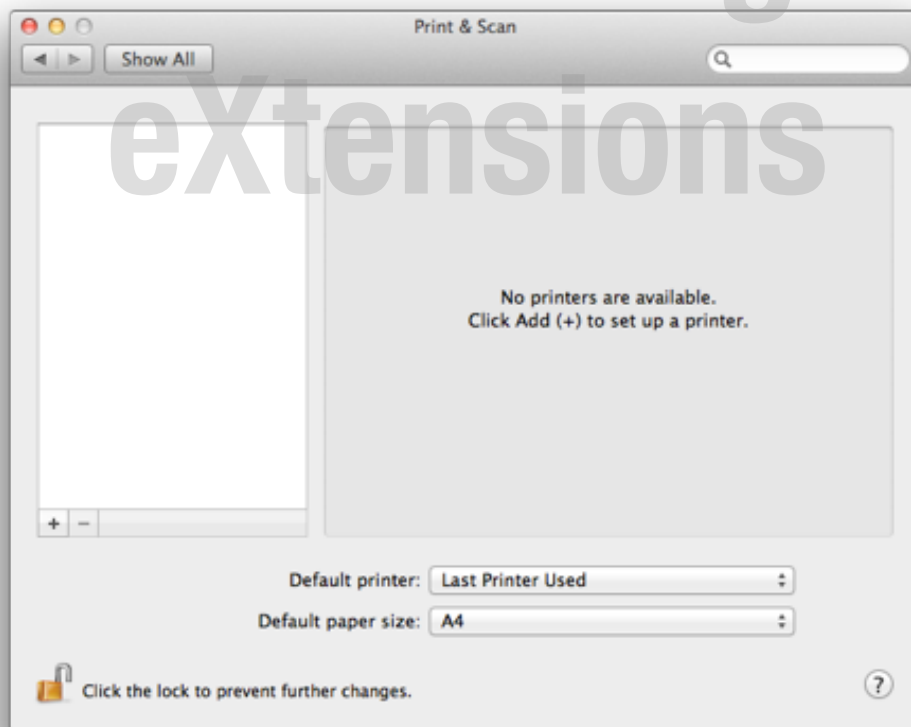
Some parents are rightly concerned about what their offspring are viewing and who they are in contact with. We are reminded of the [Peter Steiner cartoon](#) from New Yorker, "On the Internet nobody knows you're a dog." There have been other, more recent reminders of how at-risk young people can be.

While parents should work with the very young in their online discoveries, those who are a little older value their independence and privacy. They can feel inhibited and resentful if they feel they are under observation. Parents have to perform a balancing act between that freedom and the protection of their sons and daughters from the malign influences that may exist online.

Print & Scan



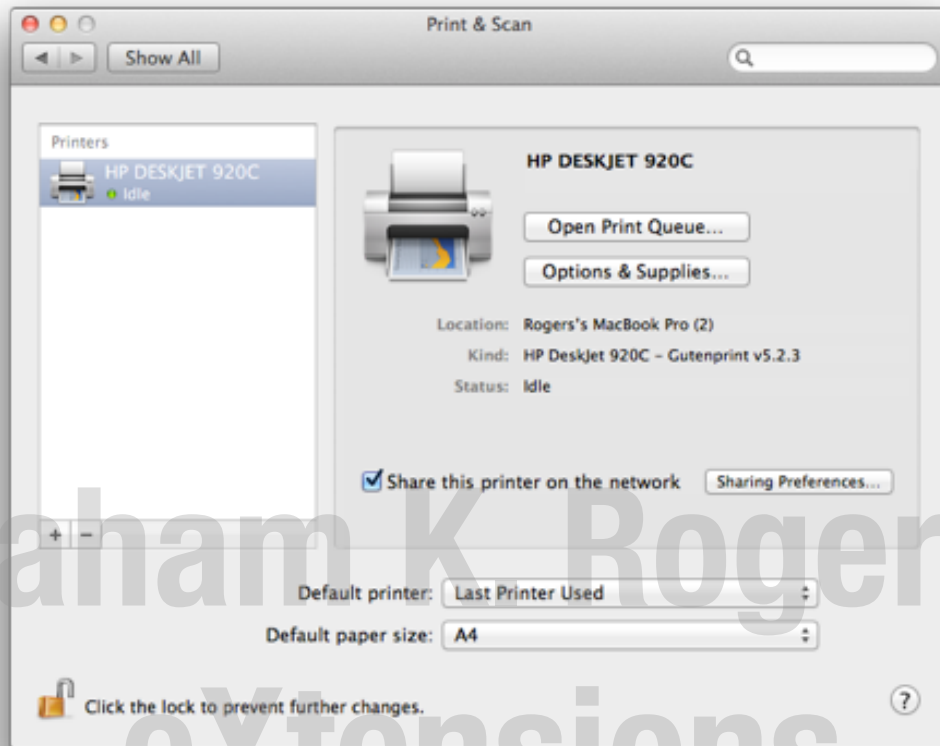
The former Print & Fax preference panel was renamed to Print & Scan with the update of OS X to version 10.7, Lion. This panel allows users to control the setting up and use of printers, scanners and suitable fax machines attached to the computer or that the computer may access via a network.



Print & Scan

Clicking on the printer icon in System Preferences reveals a three-part panel. On the left, any installed printers are shown. When one is highlighted, details appear

in the main panel, where there is also a box to check if the printer is to be shared with other users on the same local network (LAN). This works in conjunction with the Shared printer box in [Sharing](#) Preferences.

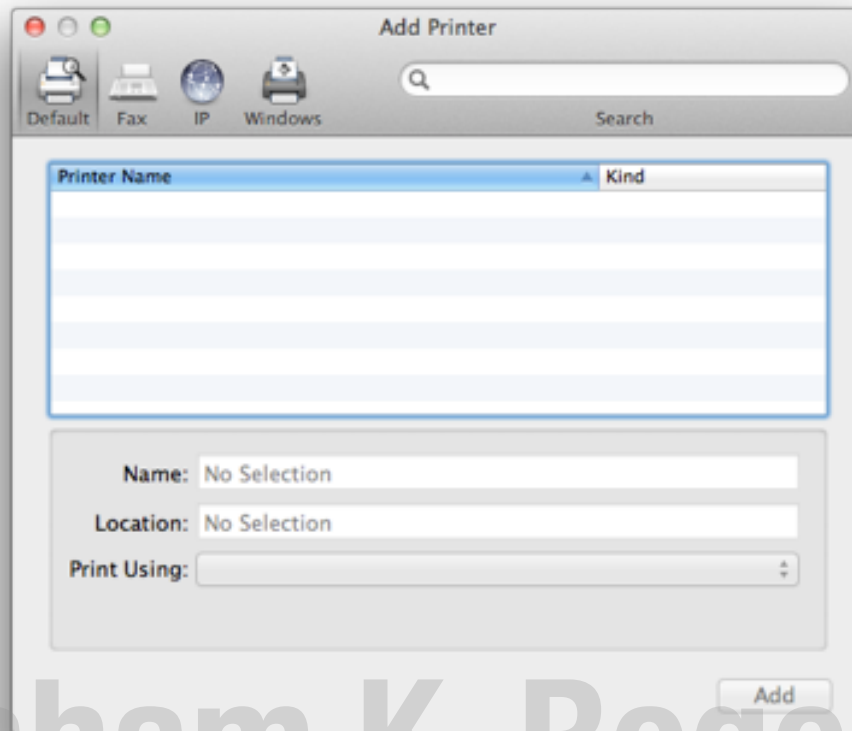


Also in the information panel are buttons allowing us to open the Print Queue and “Options and Supplies” (see below). At the bottom panel are a button to select the default printer and a button to change paper size.

Important controls in the left side panel are the plus (+) and minus (-) signs for adding or deleting printers, fax machines and scanners. When we select Add, a further panel is shown with four icons: Default, Fax, IP, and Windows.

Adding

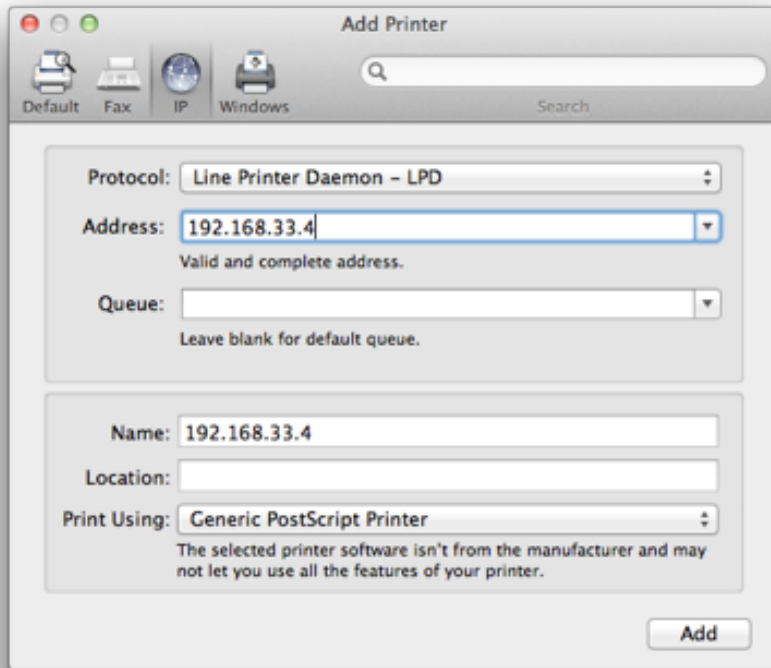
- With a USB printer connected and on, the Default window should display any printer recognized (this is not always instant). This can be added in a matter of seconds. If printer sharing is on, a printer connected to another computer on the same LAN can also be discovered and added. The same should be true for a fax machine or scanner although some older devices may not be accessible (see Notes).
- The Fax installation utility depends on a suitable device being connected to the computer.



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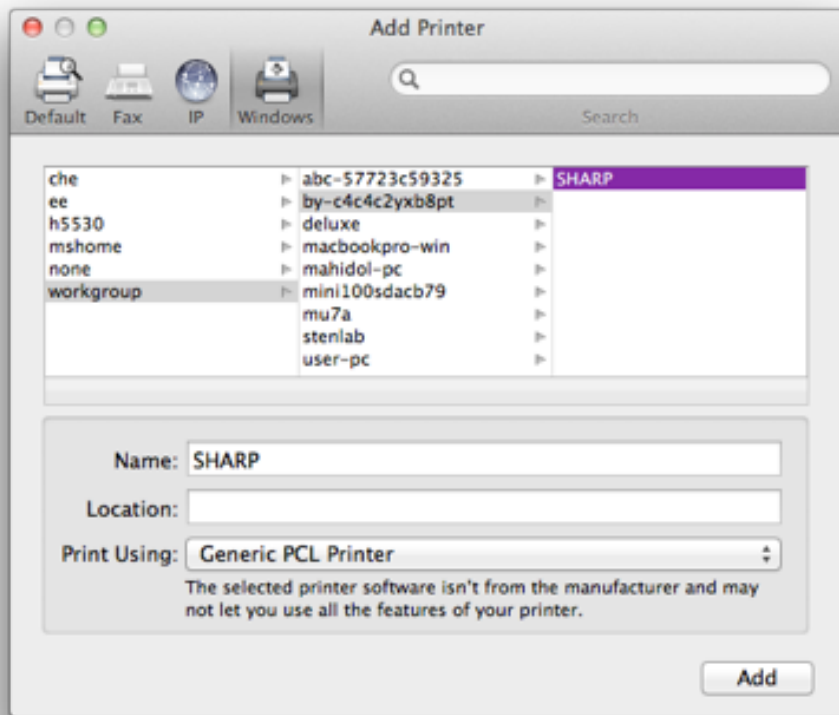
A common method of connecting a printer, particularly in an office environment, uses the IP (internet protocol) icon. Finding the IP number may need the co-operation of someone responsible for maintaining the printer. When an IP number is entered, the panel lists any IP printers online. There are three connection methods:

- The Internet Printing Protocol (IPP) first needs entering of a valid IP number and selection of a printer from a menu. Again, there are choices: Auto (the system may find the printer itself); Generic, which is useful for printers when a driver cannot be found; Select a Driver, which gives access to the list of drivers with OS X. If none of these work, there is always "Other" which accesses the Finder so that a downloaded driver may be used.
- Line Printer Daemon is similar to the IPP method although this may integrate better with OS X. A search on Wikipedia tells us that this is "also known as the Berkeley printing system [and] is a set of programs that provide printer spooling and network print server functionality for UNIX-like systems." OS X uses BSD.
- The other IP connection method shown is HP JetDirect Socket, which may be needed when a printer from Hewlett-Packard is used. Installing a printer connected to a network may need some switching between the three choices, depending on the printer. With IP printing and the other methods, clicking on the "More Printers" section gives specific Canon, Epson (Firewire and IP) and HP parameters.



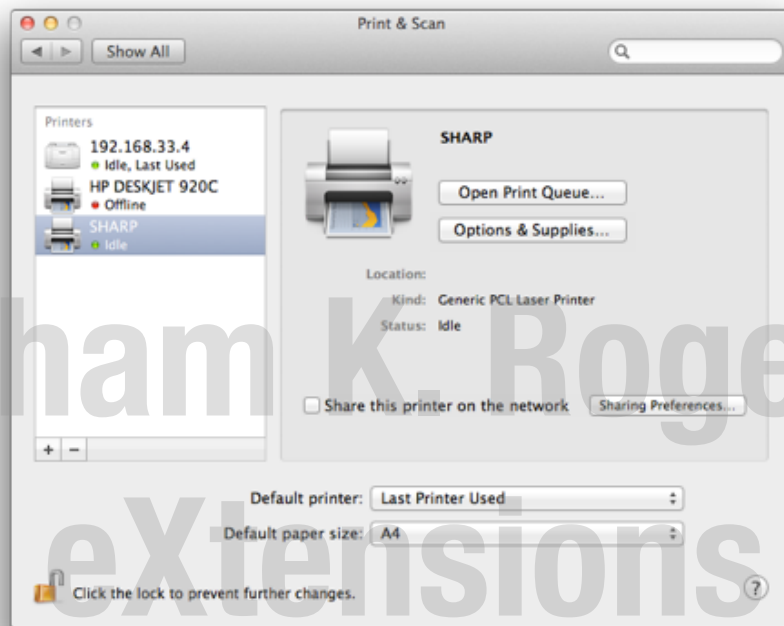
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- The final method is “Windows”. Clicking on this brings up a split panel. This panel shows networks accessible. When one is highlighted, the devices (including computers) are listed. When a printer is found (easier if the device details are known), clicking on it allows a connection to be made.



When a printer is highlighted in the panel, we may access two buttons: Open Print Queue and Options & Supplies. The first reveals a panel with six icons for device management: Delete, Hold Job, Job info, Pause Printer, Supply Levels, Printer Setup. The panel also indicates if the printer is available or not connected.

Options & Supplies has three panes: General, with information about the printer; Driver, which shows the current driver on a button which allows a change to installed drivers (or Other); and Supply Levels, such as ink (also available in the Open Print Queue panel).



Notes

A few days after this was uploaded, Apple released a [Knowledge Base document - HT1341](#) - with information on how to reset the printing system. This is done by holding down the Option key when pressing the - (remove printer) key, or + if no printers have been added, and selecting Reset printing system from the menu. It is suggested that users read the KB document before doing this.

While this was being prepared, an article by [Lance Whitney](#) appeared on the CNET site in which he discussed two patent filings from Apple that appear to suggest ways to remove the need for printer drivers. If there are any changes to the way Print works, I will update the information here as needed.

I was able to test with a USB printer and IP printers, but had no fax machine available. A scanner was tried but this only had a driver for OS X 10.2 and was not automatically recognized by Printer preferences.

Connect to network sees any IP printer. Connect offers to use generic printer driver if none immediately available

Security & Privacy



With OS X 10.7, Lion, the System Preferences panel for Security had its name changed to Security & Privacy, which is reflected in a new section.

Security should be a high priority for all users. While Mac users claim that OS X is more secure than alternative operating systems, there is no reason for complacency. The Security & Privacy Preferences section works with other parts of System Preferences (like Users & Groups and Sharing) for a safer environment if used properly. The Security Preference pane has four sections: General, File Vault, Firewall and Privacy.

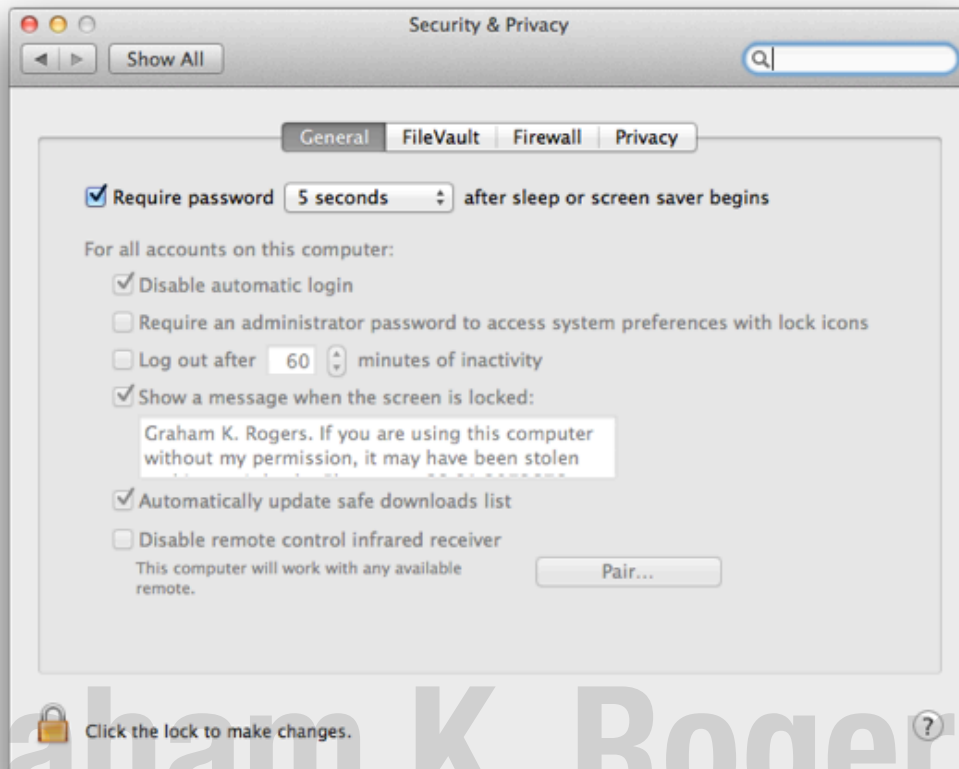
General

At the top left of the General panel is a check box for a password if the computer is in sleep mode or the screen-saver is active. This is a simple and effective first line of defense. I use this in conjunction with Active Screen Corners: moving the cursor to (in my case) the bottom right of the screen turns on the screen-saver, while moving it to the top right turns the screen off and the computer is safe from prying eyes. The only way to circumvent this (if, for example, the computer is stolen) is to restart the computer.

The second check box prevents automatic log-in. Used with the screen-saver lock, Firmware Password Utility (available now by starting up in the Rescue partition, by using Command + R) this may prevent unauthorized use of a computer. OS X allows a multi-user environment, although some prefer a single user account. A check box locking each preference pane will prevent other users changing the OS settings.

If essential tasks are not running, activating the next check box will automatically log the user out after a certain time. The time can be selected in a small panel. The default is 60 minutes. Secure virtual memory is used to ensure that any data, such as passwords, in virtual memory is erased.

A new addition in this panel allows a user to add a message that can be viewed at login. This was previously only possible by using a third-party utility like [Onyx](#). A message added using that utility was kept when OS X was updated to 10.7.



