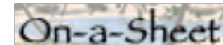






# Screen Capturing

Mac OS X, MS Windows



	 Mac OS X	 MS Windows	
<b>CAPTURING</b>			
<b>Always Available (1)</b> – part of operating system and always available w/o starting any separate application			
Full Screen to File	⌘ + ⌘ + 3	n/a	
-“- Clipboard	Ctrl + -“-	PrtScr	
Partial Screen to File	⌘ + ⌘ + 4, select area	n/a	
-“