A second addition here concerns what Apple refers to as a “safe downloads list”. At this time I am unable to find a definition of a “safe download” but this may be connected to the Safari “open safe files after downloading” which are “movies, pictures, sounds, PDF and text documents, and archives” (Safari, Preferences, [General](#)). As this is now considered a security risk, many deselect this check box.

Finally, in this panel, is a box to disable the infrared receiver used by the remote control. This prevents others using another remote control and accessing media (music, photos, movies). For additional security, the remote device itself can be paired with the computer, also ensuring that others do not have access

FileVault

The second panel in Security Preferences focuses on what Apple calls FileVault. The icon (a house with a safe dial superimposed) signifies the ability to lock the users Home folder by way of encryption. If users have this activated, files are decrypted and encrypted while working. A user enters the account as normal, using the password. To start this, users press the single button, “Turn On FileVault”.



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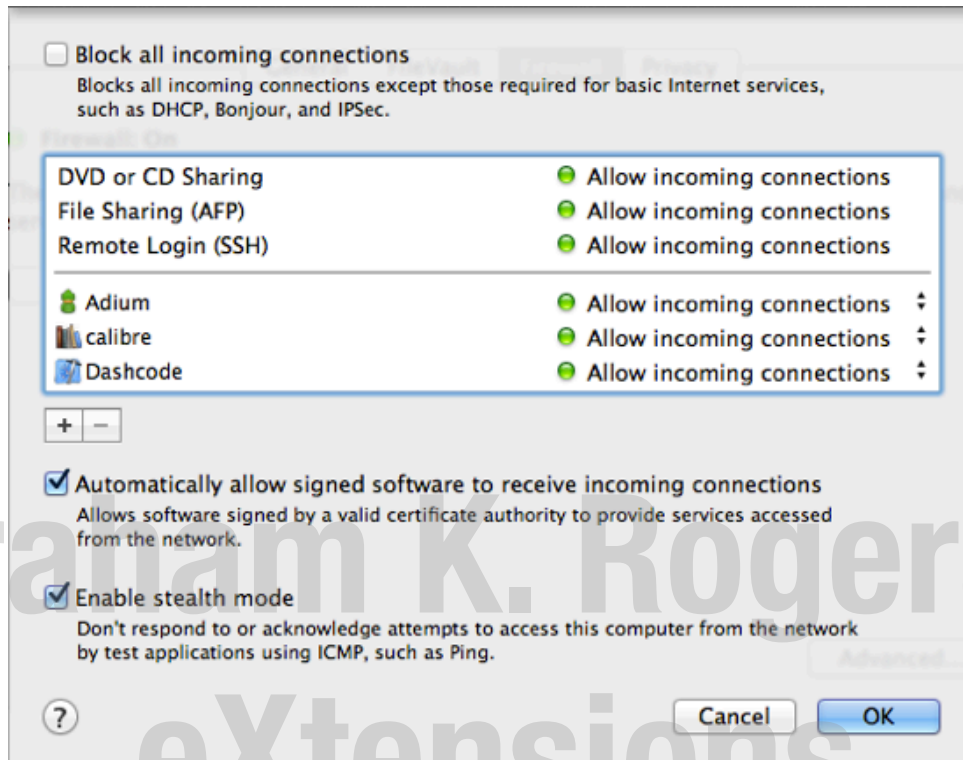
There are two parts to this feature: the file vault protection itself, which needs a considerable amount of hard disk space for the file swapping that will occur; and the Master Password. Apple calls this a “safety net” as it will allow unlocking of any File Vault account. If this master password is lost, then you can kiss good-bye to your data.

- Apple has information about the [updated FileVault2](#) on its features section of What’s New for OS X.
- An extended discussion of [FileVault by F. J. de Kermadec](#) can be found at the O’Reilly website.

Firewall

Anyone who does not use a firewall these days is asking for trouble. There were significant changes to the firewall in OS X Leopard and the panel in Lion seems to be similar. It is now application–focussed rather than port–focussed. The Firewall pane has basic information for the user and two buttons: Start (or Stop if the Firewall is ON) and Advanced. It is in the advanced panel, which can be accessed only if the security padlock icon is open, that the important settings are made or changed.

The Advanced panel has three checkboxes. Above the main (applications) list is Block all incoming connections. If this is selected only essential services will be able to use internet access.



The applications list panel allows a program the correct access instead of specifying port numbers as was the case before Leopard. There are now two settings for each application in the list: Allow incoming connections; and Block incoming connections. Below this panel are two icons (+/-) for adding applications to or removing them from the list. Pressing the Add (+) reveals a panel which allows us to choose an item to be included. As software is installed, this adding is usually carried out automatically. Pressing the remove (-) removes an app with no warning.

Below the applications panel is a second checkbox (related to the Block item at the top) allowing signed software — software that is known to be trusted — to receive incoming connections. For outgoing connections, a 3rd party utility like Little Snitch is essential.

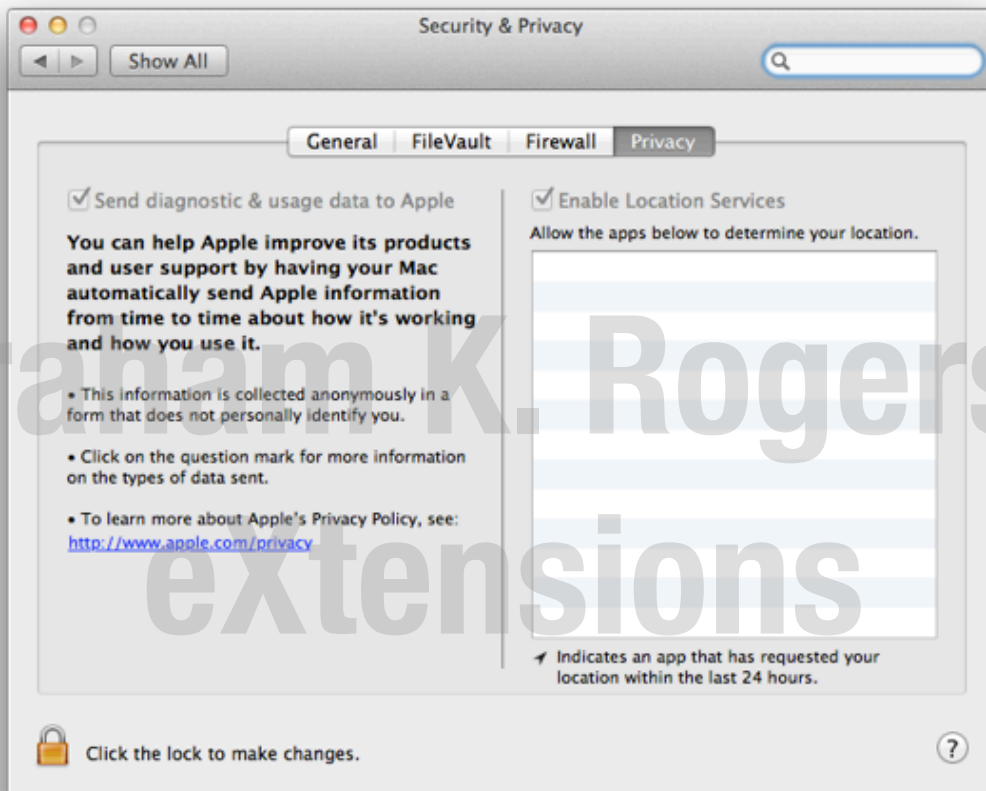
One more check box in the Advanced panel allows activation of Stealth mode, so that any outside probing that occurs (such as that shown in the logs) will have no response: the computer will not even appear to exist.

Now removed from this pane is a link to the log.

Privacy

The final pane in the Security and Privacy preferences panel concerns the way the sending of data from the computer to Apple or to other developers.

At the top left of the pane is a checkbox. If selected a computer will automatically send data for purposes of analysis to Apple. The panel informs users that this is anonymous. There is a link near the bottom for more information.



To the right is a panel concerned with Location Services. This may have been included following a controversy about data that was being sent to Apple from the iPhone and from the iPhone via iTunes. Any apps that are permitted to determine location are listed in the panel. Using the same direction icon as may be seen on the iPhone, an app that has requested location information within the previous 24 hours will be indicated. Starting iPhoto (for the first time since the update to 10.7, Lion) did not make any changes to this panel, even when I accessed Places.

Sharing



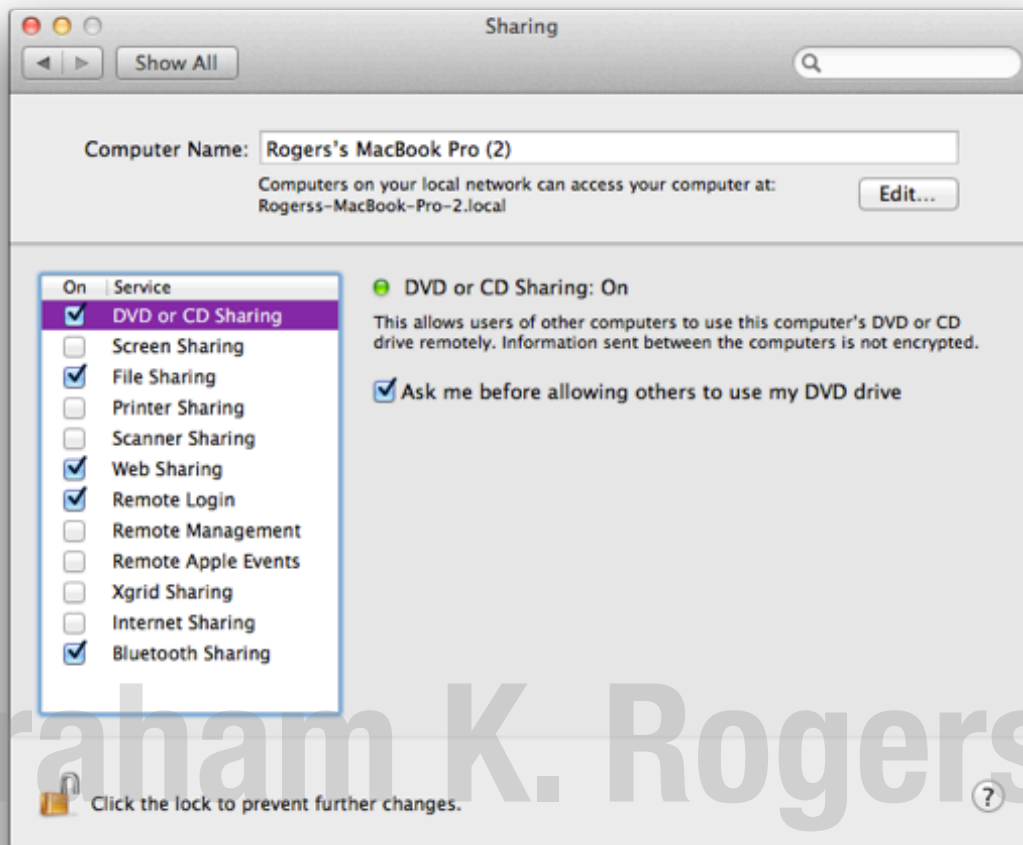
Sharing Preferences retained the same interface with the update to OS X, but had one addition to its features: Scanner Sharing. These preferences work with [Security](#) (and other) Preferences to enable specific connection methods to be used and to activate the necessary ports when needed: we join networks and link to devices, like printers or scanners. There are twelve different ways to share in the preference panel. This has increased from the eleven of earlier versions of OS X, with the addition of Scanner Sharing.

When the Sharing panel is opened there is a list of the ways connections and data may be shared to the left. Each has a checkbox and then the name of the service alongside. The main panel has information about the highlighted service and (depending on the type of sharing) may have additional panels to indicate connection information.

DVD or CD Sharing

The top item in the list, which was added after the Mac Book Air was released, is “DVD or CD Sharing”. A disk in a computer can be used by someone on another networked computer. There is a check-box in the information section to ensure that this facility is used only with permission.

Although this worked well with the MacBookAir when I reviewed it, at that time it would not work with other computers. An update released in October 2008, Migration and DVD Sharing Update, fixed this and the feature now works (when installed) for all Macs.



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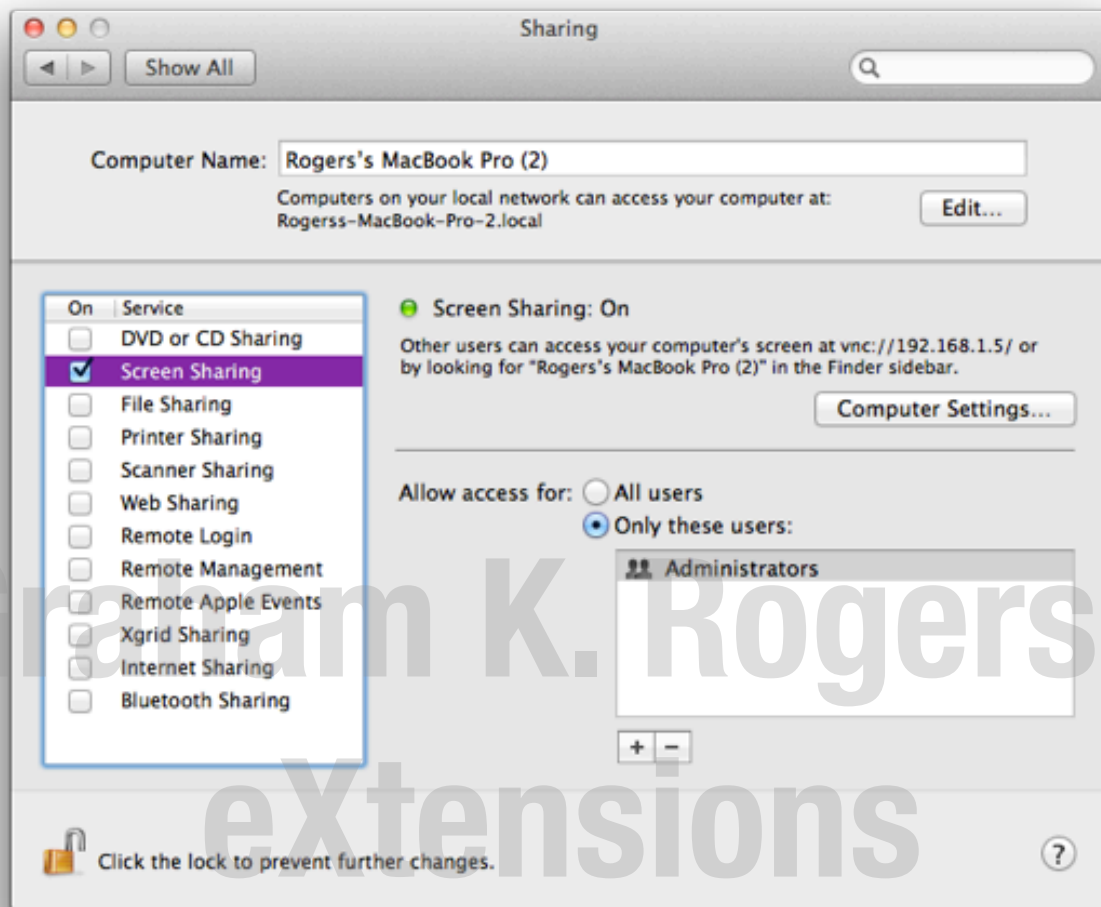
Screen Sharing

Screen Sharing is a form of virtual network computing (VNC). I can work on another computer on my home network that has this activated. Remote Internet access is possible, although this means some careful manipulation of settings if a router intervenes because of the different IP numbers allocated by an ISP and the router. When the checkbox is selected, a green light is shown in the information panel and details of how to connect (IP number and Computer name) are shown.

Connections are made by clicking on the Share Screen button in the Finder panel (or using the IP number of the computer with a VNC prefix in the "Go" menu, Connect to Server), I can work on the target computer as if it were my own: exactly as if I am sitting in front of that computer.

The purpose here is to assist another user by working on the computer: demonstration or diagnosis. Anyone who has tried to advise someone on the telephone about what to move, what to open, what to trash, will realize how

hampered we are by the lack of visual input. Moving the cursor for the other user, opening the correct panels, is more effective.



This preference does not allow files to be dragged from the target screen to the desktop or vice versa. However, it is possible to send the contents of the Clipboard. That data could be pasted into a file on the remote computer (by the demonstrator) and displayed. An example might be an image of settings to allow comparison by the second user: a picture is worth a thousand words.

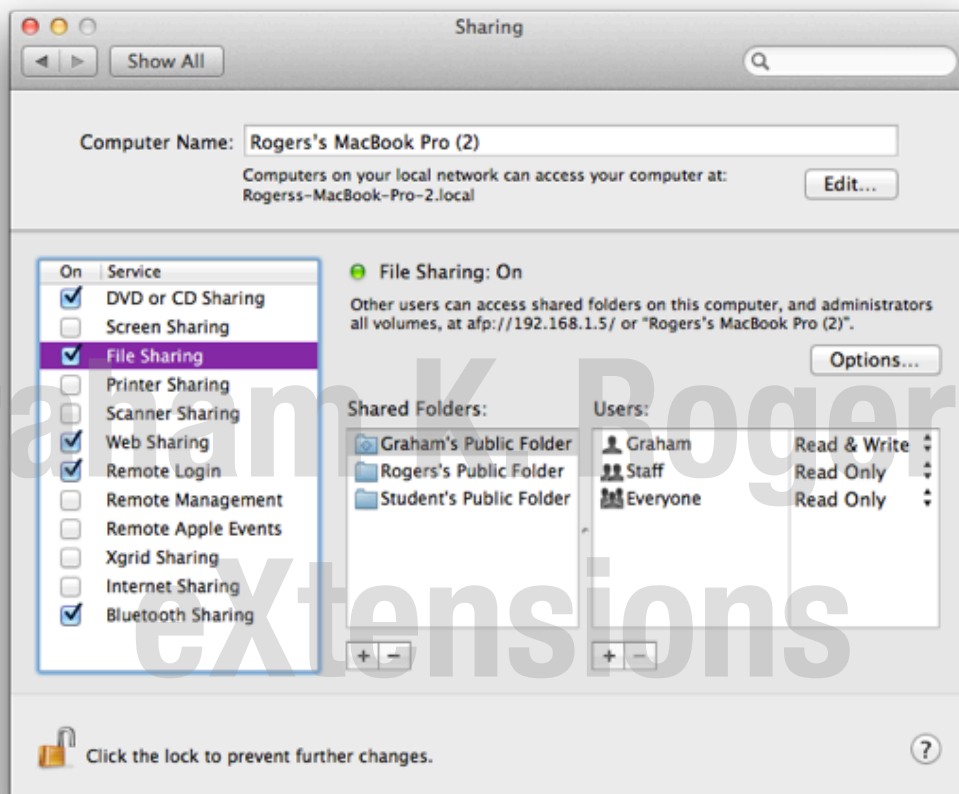
Screen Sharing connects to the active user's screen, which means it could be abused. Using the button to the right of the main panel, Computer Settings, reveals a panel with two checkboxes: Anyone may request permission to control the screen; and VNC viewers may control the screen with password (a box alongside is provided to enter a password).

In the lower section of the information panel a user may select to allow either all or specific users to be granted access. Users can be added or removed using + and - icons beneath the user-list panel.

To stop the connection we use either the Screen Sharing menu and Quit, or "Disconnect" in the Finder menu. See also Remote Management (below)

File Sharing

File Sharing activates what Apple calls the “Public Folder”. Files placed in here can be seen by all users on the network. The Public Folder also contains a Drop Box in which users place files. The contents will not be visible. This is to prevent another user examining private communications that use this method: once in, only the account owner can use the file.



Printer Sharing

While my home office is upstairs, I tend to work downstairs which is cooler, but when I had a printer I did not want the fuss of carrying a printer down when working, nor the clutter of a second printer.

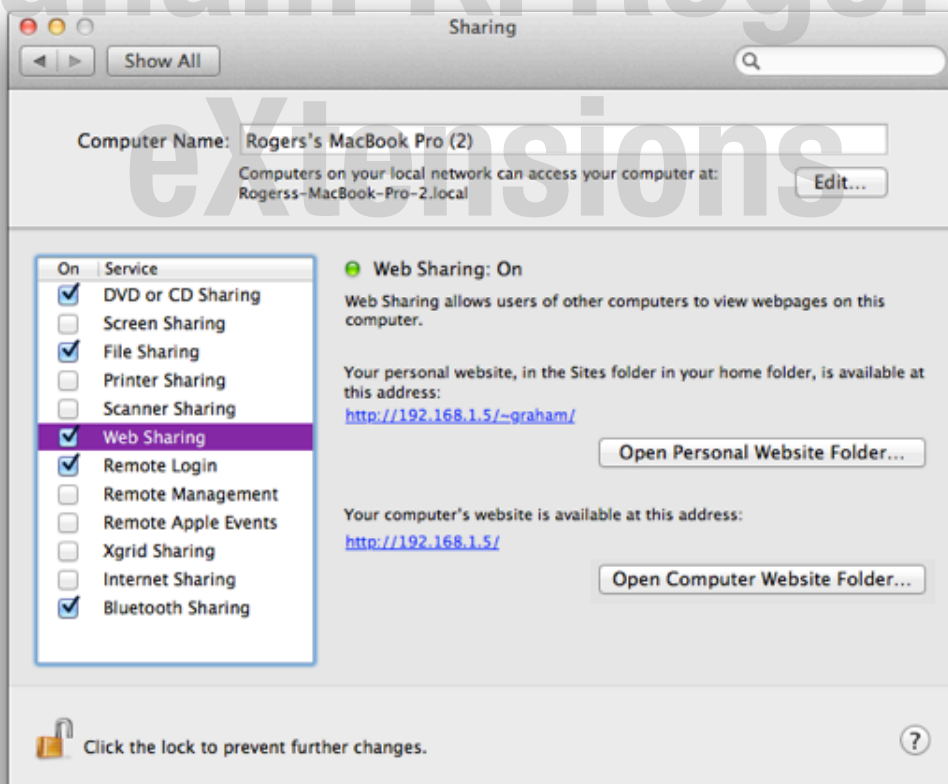
Printer Sharing allows me to have a single printer, for example attached to my iMac using USB and to print via the LAN. The Printer Sharing preference was turned on for the iMac. The panel for this also allows quick access to [Print & Scan Preferences](#). Two data panels list any printers that are found online and they may be highlighted then used.

Scanner Sharing

Like Printer Sharing, the new addition to the Sharing preferences allows others on the same network to use a scanner (or scanners) attached to the computer. These are listed automatically. Beneath the panel for listed scanners is a button that allows access to [Print & Scan](#) Preferences.

Web Sharing

Web Sharing is a feature that I have been using since I first switched fully to OS X. When the box for this panel is checked, it turns on the Apache Web Server and immediately the Mac can be a web host. To put the Mac on the internet, of course, requires a static IP number or some other way to configure this as an ISP usually provides a dynamic (changing) IP number. I used this to create a mirror of a website, with all the directory levels, images and other files, so I could check the links before uploading them to the server.



By default, the home page for each user is in a folder named "Sites" in the Home level. When first activated, the index page has information about Apache. Other users on the computer or the network can access the web pages, so this can be used in an office to create an internal website. When the checkbox for this feature is active, information on how to connect is shown in the information section.

There are two buttons for connections to folders. The top one is marked Open Personal Website folder and links to the Sites folder in the specific user account. The other is for the computer and is marked Open Computer Website Folder. This opens the Library > Webserver folder.

Remote Login

Remote Login works with the Finder and when this is active a user can log in to the computer from another on the network. There are overlaps here with other types of sharing. The Finder “Go” menu uses several ways to connect quickly to folders on the users’ computer or to remote devices using “Connect to Server” (Command + K) which reveals a panel.

We may then browse for another computer or enter an IP number with the prefix of AFP (e.g. afp://192.168.1.2/) or SMB for Windows. SSH with the user name may also be used. With recent changes to the operating system, it is now easier to use “Shared Devices” in the Finder menu.

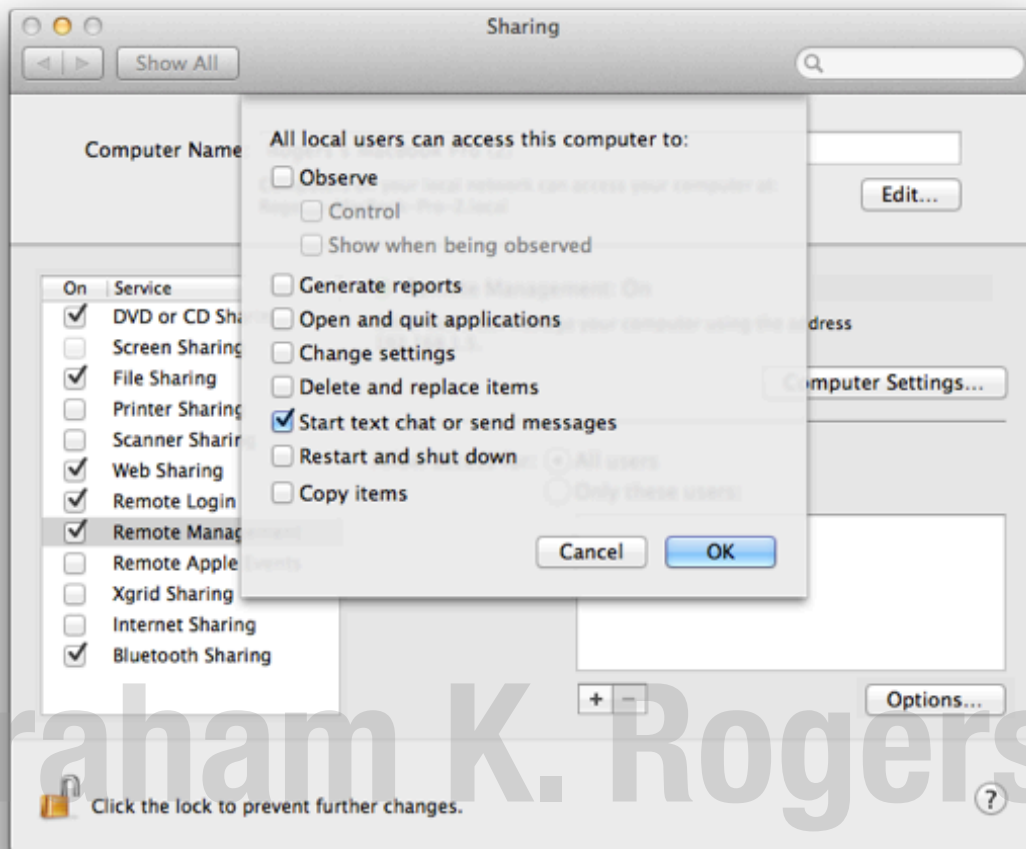
Remote Management

Remote Management worked in conjunction with the Apple program, Remote Desktop in earlier versions of OS X. This helps those running a network of Macs, such as a school Lab, to control the functions of those computers from a master computer. A number of these functions have now been superseded by the Screen Sharing function (above).

When Remote Management is selected, a panel appears (or can be opened by pressing the Options button) allowing a user to select certain functions. This supersedes Screen Sharing and a note appears if Screen Sharing is selected to this effect.

A button in the top half of the information screen is marked Computer Settings. This reveals a panel with several options, including Screen sharing items. There is also a checkbox for display of an icon in the menubar. Four boxes allow entering of computer information for display in a System Overview report.

Like Screen Sharing, in the lower section of the information panel a user may select to allow either all or specific users to be granted access. Users can be added or removed using + and - icons beneath the user-list panel.



Remote Apple Events

Remote Apple Events is not a way to track announcements from Cupertino about new products, but, according to the preference pane, "Allows applications on other Macs to send Apple Events to the user's computer."

Events can be initiated by programs or Apple Scripts and are a way to use the resources of one computer from another, such as shutting down or opening a file.

A simple example from the past is the command to print which now has a specific Sharing panel. This type of feature would be more common in an office where several Macs are used and the sharing of data and resources is integrated into operations.

Xgrid Sharing

When the feature called Xgrid sharing first appeared, the potential was clear to many people. In one click, according to Apple, this would turn an "ad hoc group"

of Mac systems into a supercomputer. It is slightly more complex than that, but a user in Singapore did create a cluster with three Mac minis.

There had already been distributed computing across the internet: for example the SETI project and [another project](#) involving 30,000 computers had successfully simulated part of a complex protein structure.

The idea of setting up such a multi-computer system (albeit somewhat smaller) on a home network had been unreachable until Xgrid Sharing. It links computers, turning them into a cluster and distributes tasks to the processors in a way that calculations are combined: computer teamwork.

Turning this part of Sharing on will allow the computers to share resources. What it still requires, however, is someone with the skills to write the software to control the tasking.

When this feature is turned on, we are prompted for a password. This needs to be entered in the box at the lower half of the information section. A button to the left (marked Password, by default) also has options for Single sign-on, and None.

When None is selected a panel appears warning that the computer is insecure. A Configure button near the top of the section allows settings to be entered for the way tasks may be allocated.

eXtensions

Internet Sharing

Internet Sharing can be useful if a home has limited networking resources: for example a router with a single port, or a computer with no wifi. Input to a computer can be from one of four sources: Airport (wifi), Bluetooth, Ethernet or Firewire, previously an OUTPUT method.

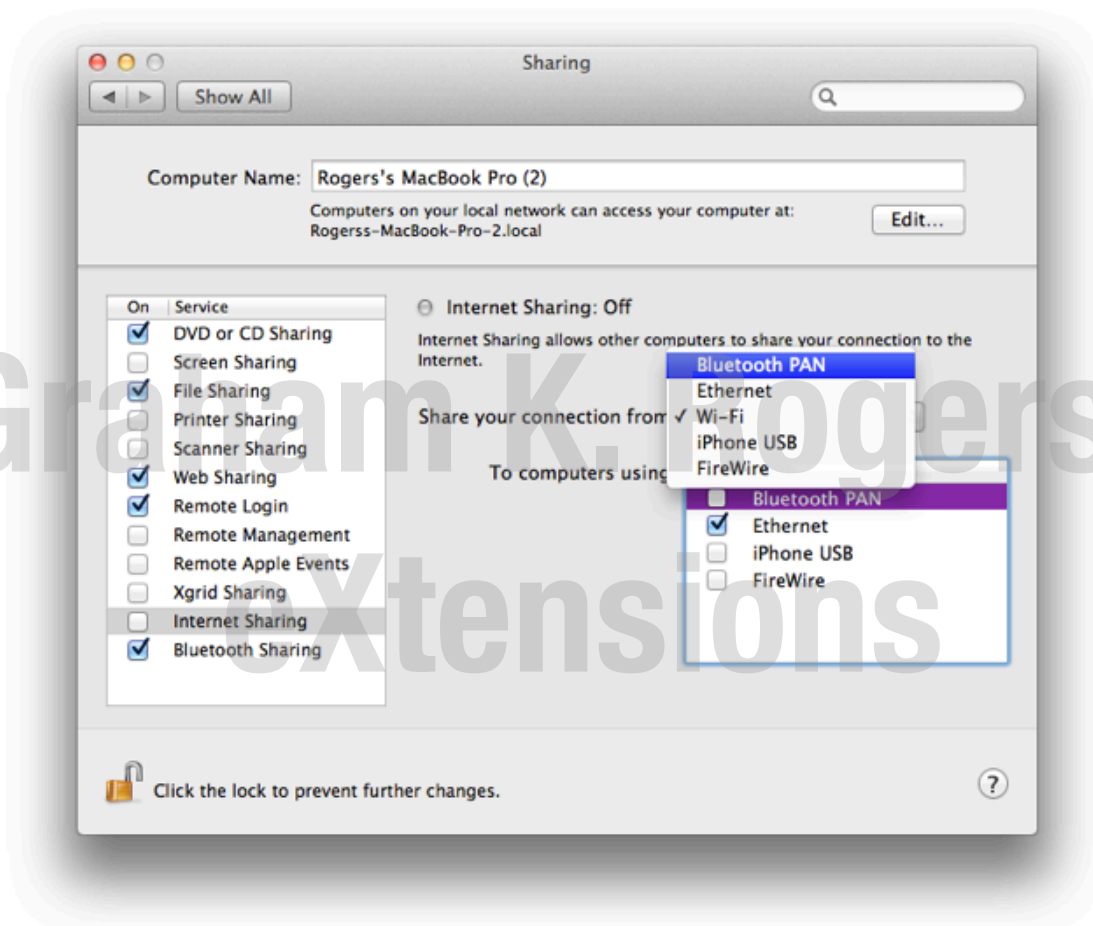
That incoming signal can be routed to another computer, via Ethernet or Airport. Input and output methods must be different on the master computer. Newer computers may also allow connections via Thunderbolt.

Internet Sharing takes advantage of other Sharing methods when it is possible to connect directly with an Ethernet cable. OS X will allocate IP numbers. Similarly, using the Airport menu, we can create a computer-to-computer network easily.

While earlier it was possible to select options for incoming and outgoing connections, OS X now recognizes which methods are live and which are possible. Others are greyed out.

When the service is unchecked, the connection types are no longer greyed out and we may then select (or deselect) input and output types.

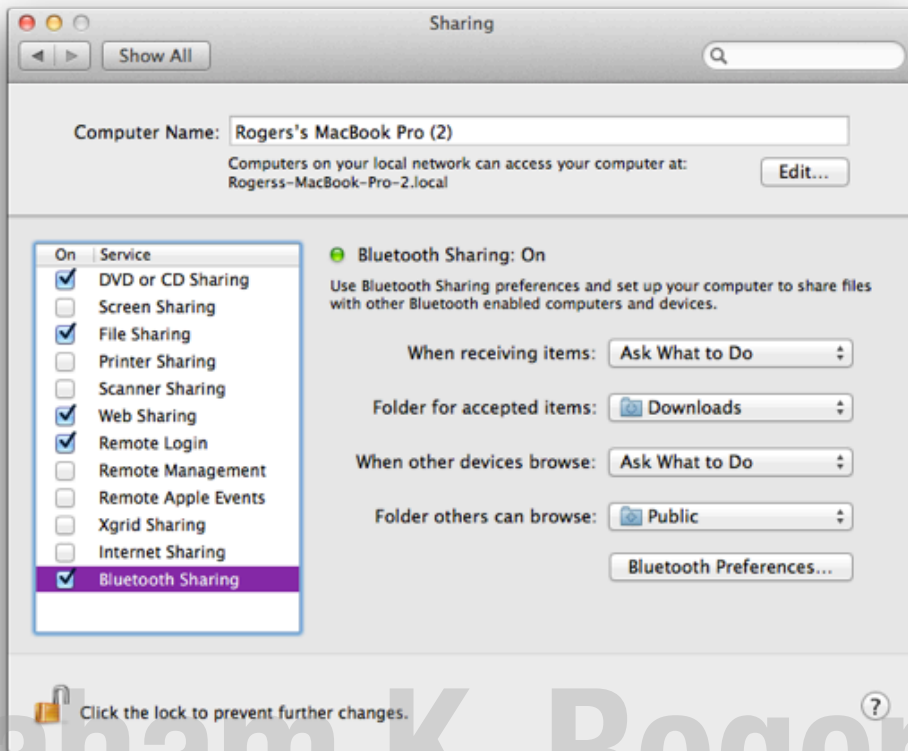
A possible scenario is that a computer with no wifi can be connected to a machine that has a wifi antenna (data in) using a direct Ethernet cable. Also, in the past, when I was testing a computer with wifi, but had no spare cable in the room I was using, I could connect my computer to the router with an Ethernet cable and then create a wifi network on that Mac that the second computer could link to. This is also possible with an incoming connection via a Bluetooth mobile phone (e.g. Bluetooth in, Ethernet out) although there are speed penalties.



Bluetooth Sharing

Bluetooth Sharing covers the downloading or uploading of files from devices equipped with this feature. There are several options about actions to be taken (Ask, Accept, Never) and check-boxes that require devices be paired.

There are also options for folders to receive files and folders that others may browse. A button at the bottom of the panel links to the [Bluetooth](#) preferences panel.



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Software Update

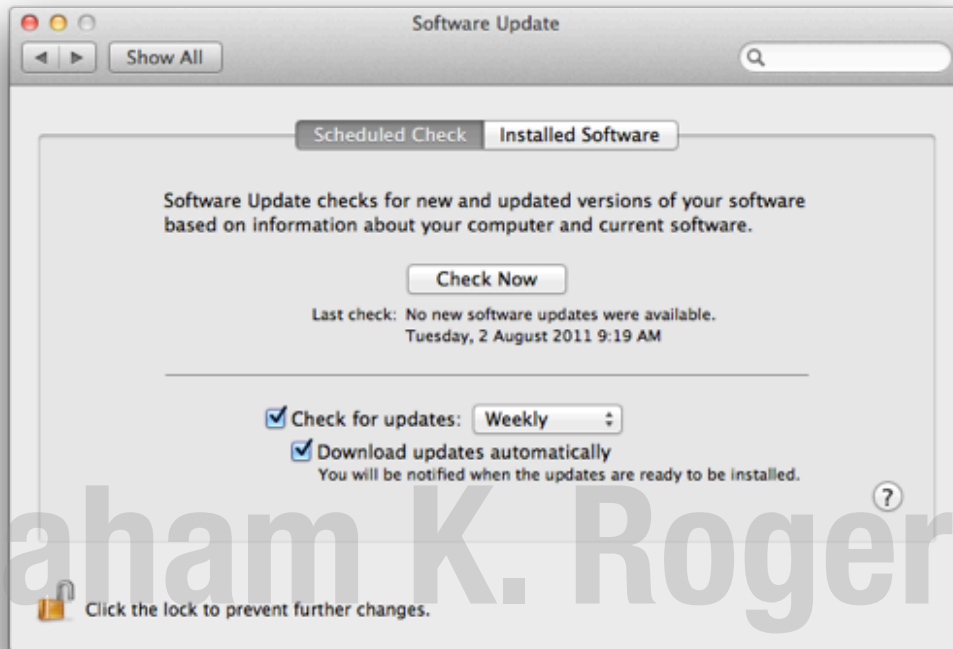


The System Preferences panel for Software Update has two buttons. One is to control the updating operations and the other shows a list of installed updates.

Scheduled Check

The first button in Software Update shows "Scheduled Check" and this panel is in two parts. The top has a single button, marked, "Check Now". Also, in the Apple

menu (top left of the menu bar) is a Software Update item. Using this or the “Check Now” button in the preference pane connects to the Apple servers. The connection checks information on the Mac to see if the computer needs any updates.

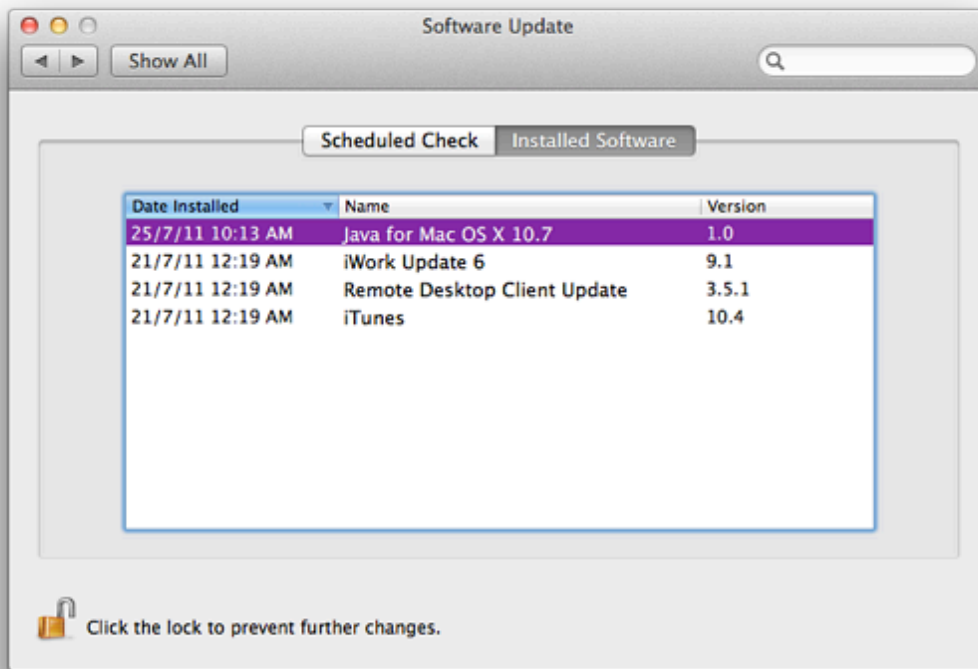


If any software is listed for update, a panel appears with information. We can use the Install button. We may also quit Software Update and download later from the Apple downloads pages, or use Software Update again when convenient.

The bottom half of the panel deals with scheduling and automatic updating. There are two check boxes. The first, “Check for updates” turns on automatic checking, while alongside is a selector for Daily, Weekly or Monthly. The second check box is marked “Download updates automatically”. These updates are not, however, installed and the user is notified when such events occur.

Installed Software

The other part of the Software Update panel lists updates that have been installed on the computer using Software Update. In my normal User account there are four listed. These have been downloaded since the update to OS X 10.7, Lion. Those before the update are no longer shown. In the Administrator account there is the same list of four updates. Others downloaded directly from the Apple site (not using Software Update) will not be shown.



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The list may be organized easily with the headings, by date, name or version, either ascending or descending. The button in earlier versions of OS X that opened Console — the utility that keeps all log files on OS X — is no longer available.

As with other panels in System Preferences the padlock icon is shown at the bottom of both panes in Software Update.

Sound



The **Sound Preferences panel** is in three parts. These control Sound Effects, Output and Input. Each section, like other preferences, is revealed via a button at the top of the panel.

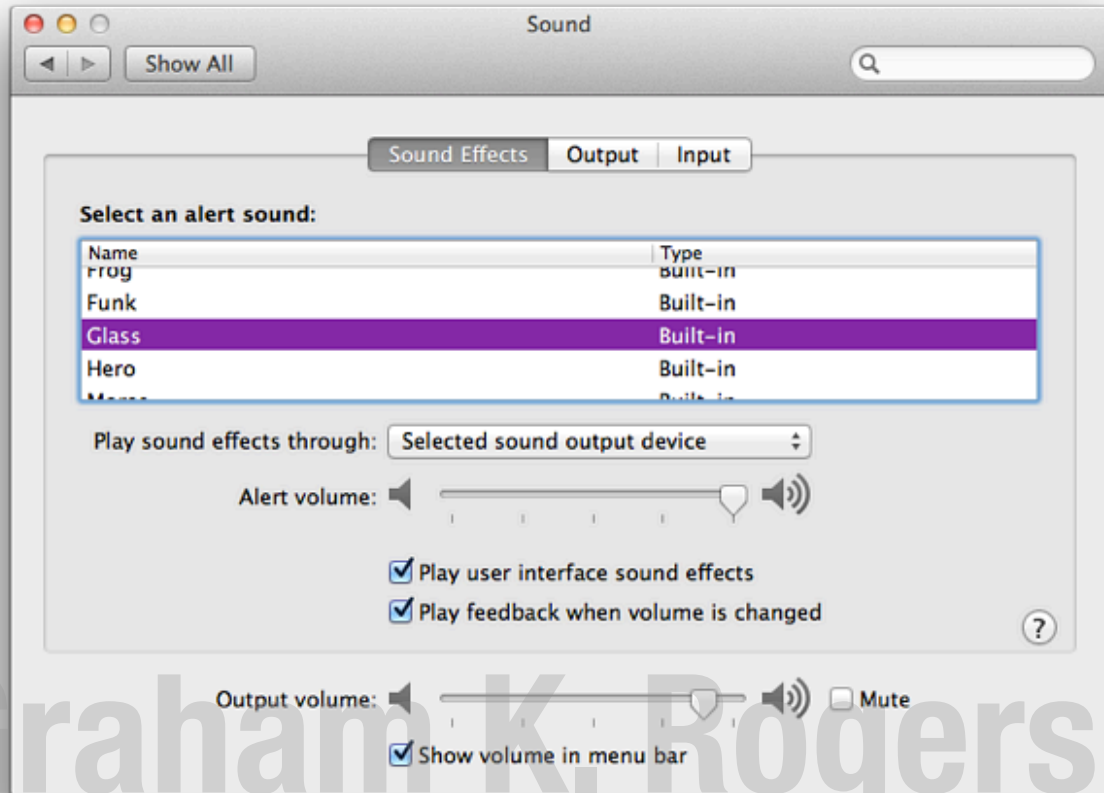
Sound Effects

Sound Effects is a panel that allows us to select a sound for system alerts. There are fourteen installed sounds from Basso to Tink. Each is a personal choice. With mail arriving, opening a page in error or making other mistakes, a user might be hearing these sounds several times a day. [I find that "Glass" is gentlest on my ears.]

A slider bar under the panel allows the volume of these to be adjusted independently of the speaker volume. By default on my MacBookPro the sounds are played back through the two internal speakers. The selection button, just above the slider, may be used if other speaker systems are attached.

Below this and the Output Volume slider, in the centre of the panel, are two check-boxes. The first is for user interface sounds, such as when the trash is emptied. The second allows an alert to be played when the volume is adjusted.

At the bottom of the panel is the slider for adjusting volume. When this is used there is feedback from the speakers. That also applies to the menu bar sound control which can be displayed by checking the very bottom box.

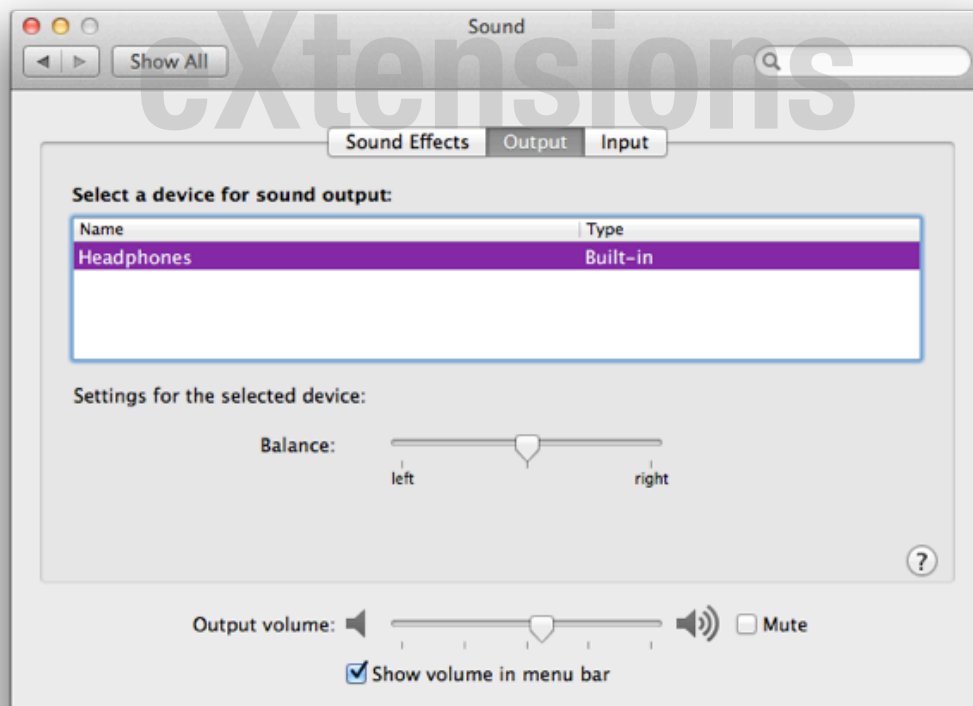
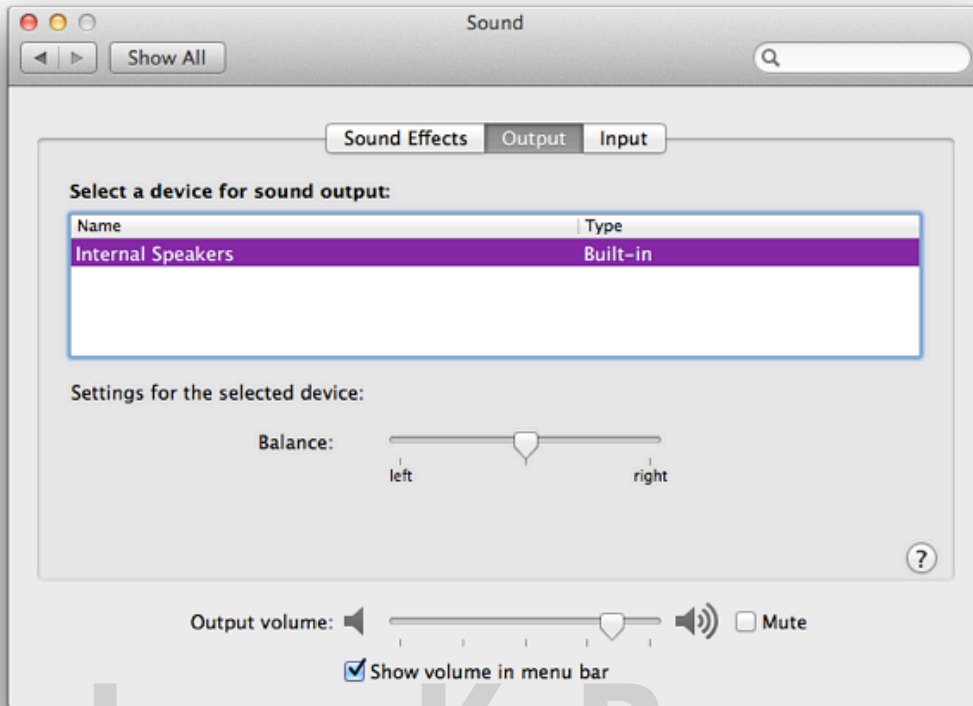


In earlier versions of OS X, an additional check-box had been provided for for sounds that operated with Front Row: the interface that accesses music, photos and videos. As Front Row has now been removed from the OS X applications list, this is no longer included.

Output

The second button in Sound is for Output. By default, the built-in, or Internal Speakers are shown in the main panel here. Below are sliders to adjust left or right output levels.

These also make the same system alert sound as the volume adjuster (also displayed in this panel) to show that changes are being made. When additional output devices are added, the panel changes to show these (below).

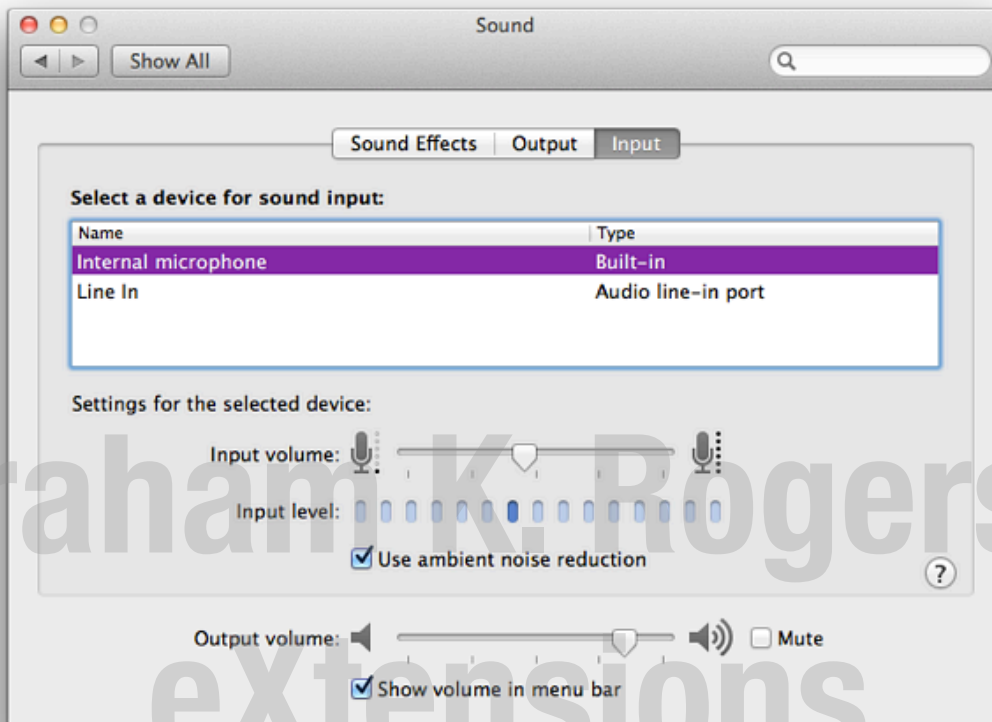


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Input

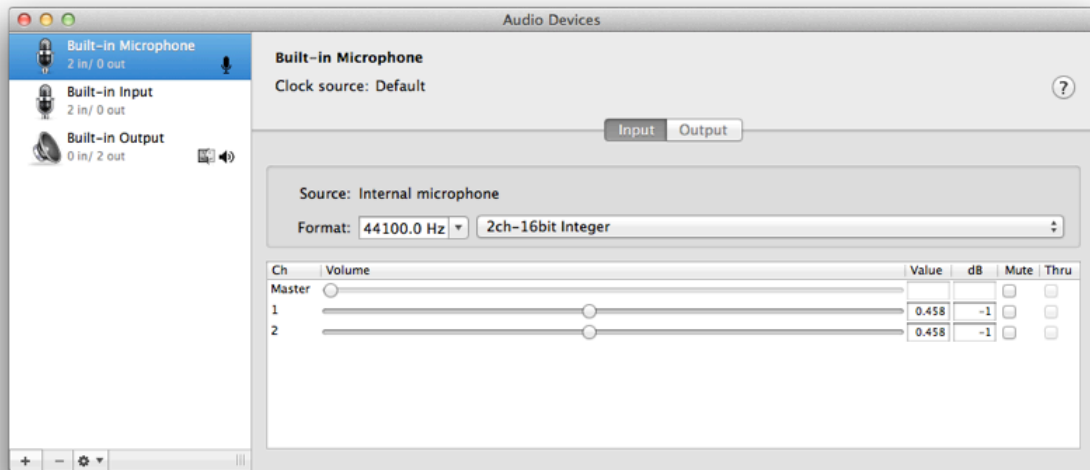
The final section is for input. Two items are available normally: the internal microphone and Line in, although this needs a device attached to the port for there to be any sound.



Below these items are a level indicator and the input volume slider. There is also a check box for ambient noise reduction which is not available for all devices. With the built-in microphone this is available, but with my G-Track USB microphone, for example, this check box is greyed out. As with the other panels, the volume slider and its menu-bar check box are also shown.

Note

Users may also want to look at Audio MIDI Setup (in the Applications > Utilities folder) if there are other problems related to sound, particularly when specific devices are attached.

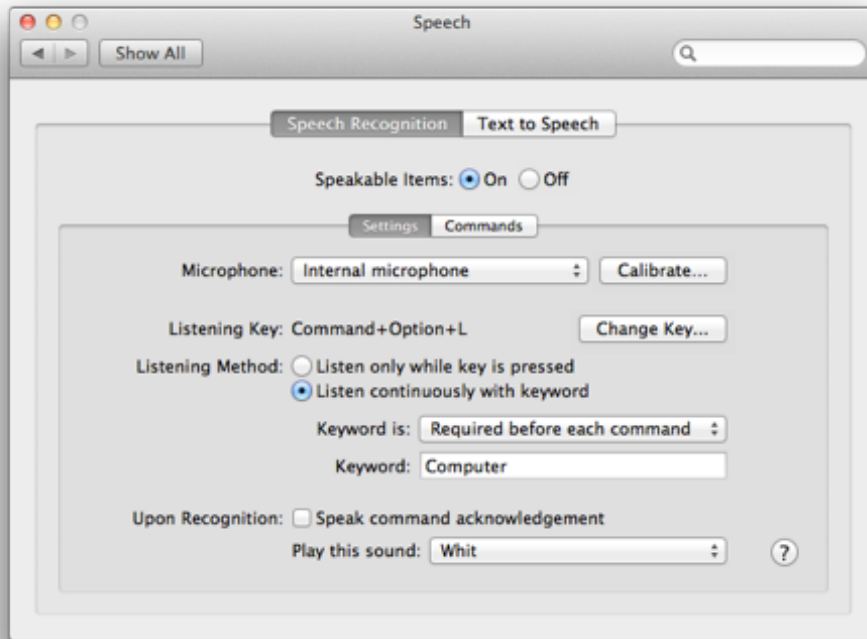


Graham K. Rogers - Speech eXtensions



Speech Preferences works with voice and hearing. As with many such features, there is input and output: Speech Recognition and Text to Speech. When OS X first appeared it included speech recognition software, called Speakable Items. It has improved. It requires training: the more it is used, the better it should become.

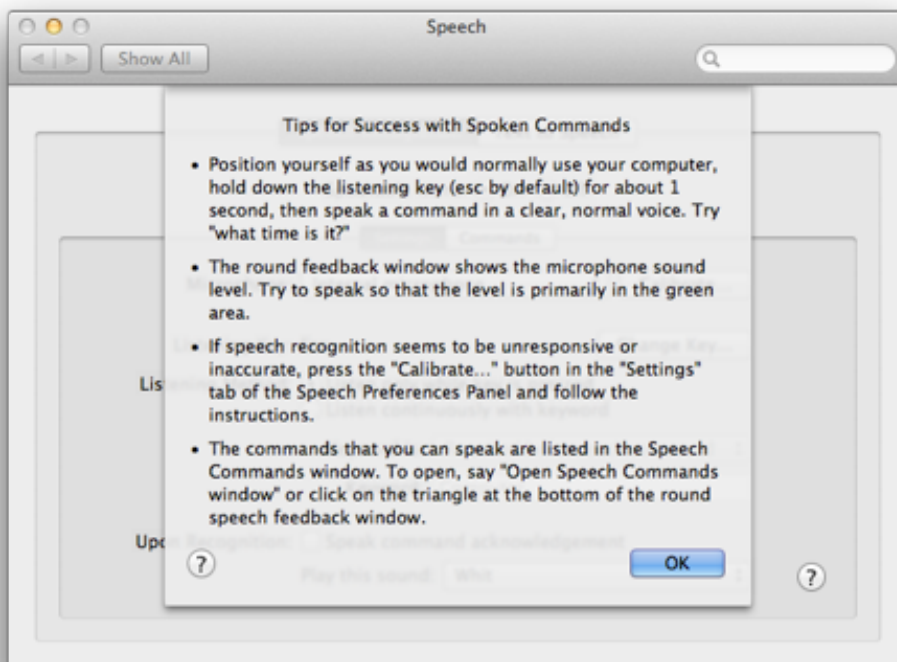
At the top of the Speech Recognition panel is a simple On or Off selection for Speakable Items. A panel below that has two sections for Settings and Commands.



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Speech Recognition

When Speakable Items is active, a small microphone icon appears on the desktop remaining on top of windows, so is always visible. When the option is turned On, a panel of Tips for Success with Spoken Commands appears.



By default the microphone used is the Internal microphone. When using a button, Line in is also available (for if a microphone is connected to the port). Attaching a USB microphone added USB Audio CODEC to the list. To the right of the microphone selection is a button marked, Calibrate.

Calibration opens a panel with a slider to adjust the input levels and then speak a list of commands. As each is recognized, the command flashes and a sound is made. This may take a few minutes.

There are two ways to input commands: using a key (default is ESC) or listening continuously with a keyword. With the first, we may change the key using a “Change Key” button to the right.

When pressed, a panel appears describing the keys or combinations that are best used. When we enter the key(s) the panel changes and we accept with OK. The main panel then shows the changed listening key.

When “Listen continuously” is selected, we may choose how the keyword is to be used by using a button: Required before each command (default); Optional before commands; required 15 seconds after last command; required 30 seconds after last command. In a text box below, we may also change the Keyword from the standard, “Computer.”

Two acknowledgements are available. A checkbox makes the system announce the action as confirmation. There is also a system sound.

As an example, when I say, “Computer, open Address Book”, the selected sound is heard, the computer announced, “Opening Address Book” and the same words in a javascript comment appear above the microphone symbol.

Commands

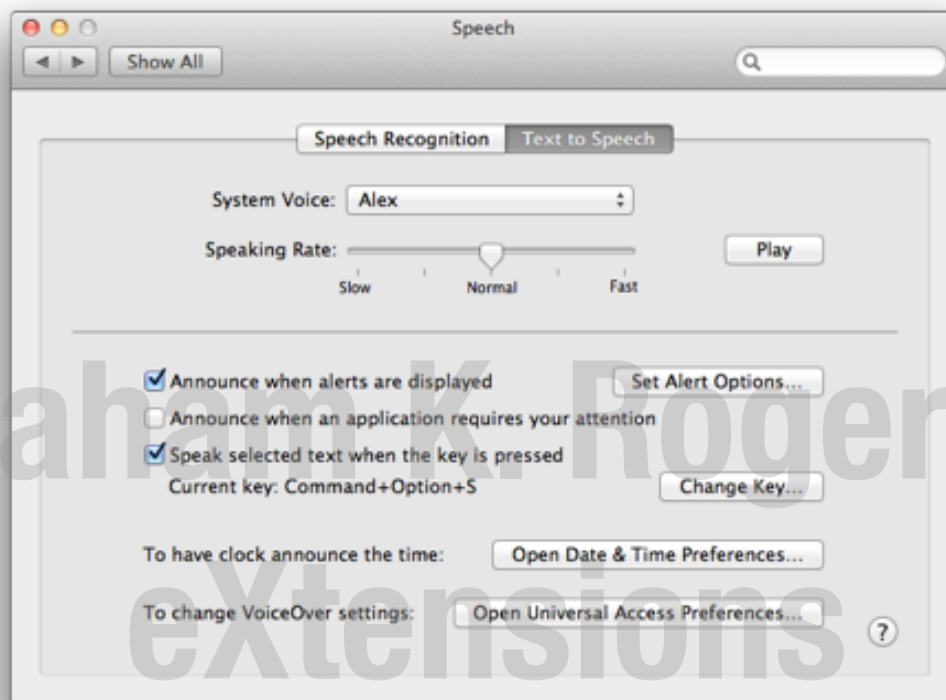
A list of speech commands is also shown. As the input microphone picks up sound, so bars and arrows on that icon show this (see Notes — below).

The Commands button, next to Settings, allows selection of which parts of the system are used by Speech recognition. Of these, the top pair, Address Book and Global Speakable Items are configurable.

Others include Application Specific Items, Application Switching, Front Window and Menu Bar. At the bottom of the panel is a link to the Speakable Items Folder. This contains files in XML format so it may be possible to add to these.

Text to Speech

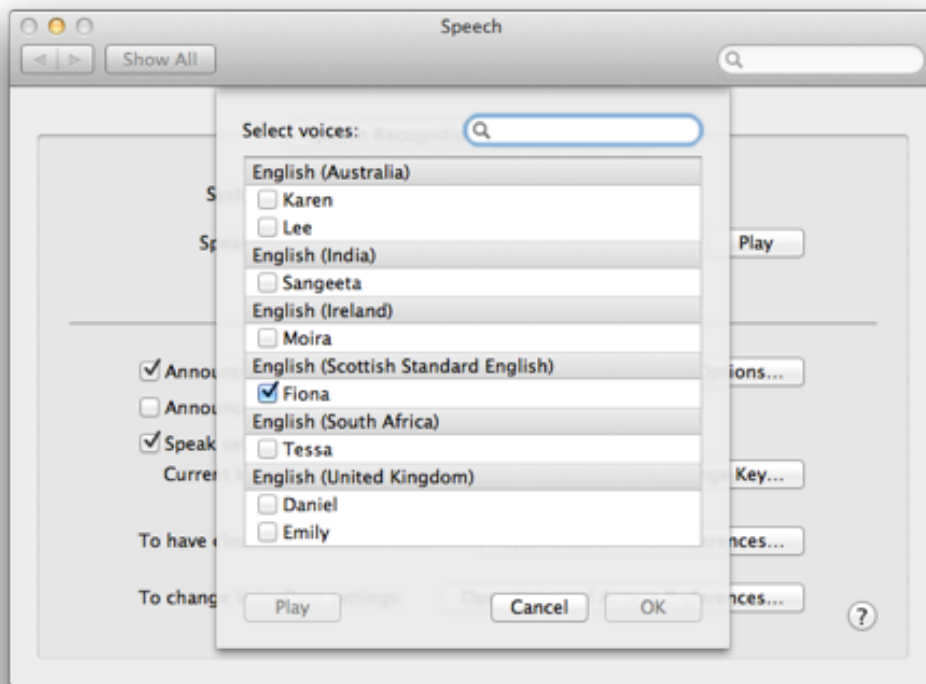
The other main part of the Speech preference deals with output from text: Text to Speech. This is more effective and usable than Speech Recognition. The feature has been available via application menus for a while under the Services sub-menu. Highlighted text is read out in the selected computer voice. This may not work with all applications (see Notes – below).



Voices have ranged from the sublime (Victoria) to the ridiculous (Deranged or Bubbles) and the better ones have been fairly understandable. With Leopard a new voice, Alex, was added which gives clear output. This is one of the default voices with Lion (see Notes — below).

When the System Voice menu button is clicked, three female voices (Kathy, Vicki, Victoria) are shown and three male (Alex, Bruce, Fred). In earlier versions of OS X several more were immediately available. Also in that menu is a Customize option.

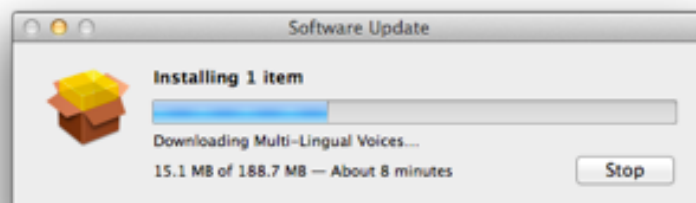
The panel for customizing voices is totally new for OS X, 10.7 and has several regional accents, such as Karen and Lee for Australia, Sangeeta for India, Fiona for Scotland. Ting-Ting for China and Narisa for Thailand: 64 in total. There are also another 14 novelty voices, such as Deranged and Hysterical.



Granam K. Rogers -

The voices already available are checked in the list. If we select another, a yellow warning triangle appears and a note informs us that "This voice will be automatically downloaded". We may press a Play button (which produces a brief sample of the voice), Cancel or OK. This brings up a Software Update panel for confirmation.

We press Install to download the voice. Fiona was shown as 220MB so considerable space is saved by not having all voices installed. When we select Install a license agreement appears, and then the software is downloaded.



Beneath the voice selector, is a speed control. Slowing the voice improves output although the fastest setting is still understandable. Non-native speakers and learners would benefit from the slower output. To test each voice or speed setting, there is a Play button alongside.

For more accessibility there are three check-boxes beneath: Announce when alerts are displayed; Announce when an application requires your attention; and Speak selected text when the key is pressed.

To the right of the Announce alerts item, is a button for setting Alert Options. This reveals a panel with the ability to set a specific voice, the phrase that the computer will use (e.g. “Alert”, “Excuse me”) and a slider to select a delay for the action. Three buttons below are Play (to test the sound), Cancel, and OK, to accept.

Keys or combinations may be set by the user for speaking selected text (see Notes — below). A button allowing this reveals a panel in which a new key or combination may be entered (I use Command + Option + S)

At the bottom are two buttons that allow use of features from other preferences. To have the clock announce the time we are taken to [Date & Time](#) preferences where this feature may be turned on. A final button marked To Change VoiceOver settings takes users to the Universal Access preferences panel where this feature may be turned on in the “Seeing” pane.

Notes

- Although Speakable Items has a novelty aspect, there are values. For example if I have my hands full, I can access the Address Book. I should also be able to require a specific user’s details to be displayed. I should also be able to switch to another application (for example iTunes), or make it check for email. The number of times that I have made a successful command (see above re Address Book) is small. It could be useful but needs considerable patience to train it and use the correct commands. Once turned on, it remains active if we quit System Preferences.
- With Text to Speech I found that when this was used with some third party applications it would not work properly and would only play the date of the file or its title. It was possible to use the Services menu item (in the filename menu) and export the spoken text to iTunes. Another solution is the 3rd party [iSpeakIT from ZappTek](#).
- The Text to speech feature is good for proof reading, but its primary value is for those with seeing difficulties. Apple has added similar features to iOS devices. When added to the iPd nano a while back (using similar technology) this was applauded by the US Society for the Blind. There has been a long-time inclusion of such features in Apple systems, however (see [Universal Access](#)). Cupertino has also increased its facilities for those with disabilities, some of which may be seen on the [Accessibility](#) pages.
- When I first tried “Alex” I noted it was almost in the class of HAL, the fictional computer of Kubrik’s Space Odyssey. It is much improved and

takes note of punctuation and other natural sentence pauses. Indeed, when I was listening to a test of the weather forecast using ZappTeks's iSpeak It, I realized I heard what appeared to be an intake of breath. When I played it again it was indeed a "virtual" breath at the end of some paragraphs, but not all. The first few breaks did not have this, then just five or six in the middle. Specifically it is the voice named, Alex. I tried with other voices I had installed and none exhibited this trait although Vicky was close.

Spotlight



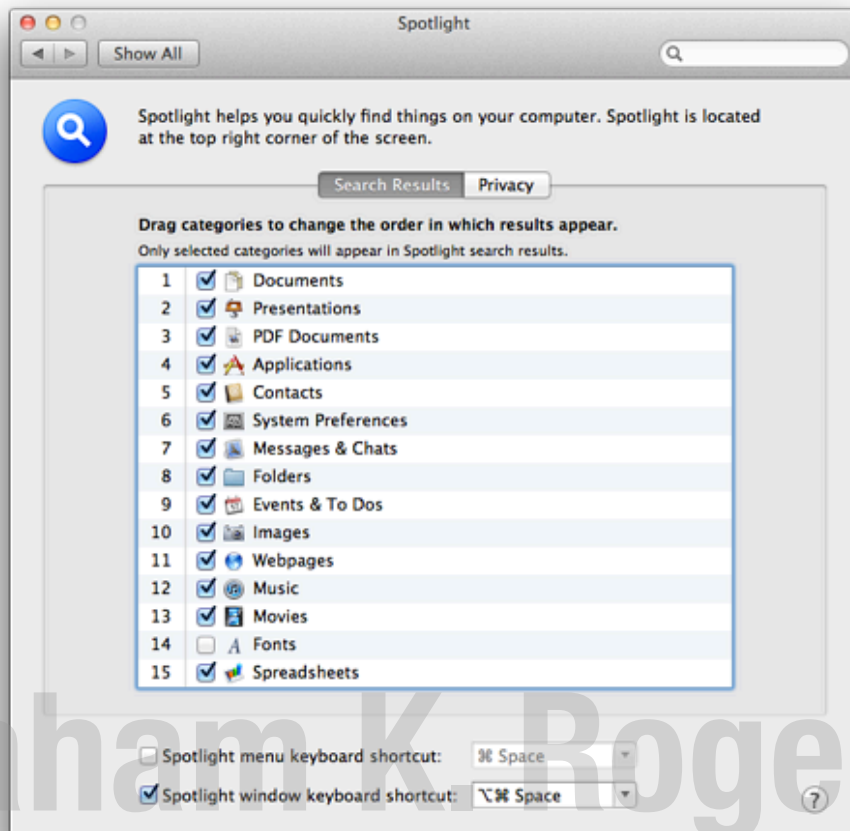
Graham K. Rogers - eXtensions

Spotlight is a powerful and system-wide search facility that was introduced with OS X 10.4. It uses HFS (hierarchical file system) to help us find information on a disk quickly and easily. It integrates with Apple's Finder. In theory, any data recorded on the disk, including text as well as file names, plus file metadata, is indexed by Spotlight (See Note below).

Search Results

When the system is first started (or when users update from Snow Leopard to Lion), Spotlight will index the disk. This can be seen by a small black dot in the middle of the Spotlight icon on the top right of the menu bar. Spotlight uses 15 categories in searches and these are shown in the Spotlight preference, "Search Results" panel.

In earlier versions of OS X there were 14 categories. The addition is "Spreadsheets" while the earlier "Mail Messages" has been changed to Messages & Chats."

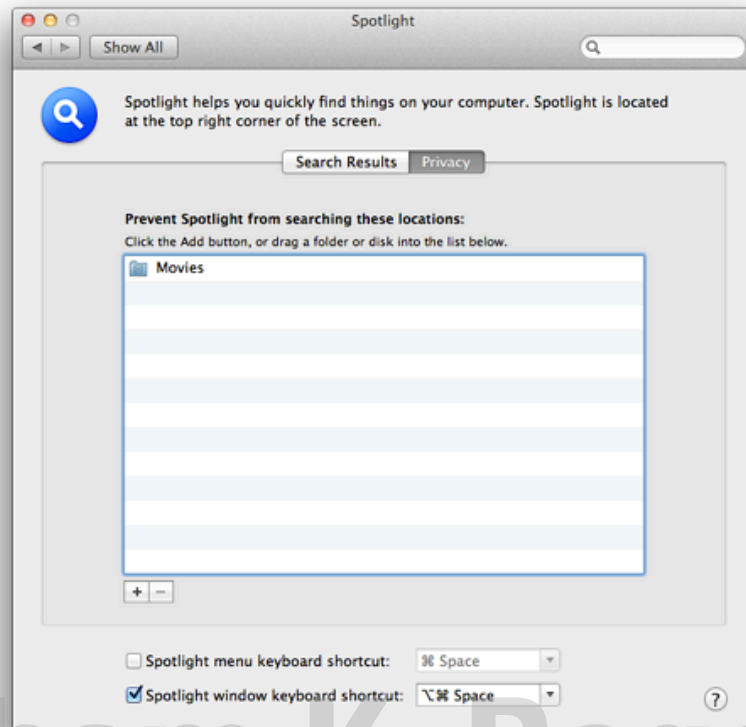


Each has a check box so can be deselected. A category may be dragged up or down to change the order of results. In my user account, “Documents” is the top category, followed by “Presentations”, with “Spreadsheets” last. Updating the data occurs immediately a file is saved. If I search for that last sentence, my text file is the top hit: it is a Document and, chronologically, the most recent.

Privacy

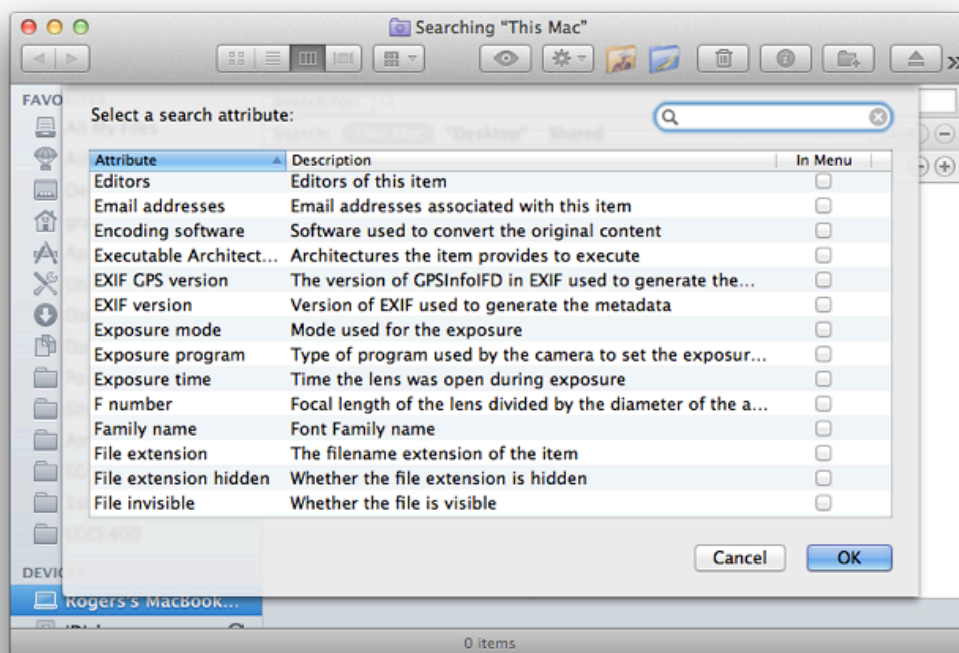
The other panel in the Spotlight preference pane is marked, Privacy. If a folder or a disk (e.g. an external hard disk) is dragged to this panel, it will not be included in searches. We can also use the Plus (+) and minus (-) icons at the bottom to add or remove locations from this panel.

This panel has another use in updating the Spotlight database. If a folder or disk is dragged to the panel, then dragged out again, Spotlight will then re-index that location. This includes the computer’s hard disk, so is a way to re-index the disk.



Graham K. Rogers -

At the bottom of both panels are two checkboxes. The first is for the menu keyboard shortcut. By default this is Command + Space. [I deselect this as I use the same key commands for switching language keyboards.] The other key command — Option + Command + Space — brings up a useful Finder search window. Such windows help users refine a search by adding criteria. A selector button to the right of each key-command window allows allocation of other keys.



Notes

- There were a number of third-party Spotlight plug-ins designed to enhance the features of this facility on the Apple downloads pages. This is no longer available, but several links may be found using online search engines.
- Using Spotlight: If we search using the word “image” and add the Boolean, NOT (in capital letters) plus the word, “flash”, images not taken with flash will appear in a Finder panel; but also we will find several files that contain these text words as well. On my computer that search brought up over 8,000 hits with images, zip files, text files, mail messages and other file types: all of these will have some connection to the search criteria. A search like this needs refining. Using the Finder search window and adding search criteria will reduce the numbers of files displayed.

Graham K. Rogers - Startup Disk



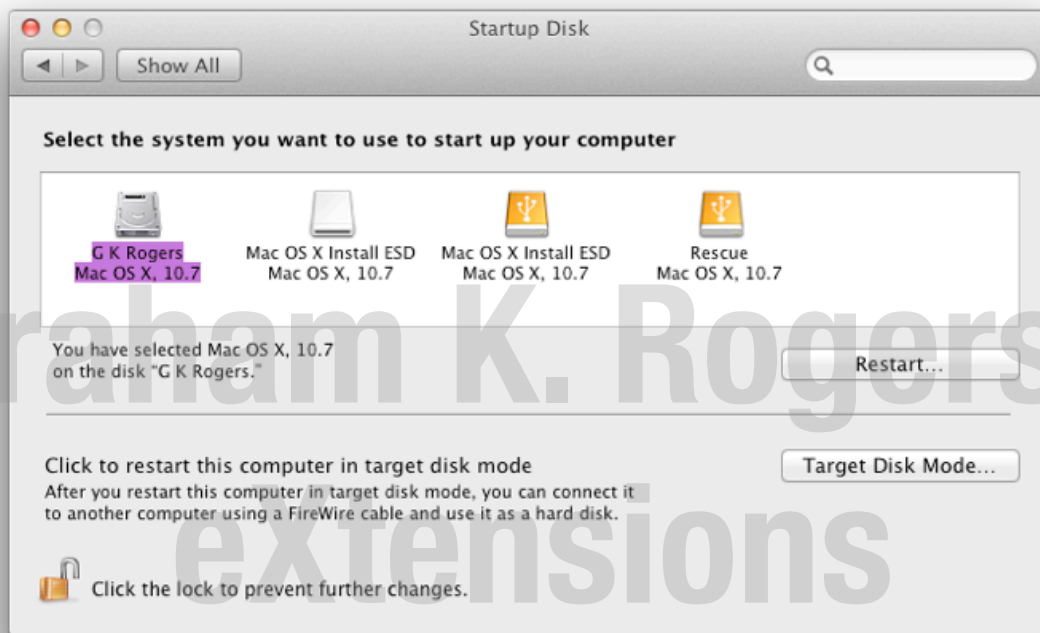
Startup Disk enables a user to change the disk that is used to start the computer and also to restart the computer in Target Mode: as a slave disk. This is useful in analysis and repair. It can also be used for swift transfer of large amounts of data.

Startup Disks

The Startup Disk preference has a single window in two parts. At the top are listed any bootable disks that the system recognizes. In a normal environment, one disk is shown. With earlier versions of OS X there were two icons: the current disk and a Network startup (no longer shown).

If a disk has more than one partition, only those with operating systems installed will be shown. An external, bootable disk will also appear in the panel when attached. My external disk has three partitions, but two only (a partition for installing OS X and another for running OS X as a rescue disk) appear in this panel.

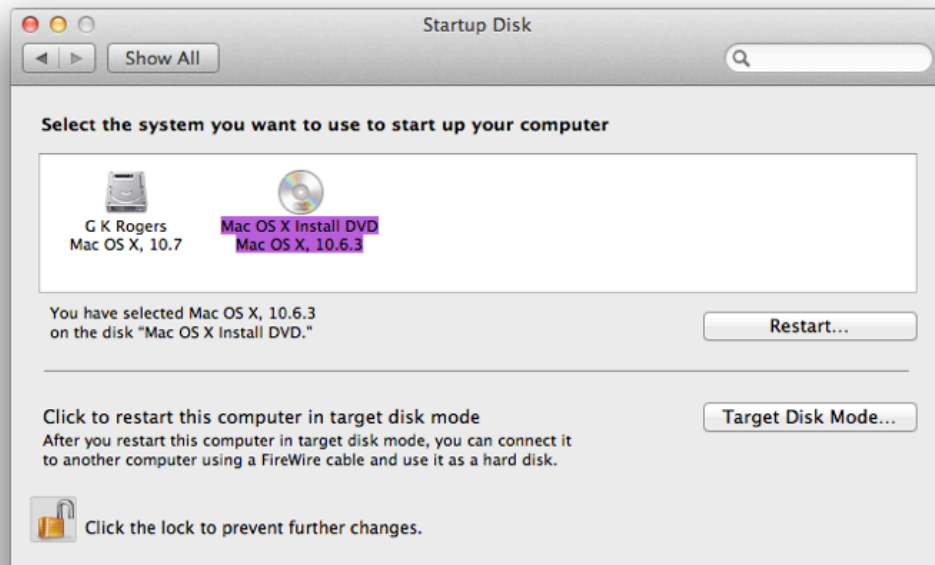
I can also see an installer on a thumb drive. The “current disk” icon also displays data concerning the version of the operating system in use and the disk name. In this panel — to the right — there is also a button marked restart.



If an Installation disk is inserted in the drive, this can be selected instead of the main disk, and we can restart directly using the preference pane. When such an optical disk is used, we can also start the computer using the C key.

Any disk with a usable operating system can be selected and the computer will restart from that. [Users should exercise caution if attempting to use a version of OS X before 10.7.

]It may also be a good idea, particularly after using another disk, to ensure that the correct disk is selected. OS X is usually good at finding a bootable disk, but has been known to lose the plot.



Graham K. Rogers -

Target Mode

The bottom half of the Startup Disk panel refers to Target Mode. This is a highly useful way to connect two Macs using a Firewire cable: one becoming the slave of the other. Newer Macs are able to use Thunderbolt connections (if both are so-equipped). The computer will start in Target disk mode when the button (bottom right) is pressed. The target Mac should be connected to a (master) computer before using Target mode. Target mode may also be activated by starting a computer with the T key pressed.

Target disk mode can help in diagnostics and repair. As an example I can run Disk Warrior on my MacBookPro to check and repair the disk on my iMac. It is also a method to transfer large quantities of data quite quickly.

At the bottom of the panel, is the lock icon which requires an Admin password to open. This makes it less easy for someone to start the computer using an external disk. If used in conjunction with the Firmware Password Utility, the computer is considerably more secure. With Lion this may be found in the repair utilities by starting the computer using the Command + R key combination.

Time Machine



Time Machine enables backing up of the entire contents of an OS X system to a specified external disk. Apple expanded the function to Time Capsule which is a combined Airport Extreme wifi router with an inbuilt hard disk.

In the update to OS X: 10.7, Lion. Time Machine was altered in ways that make its day to day operations more efficient, while the basic format will be familiar to those already taking advantage of this backup method.

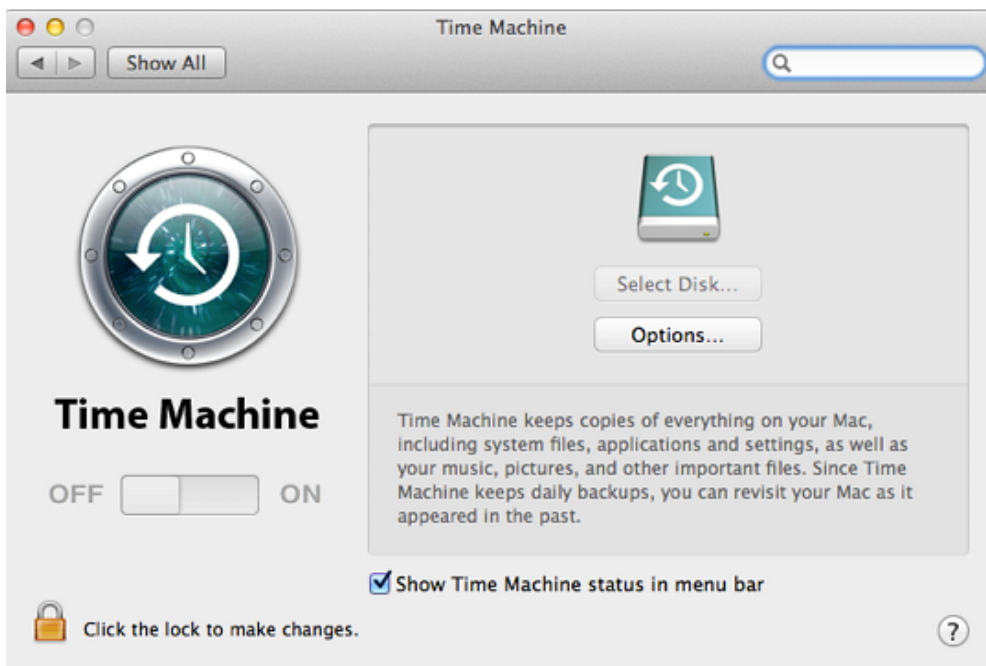
Setting Up

In System Preferences, when first started, the Time Machine panel displays a large icon for the feature, to the left of the panel. The same icon is also shown in the Dock. A small icon may be added to the menu bar which will allow a number of actions to be taken. These are related to the Preferences, but are not identical.

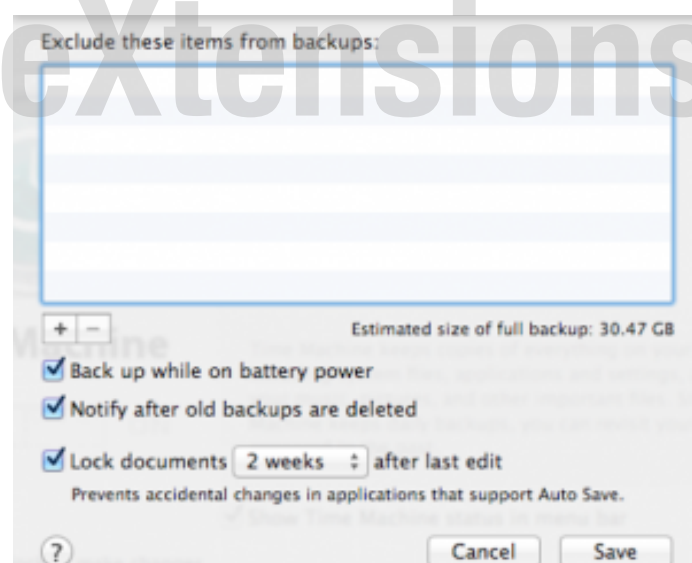
Previously when no disk was connected or when Time Machine is not set up, a panel appeared when the icon in the Dock was pressed, warning of the lack of a disk. Apple has now made changes to the way Time machine operates and, once configured, even if a disk is not attached, the system will store backup information.

It is therefore now possible to view the Time Machine “Infinity” display whenever the Dock icon is pressed, once a Disk has been specified and set up. When Time Machine has not been set up, there is a warning panel that offers to take the user to the preferences to set this up.

Initially the preference panel displays the icon with the preference name prominently displayed to the left. Below is an ON/Off switch (below that there is the standard padlock icon to prevent changes).

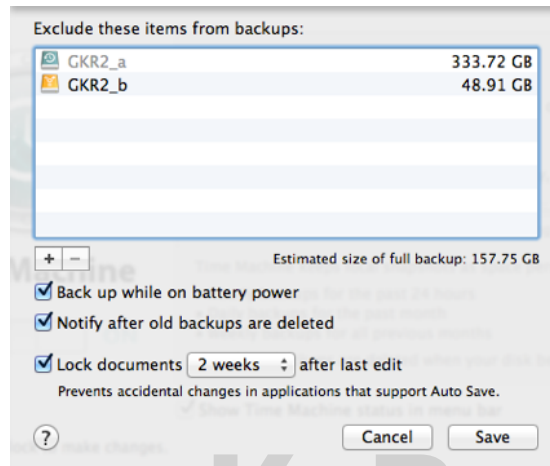


In this original setup condition, the main panel has a Time Machine hard disk icon in the centre with a button below marked, "Select Disk." Below is a text description of the feature. At the bottom is a check box for display of the icon in the menu bar: this additional icon provides other controls when active.

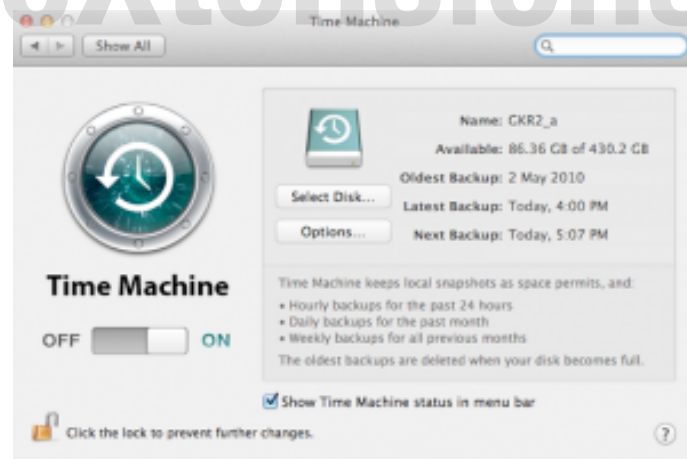


When Select Disk is pressed, there are a number of options. Any usable disk connected is recognized and may be selected by highlighting it and selecting the "Use for Backup" button. A second button enables a user to set up Time Capsule. Pressing that button links to the Airport setup utility. Note in the image above, that Time Machine preferences recognize an Airport Extreme Router and offer to set up a Time Capsule disk.

While Time Capsule is ready to run, a hard disk purchased from a store will need to be partitioned to the Mac OS Extended format. This may be done by selecting the disk in Disk Utility (in Applications > Utilities) and choosing the Partition tab. Once the size of the partition (or partitions) is decided, press the Options button and choose Apple Partition Map or GUID. This is the same process as I used when creating a [rescue disk](#) for Snow Leopard.

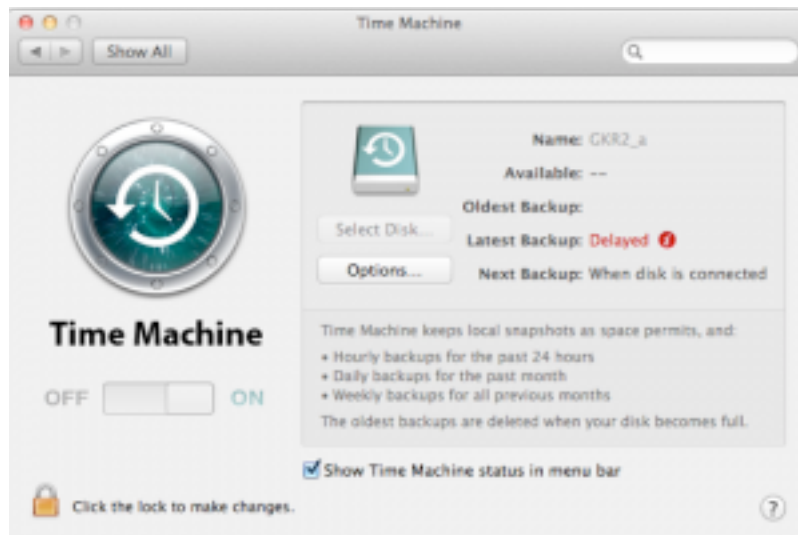


Once set up, the system recognizes that a disk is available and the main part of the panel changes. The icon is moved to the left and details of the disk used are displayed: Name, Available (disk space), Oldest Backup, Latest Backup and Next backup. In the image below, the panel displays the two partitions on a 500GB disk, one of which is set up for Time Machine.



Backing Up

The Oldest Backup will change as the disk is filled and weekly backups will be deleted. The Latest is the last time the disk was backed up. "Next" displays the time when the next backup is scheduled. If a disk is not connected, the panel previously displayed, "When Disk is Connected," but now shows, "Delayed".



The first backup takes a long time. If there is more than one partition on the external disk, the transfer may be slowed if Spotlight indexes the others. Spotlight preferences can be used to drag the partition icon to the “Privacy” panel. Indexing will stop.

In Snow Leopard and before, whenever the disk was connected, the entire system was backed up every hour, every day and every week. This has changed and we can see in the Options panel for Time Machine a new entry to Lock Documents. This is related to the way that Time Machine will back up the contents of the hard drive even when the disk is not attached. This is useful for those on the road, or whenever we are away from the usual location of the disk. By pressing the icon in the Dock, we may go back to an earlier version of a file or folder.

The default for locking documents is 2 weeks although the button in the panel allows this to be changed: from 1 day to a year. If a locked document is opened in an application it will display correctly. However, if a user tries to make changes, a panel will appear giving options, including Unlock.

Time Machine does not create a total backup. The FSEvents file records any changes and Time Machine uses those. The preferences do not have to be open for backups to occur. When a disk is not connected, the next backup shows as Delayed (above). When the disk is available the Next Backup section changes to a progress bar when a backup is taking place. Sometimes there will be a striped bar showing, “Preparing.” This may be for a long time if there has been a problem or a gap in backing up: patience is the key here.

To force a backup, we can use the Backup Now item in the Dock or the menu bar icon menu. If a backup fails, this information appears in red, with the letter i in a red circle alongside. The “i” can be clicked to reveal more information about the problem.

The panel also has two buttons which open further panels: Select Disk and Options. The Select Disk panel can be used to add another disk when one is full

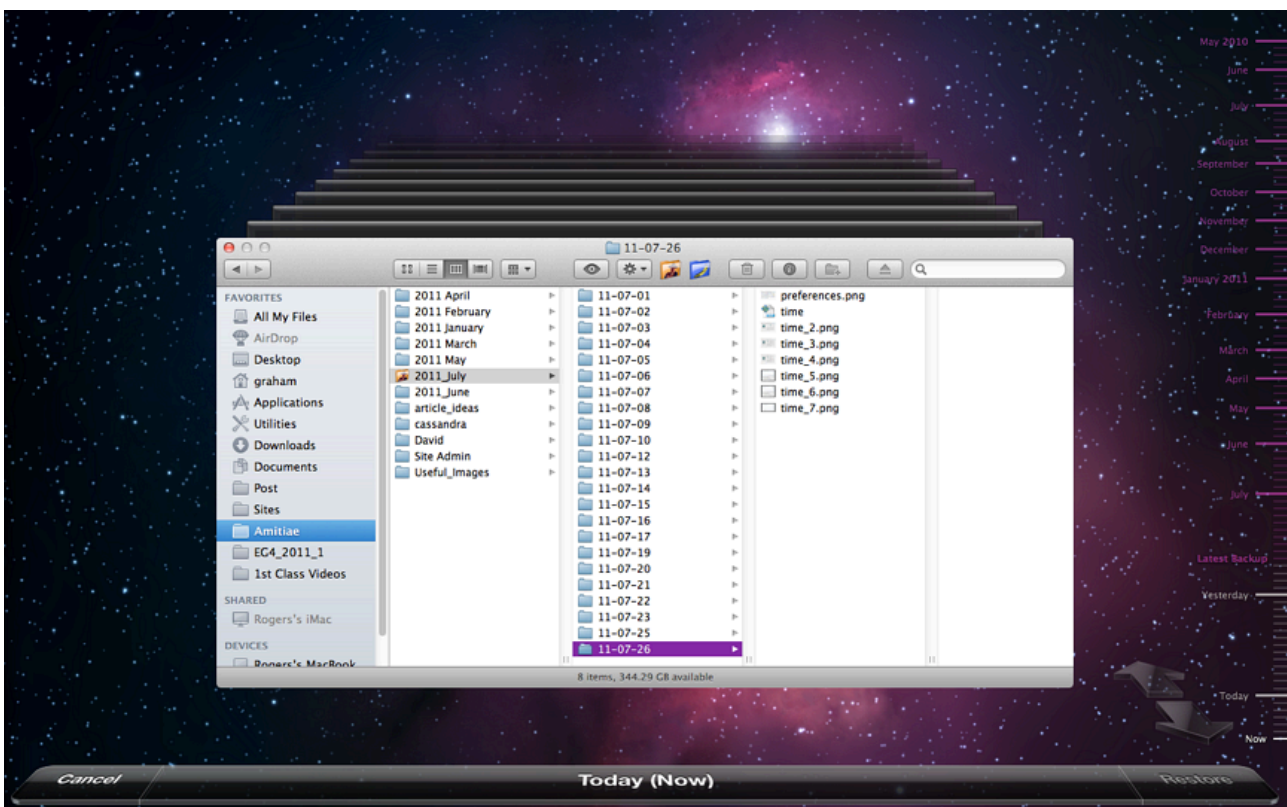
and is almost identical to the original “Select Disk” panel when Time Machine is first set up, including the “Set Up Time Machine” button.

There is a new Do Not Backup button in this panel which stops any backing up: the main panel then appears as it was when first used. Another new feature here is encryption — Encrypt backup disk — which requires a password when first set up (and for access). Use this carefully: lost or forgotten passwords will mean a loss of access to the backed up data.

The Options panel reveals locations which are excluded. The plus (+) icon adds other files or folders to be excluded from backup. Additionally, a check box allows backups to occur when the battery is used. This was not possible when Time Machine first appeared. Another check box confirms that the user is to be warned if an older backup is to be deleted.

Restoring

To return to a previous version of a file or folder, we access Time Machine via the Dock icon. This brings up the “Infinity” window and we may select a location from the Finder panel and a time, either by using the control to the right, or by clicking on the receding panels. When a file is located we may click on Restore and the file will be moved to its earlier location. If a file of the same name is already there, we are given the option to rename the file to be restored, or to save it elsewhere.



A complete system could be restored using “Restore from Time Machine” on the DVD Installer with Snow Leopard. Now, in the event of a restore being necessary, we are able to use new startup keys Command + R to enter an invisible partition that has the tools necessary. There is a feature in here that allows a complete restore from the Time Machine backup.

This may also be done on a computer that already has the system. Time Machine will replace all data, including settings and accounts. There are several warnings before this takes place. A warning appears to inform us that taking this step will replace all the contents of the selected volume. Pressing Continue brings up a panel that shows any suitable disks available. To effect the backup, if not already in use, the disk that contains the Time Machine backup can be attached at this time.

When the disk is recognized and highlighted, pressing Continue gives a list of available backups. A full restore is likely to take a considerable time. A power backup is suggested (for the disk if not the computer). When the process is complete the computer will restart with the restored system.

Graham K. Rogers -

Trackpad eXtensions



Trackpad Preferences has had a total revision with the OS X update. Most of the earlier features are still available and Lion sees one or two useful additions.

The panel for Trackpad preferences is in three parts, each of which is accessed by pressing on the titled button: Point & Click; Scroll and Zoom; and More Gestures.

In earlier versions of OS X the settings were split into 1, 2, 3 and 4-finger gestures on the same panel, with slider bars on top. In the current version some gestures have options which are outlined in the sections below. All gestures and options are illustrated with video clips to the right of the panel.

Point & Click

- Tap to click makes the trackpad act like a mouse button or trackpad bar. It seems to be the normal input method for Windows users (I prefer this off which confuses my students).
- When Tap to click is not selected, the normal setting for two-finger input is Click with two fingers. The video clip shows the demonstrator tapping on the trackpad which may not work, while clicking on the trackpad bar will act as a secondary click when this is selected. When the one finger Tap to click is selected, this item changes to Click or Tap with two fingers and this works as is demonstrated in the video clip. Two other options for the Secondary click (with the one-finger click selected or not) are Click in bottom right corner, or click in bottom left corner. In this case the primary click is relocated to the right.
- The three-finger double-tap allows a word in text to be looked up in the dictionary. The word does not have to be selected. If the cursor is over a word and this gesture is used, the word is highlighted in yellow and a panel appears with dictionary information, a thesaurus entry and data from Wikipedia. Those with Little Snitch may want to choose the option to access links, “forever”. Highlighting is not always instant and may need a second tap to make sure.
- The three-finger drag allows a window to be moved around the desktop in the same way as if the trackpad button were held down. This also brings a window to the front when used.



At the bottom of this panel is a slider bar for tracking speed.

Scroll and Zoom

The second window in Trackpad preferences has four gestures all of which use two fingers. None of these has options.

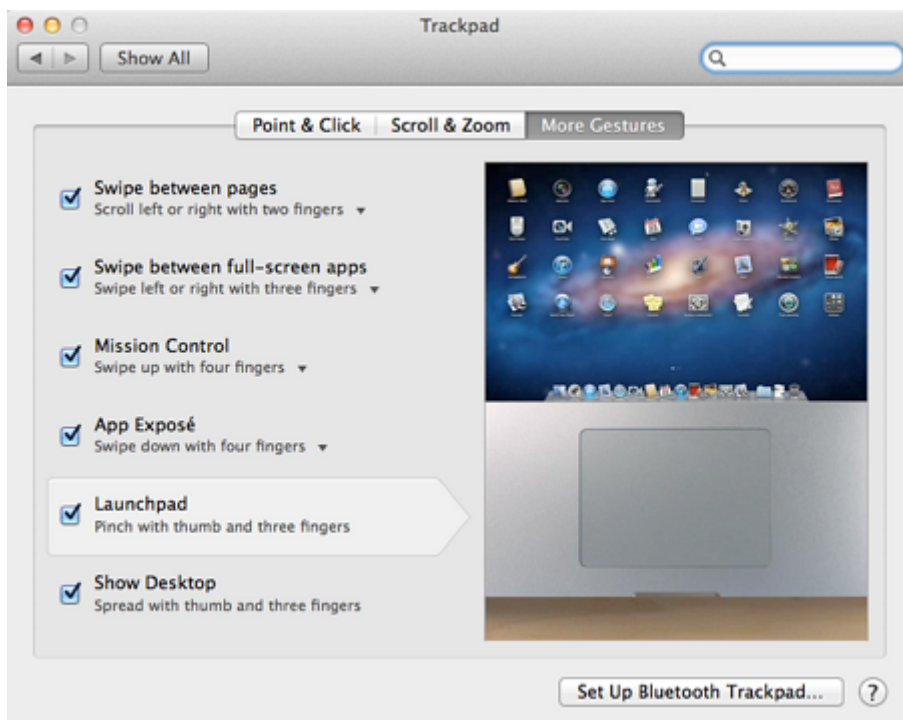
- When Scroll direction is checked, the movement is described by Apple as “Natural”: as the fingers scroll down, so the page moves down, in the same way as occurs on the iPhone or iPad. Those who prefer the movement of the scrollbar to follow finger movement (fingers upward, scrollbar up) may wish to leave this unchecked.
- The Pinch with two fingers, as on iOS devices, will enlarge images and certain text content (Safari, Preview) when the gesture opens and make them smaller with the closing action.
- Similarly, the Smart zoom — a double-tap with two fingers — enlarges pages. A second double-tap will return them to the normal size. As with the Pinch, this only works with certain applications.
- Rotate allows a user to turn an image (or a page in certain applications, like Preview — not Safari) 90 degrees. It is effective in Apple’s photo software, like Aperture or iPhoto for rotating images quickly.



More Gestures

The final section has six options of varying degrees of difficulty. Some of these gestures replace some that were used in Snow Leopard.

- A two-finger swipe to left or right scrolls between pages in some applications, such as Safari, where we can view pages that were loaded or viewed before the current. Options here are to scroll to the left or right with three fingers, or two scroll left and right with either two or three fingers. With Safari, for example, swiping and scrolling are different actions: the latter gives a smoother transition between pages in memory, while swiping will reload a page.
- Swiping between full screen apps may be effected with either four fingers or three. If the three finger option is selected, this is not available for Swiping between pages (above). The swipe allows any desktop space to be displayed, included Dashboard if that is selected as a space in the Mission Control preference pane.
- Mission Control may be activated using the four finger swipe up. This displays the current desktop in a smaller size with applications open, with other spaces displayed as thumbnail images above. An option here is that three, instead of four fingers may be used.
- A downward swipe with four fingers accesses Exposé. All open windows of the top application are shown minimized on the desktop, with the current page in a slightly larger form. As with the Mission Control trackpad gesture above, an option is to use three fingers instead of four.



- Launchpad may be activated using an awkward three finger pinch plus the thumb in a closing movement. This gives a swift access to the Launchpad screens, but may take a little practice to perfect.
- Perhaps even more difficult is the thumb and three-finger spread to show the desktop. This may also be done with the F11 key. All windows are cleared from the screen and the user has a view of only the desktop and icons displayed there.

Notes:

1. Each panel also has a button at the bottom right for setting up of a Bluetooth Trackpad. A panel is opened and a search for a suitable Bluetooth device starts. The trackpad should be on and discoverable.
2. Older Macs with trackpads that do not support multi-finger gestures (or those without the Magic Trackpad and Multi-Touch Trackpad Update 1.0) will display the older preference panel even with OS X, 10.7 Lion installed.

eXtensions

Universal Access



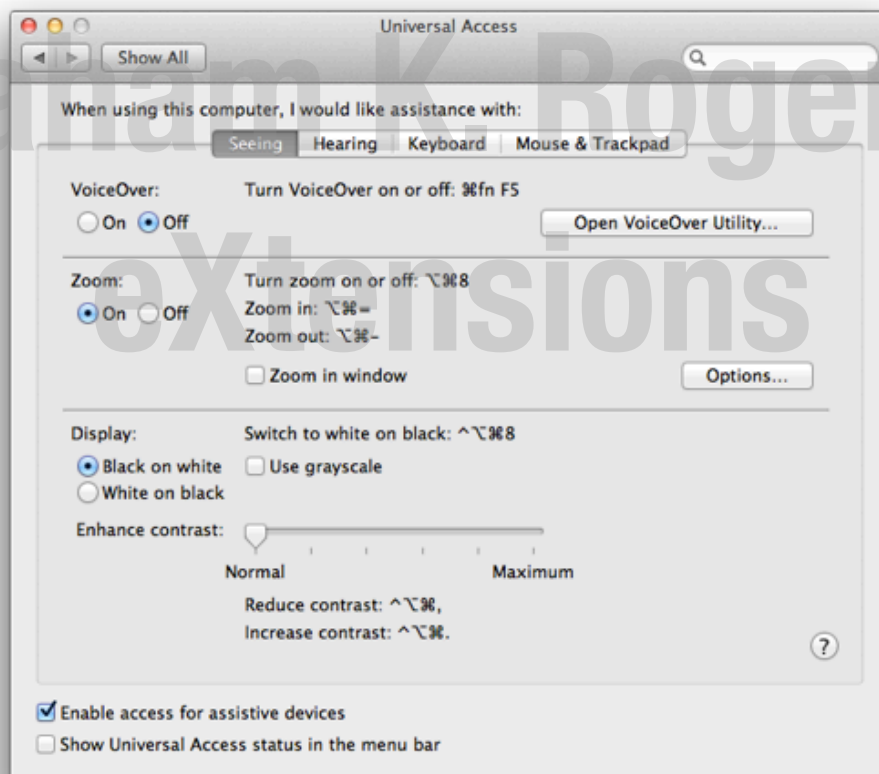
Universal Access controls settings for computer use that include several features aimed at assisting the disabled, but which may also be of use in a wider context. There were no changes in the update to OS X.

There are four categories: Seeing, Hearing, Keyboard, and Mouse & Trackpad. At the bottom of all panels is a check box labelled "Enable access for Assistive

devices”: valuable if we need to use special equipment to control a computer. An addition in Leopard just below that “Assistive Devices” check box, was a useful check box to allow the status of Universal Access to be shown in the menu bar. However this only indicates if an item is on or off. It offers no method of control apart from opening the Universal Access preference panel.

Seeing

The first panel, Seeing, has three main sections: VoiceOver, Zoom and Display. These are designed to assist those with vision problems to work more effectively with a computer. Apple added to these (and other) functions in the latter part of 2008 by updating its Accessibility web pages (and by enhancing features in iTunes and iOS devices).



VoiceOver has two main controls: On or Off. This feature is off by default. It may be activated or deactivated also by use of the Command + F5 keys. On a notebook computer this may be Command + Fn + F5 (unless the option to use keys as normal Function keys is deactivated in Keyboard preferences).

When the feature is turned on, a panel appears with a welcome message and the selected system voice ([Speech Preferences](#)) explains the features. The default voice is Alex: others may be selected or downloaded.

When VoiceOver is on, as the cursor is moved over a page certain functions critical to operations, are announced by the system voice. To tune the system voice (or to change it) to suit the user, a button to the right links to VoiceOver Utility: a highly tunable utility that has settings for several accessibility features that may be enhanced on Macs, including Speech, Visuals and Braille.

When VoiceOver is turned on in System Preferences, certain features will be highlighted with a box. This has been known to concern people who are not aware the feature is active.

Zoom, as the name suggests, is a useful feature that allows the screen to be made larger quickly. It can be turned on/off with the preference, or by using the Option + Command + 8 keys. When On, we may zoom in with the Option + Command + = keys, or zoom out with Option + Command + - (minus) keys.

An Options button allows greater control of how the Zoom feature operates: such as sliders for maximum and minimum, and how the screen behaves when zoomed. In addition, when this feature is On or Off, using two fingers on the trackpad (or the scroll-wheel of a mouse) together with the Control key, will zoom in and out.

Switch to White on Black assists those with specific seeing difficulties, for example color-blindness. A normal screen is referred to as Black on White, and it is possible here to switch to White on Black: a complete negative image.

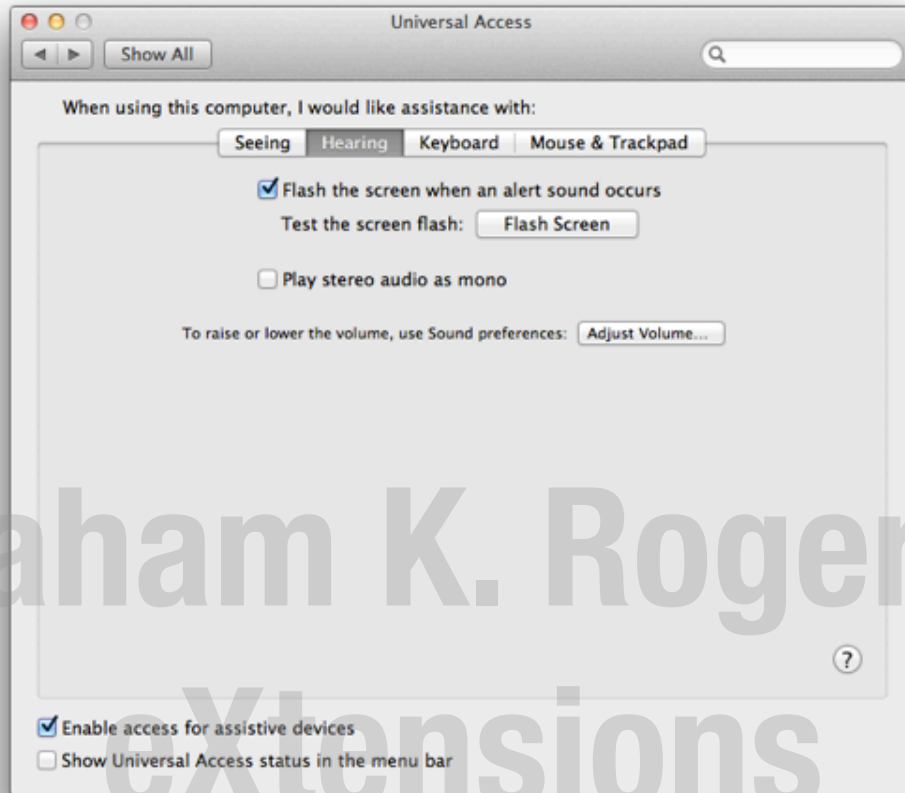
This may also be effected quickly by pressing Control + Option + Command + 8 (a combination that apparently cats and young children manage easily). Both of these options can also display in grayscale (no color) an option that is turned on using a check box in this section.

Hearing

The Hearing panel now has two basic items, “Flash when an alert occurs”, and Play stereo audio as mono.

Normally, depending on what is selected, an event (such as mail arriving) makes a sound to alert the user. Selecting the Flash alert option adds a visual warning for those who may have hearing difficulties. There is a test button to make the screen flash to familiarize a user with the operation.

A new checkbox in this preference pane allows users to output stereo sound as mono: perhaps useful for those with hearing imbalance. Just below this is a link to the Sound preferences so that users may adjust output volume. This may also be done with a menubar icon.

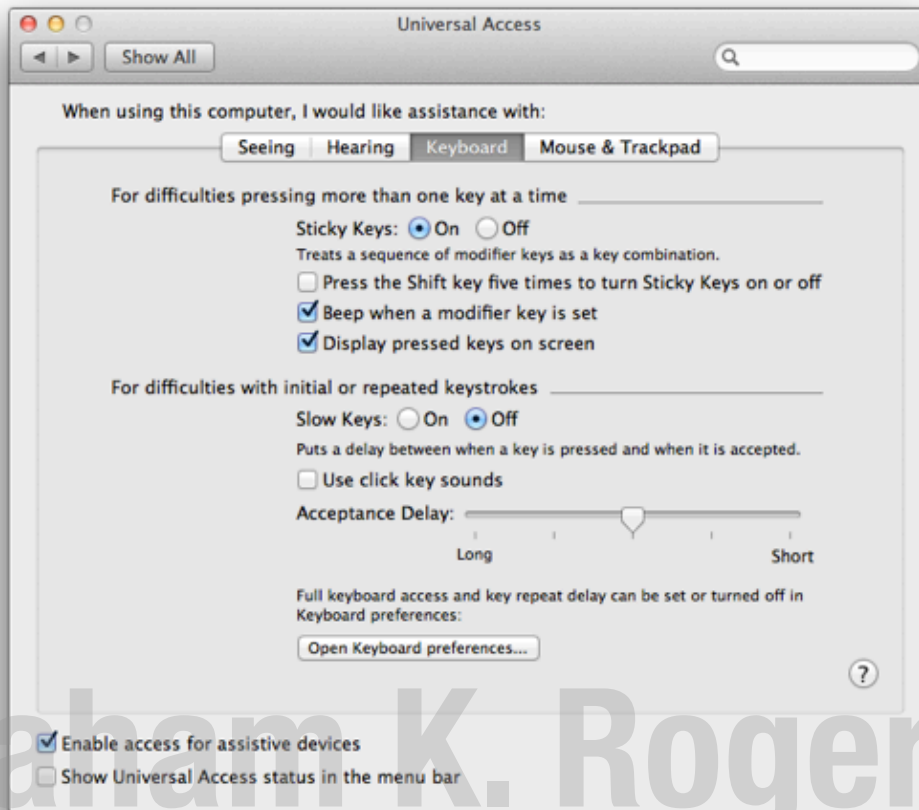


Graham K. Rogers -
Extensions

Keyboard

This section helps a user adjust the keyboard so that those with certain difficulties may be able to type with less difficulty.

If a person is restricted to using a computer with one finger only, even an action as simple as typing a capital letter is a problem. With its "Sticky Keys" and "Slow Keys", the Keyboard panel provides some solutions to those with limb-movement problems. Sticky keys leaves the last-selected modifier key — those used in combinations like Shift, Option, Command — active until another is pressed. An example could be the above, Black on White switch in the Display panel).



Graham K. Rogers -

Extensions

As the feature is activated (and as significant keys are pressed — like Command or Control) there is a Sound. Another sound is used when the feature is turned off. Checking a box allows this feature to be active once the shift key is pressed five times. A checkbox below this marked “Beep when a modifier key is set” may be slightly misleading as the sound is more like a mechanical clunk.



A useful feature of this attribute is that the keys can be displayed onscreen. Pressing the key a second time, highlights it (with an optional sound), and pressing a third time cancels the key.

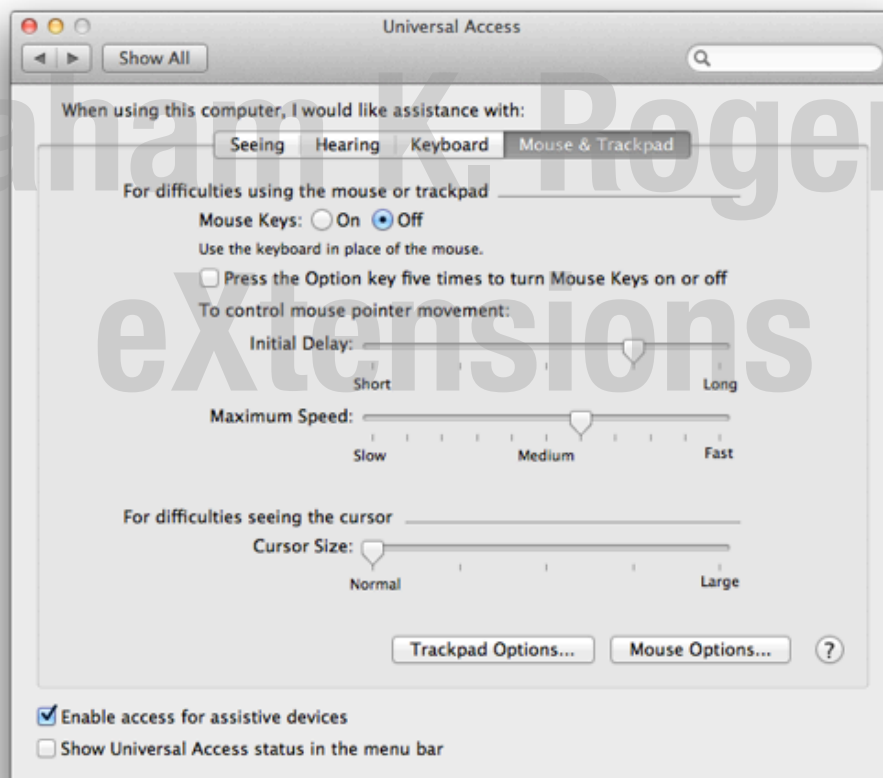
With Slow Keys, a delay between typing and appearance is introduced for difficulties with initial or repeated keystrokes. Rather than simply tapping a key as in touch typing, the key is held for a moment before it will appear. The acceptance delay may be inconsistent and could need adjustment to get it right for the user.

There is now also a checkbox so that there are sounds when the keys are pressed with this feature. There is a short mechanical sound when the key is pressed and another when it is entered on the page.

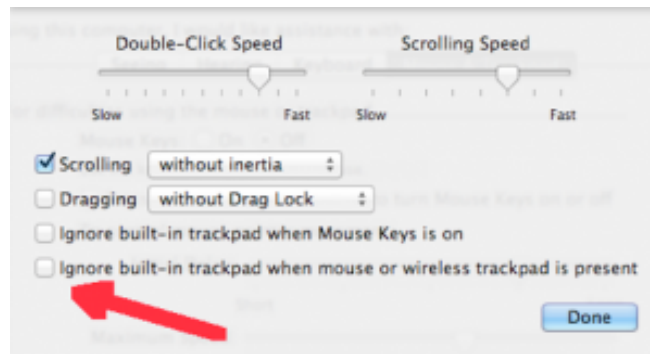
To access more features, there is a button here that opens the Keyboard preferences.

Mouse & Trackpad

For similar reasons to the above (Keyboard) section, some people cannot use a mouse easily. This final panel allows the substitution of keystrokes using the numeric keypad for the mouse actions.



There is a checkbox that allows a user to activate this feature by pressing the Option key five times. Like other features, a sound (like a small bird) indicates when this is turned on or off. The keys are 7, 8, 9 for upward movements, J, K, L for downward movement, U and O for left and right, and M for highlighting. The period (.) acts as a mouse-click. Typing was disabled when I turned this feature On.



Initial Delay of actions and Speed may be adjusted using sliders. Another slider just below allows the cursor size to be adjusted (Normal to Large)

When the feature of Mousekeys is On, the trackpad can be deselected by using a Trackpad Options button at the bottom of the panel. This panel would also be useful at any time for those who might prefer to use a mouse (or a wireless trackpad) and turn the inbuilt trackpad off. It is independent of Mousekeys activation.

A button to the right of the Trackpad Options button reveals a panel for Mouse Options that has sliders for adjustment of Double-Click Speed and Scrolling Speed.

eXtensions

Users & Groups



The latest update to OS X, 10.7, Lion, saw several changes to System Preferences. The Accounts preferences used to be first in an alphabetical listing of System Preferences. It has been renamed and is now shown last with the name Users & Groups indicating some of the changes.

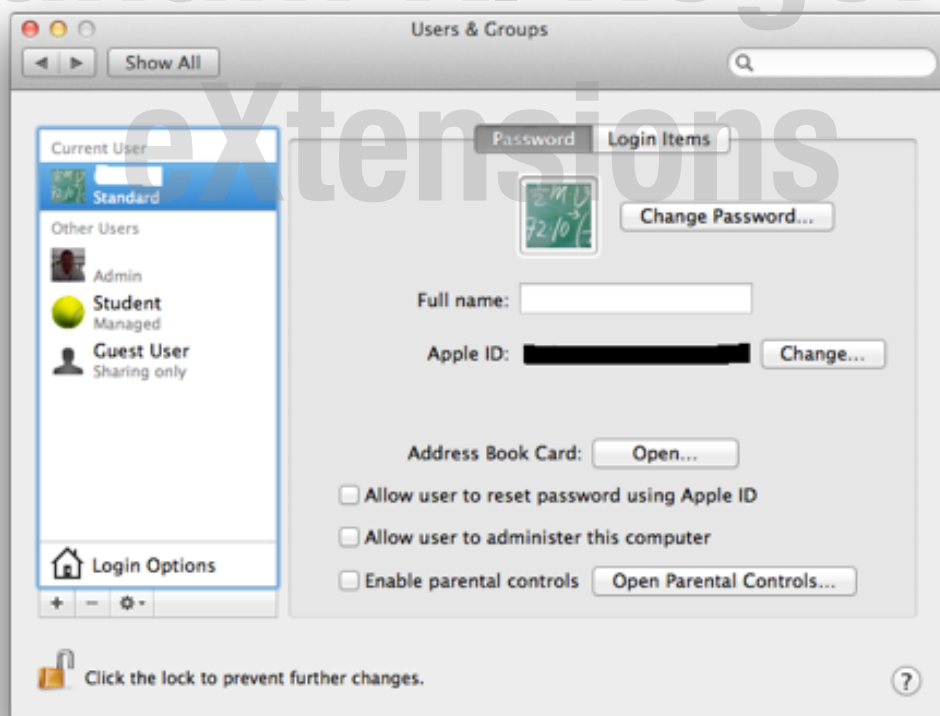
Introduction

When a user opens the Users and Groups preference panel, there are certain familiarities, but some significant changes. The first is that the main Accounts panel has been renamed Password.

The pane has two main sections. The left panel displays basic information of the user accounts. To the right is a panel containing information about the highlighted account and buttons for changes to be made.

As with many of the other preferences panels a padlock icon in the bottom left restricts access and we must have an Admin username and password to open this.

At the bottom of the left panel is a Login Options selector. Below this are plus (+) and minus (-) signs to add or delete accounts. A gearwheel icon accesses a single item: Set Master Password. This is an overarching password for FileVault which is turned on in [Security & Privacy Preferences](#). It allows access to FileVault if a user has lost or forgotten the password, but if the Master Password is forgotten, all data encrypted by FileVault will be inaccessible.



Users 1

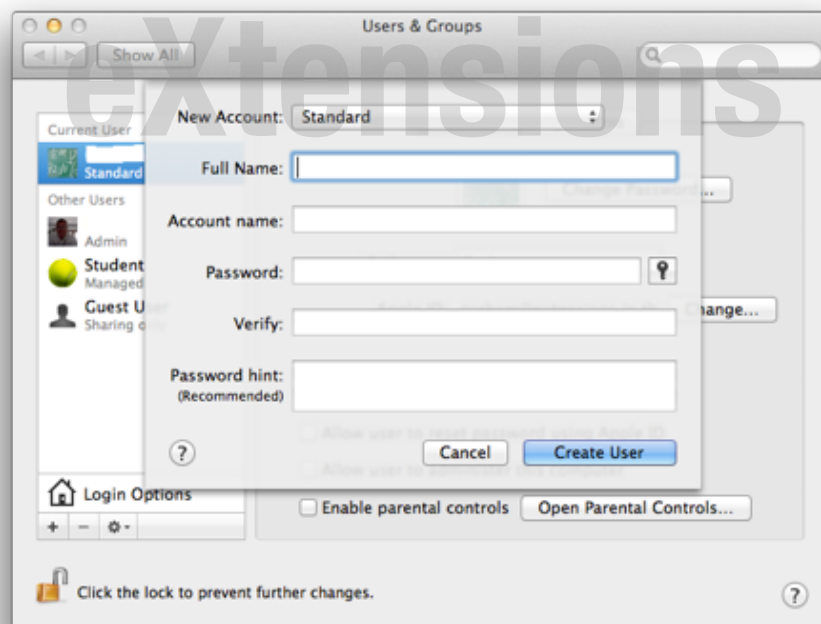
By default, if there is a single user account in OS X, that will have Administrator privileges. Clicking on the Add icon displays a panel with the type of account selected by a button and pull down menu. These are Administrator, Standard,

Managed with Parental Controls or Sharing only. Other text boxes are available for Full Name, Account name, Password (Verify), and Password hint.

The full name may be anything the user wants. The Account name was formerly called the Short name. It is critical that, once entered and the account created, that this is not changed: this affects the behavior of the Home directory and any related functions, including access to data. This is the name the system will use. It will appear as the name beside the Home icon.

A password is entered and, although some users try this, the Enter/Return key is a dangerous way to try and avoid password use: a warning is given if this is used. To the right of this sub-panel is a small key icon, which brings up a utility that can help a user select a password from the simple to highly complex. A color bar indicates a security rating from red (poor) to green.

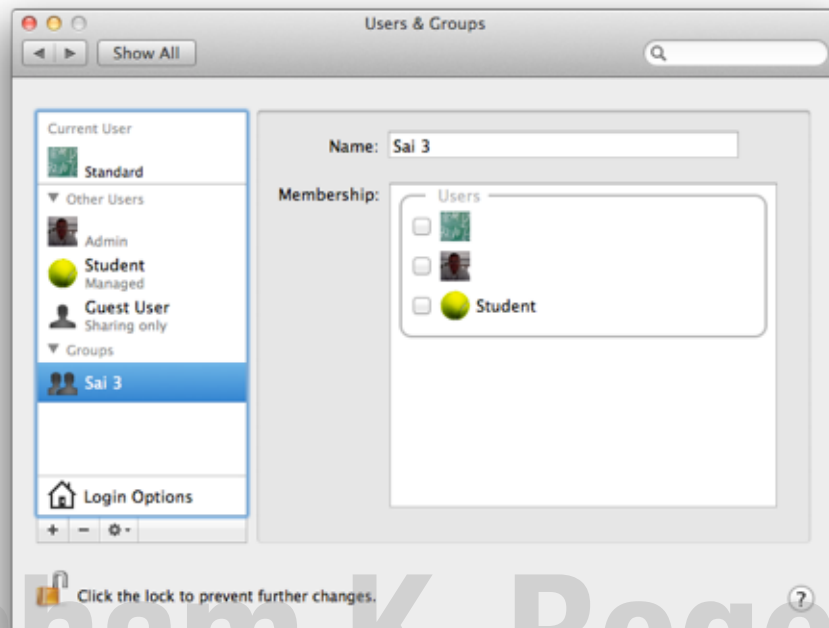
Once a password is entered, we are asked to verify: the two entries should match. Below this is a Password hint panel in which we can enter information to help us remember the password should it be forgotten. This information will appear in the main login screen after three failed attempts.



When all selections are made, we may either press Cancel or Create User. OS X will make a new user account which takes a few minutes.

At the bottom of the New Account type panel is a new option: Group. If this is selected, the panel is reduced to Full Name only. Once created, a new panel is

available with the accounts on the computer listed and checkboxes beside each to allow membership of the group (see Notes – below).



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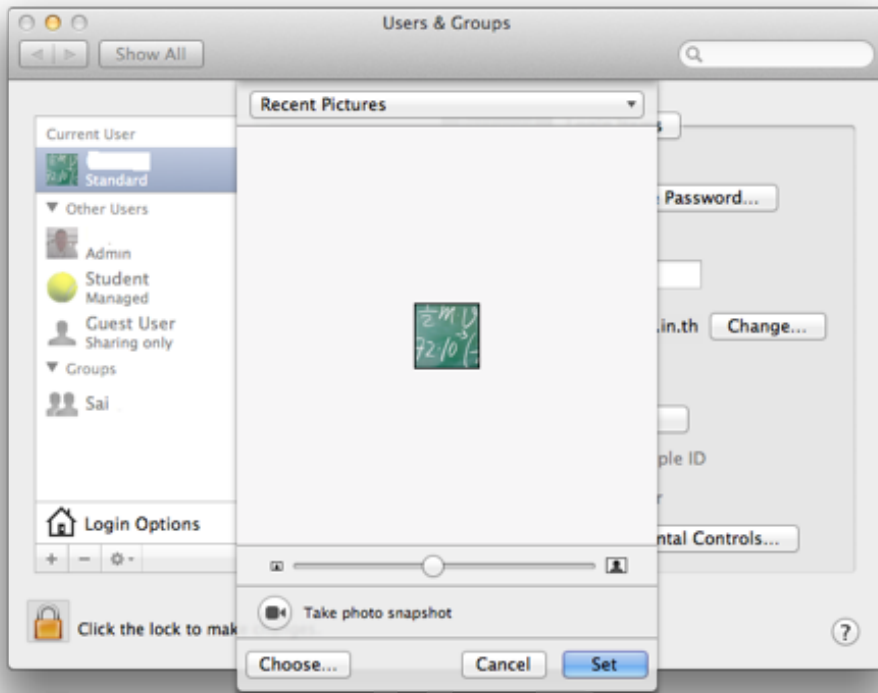
Users 2 eXtensions

To the right of the list of users is a panel with information about the current user (or a highlighted user when the padlock icon is open). At the top is the user's icon — displayed in the list of users at login. When the cursor is passed over the picture, a small arrow appears (bottom right) and clicking that allows the selection of another image.

At the top of the list of pictures is "Edit image". When clicked, a panel appears with the current icon displayed in the main section. It may be resized with a slider. At the top is a button marked Recent Pictures which reveals the current and any other images that have been used.

We may also take a picture using the iSight camera. The Choose button at bottom left brings up a Finder window allowing access to any images on the computer. The Set button accepts any image displayed in the panel, and Cancel reverts to the current icon.

Below the icon is a panel that can be edited with the Full Name of the user. When the panel is first used, below the Full Name is a button that allows a user to set the Apple ID, which can then be used to reset the password when a box below is checked.



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Once the Apple ID has been entered and Set, it appears on the panel with a button marked, Change (to the right). When this is used we may open the Address Book at the user's card. This can be used for entering data in forms.

There are three checkboxes below:



- Allow user to reset password using Apple ID
- Allow user to administer this computer (see Notes – below)
- Enable parental controls. A button alongside allows access to the [Parental Controls](#) preference panel.

Login Options

By checking the house icon at the bottom of the user panel Login Options may be accessed. Top of the panel is the Automatic Login button: this can be disabled for best security (users enter passwords to access their accounts), or can be selected for specific accounts, so that when a computer is turned on that account is always opened.

At login, we are able to select display of names of users (and user icons) who have accounts on the computer or simple text boxes in which the name and password are entered. The latter is more secure.

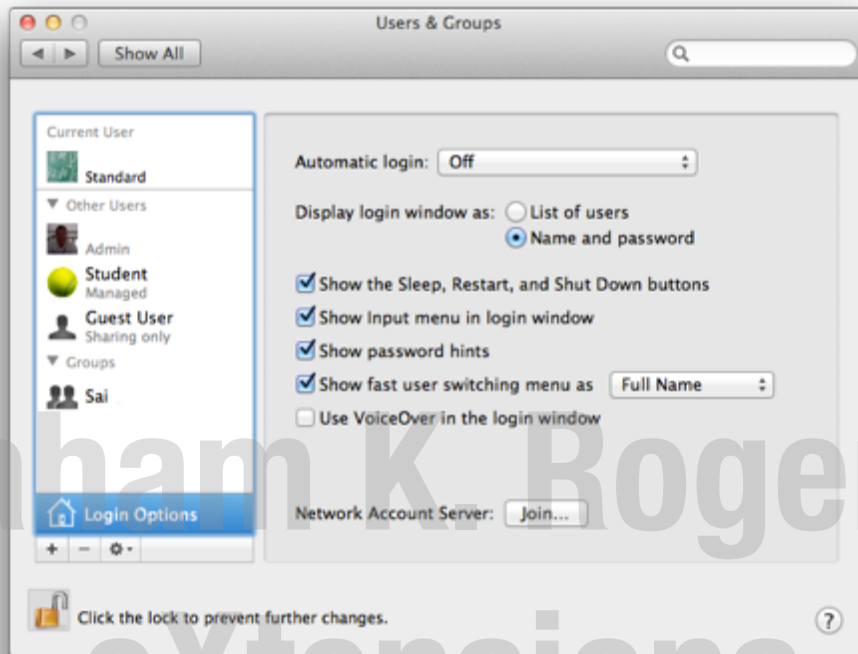
Below are five check boxes: display of buttons for Start, Sleep and Restart in that login panel (with user names or the simple text boxes); Show input menu in login Window, which allows selection of different language keyboards; Show password hints (for the forgotten password); and Use VoiceOver at login window, when a system voice will announce data as a way of assisting those with seeing difficulties.

A check-box (above “Use VoiceOver. . .”) allows fast user switching. It is possible to switch between accounts without logging out or closing applications each time. We may also choose here whether to display the account information as an icon, a full name or a short name.

At the bottom of the panel is a new button: Network Account Server. Pressing Join, opens a panel in which the user may specify either the address of an Open Directory Server or Active Directory Domain. The Open Directory Server “stores and organizes information about a computer network’s users and network resources and which allows network administrators to manage users’ access to the resources” ([Wikipedia](#)) and is an Apple solution.

The Active Directory Domain is an equivalent Microsoft solution to store “directory data and manages communication between users and domains, including user logon processes, authentication, and directory searches” ([Microsoft TechNet](#)).

When Server details are entered we press OK (or Cancel). A button to the left of this panel opens Directory Utility, revealing panels with Services, Search Policy and a Directory Editor. Users should be careful of adding, altering or deleting any information in Directory Services unless they are fully aware of what they are doing. It is suggested that this is only used under the guidance of a System Administrator.



Login Items

The Login Items section displays a panel with a list of those items that a user requires to be available at startup (see Notes — below). The list is in three sections: a checkbox so that the application may be hidden; the item (or name) of the application; and the type (e.g Application).

Below are the + and - icons. Pressing + brings up a Finder window and we may select an application or file (e.g. mp3) to open at startup. The - icon will delete the highlighted item.

Notes

- Apple Help tells us that a group account gives the same privileges to two or more members and when specific file access privileges are assigned all

group members share those privileges. This is intended to help when sharing files or using shared folders.

- We may add a group (once it has been created) by highlighting a file and choosing Get Info (Command + i). File permissions are at the bottom of the panel revealed and when the padlock icon is unlocked, users may press the + icon to add a user or group and set permissions for the added user/group.
- When adding accounts, users should not usually have more than one Admin account to avoid confusion. However a second Admin account could be setup temporarily for trouble-shooting. It may be removed after the problem is solved.
- When installing some applications a user is given the option to make it open at login. This may also be selected by highlighting an icon in the Dock and selecting Options. Users should be aware that too many items, or items with a large CPU/memory requirement, such as some suites, may be a drag on resources. Login items may also be the cause of conflicts that are not easy to track down. Starting a computer in Safe mode (with the Shift key pressed) does not load these items and this may be a way to track down any problems that are being caused this way.
- We strongly urge users to use a password and preferably one that is strong, with random characters. Using the password utility (above) can create a strong password but this may be hard to remember. In this situation I write the password on a piece of paper which is locked away in a drawer. An easy to remember password may also be easy to break or guess.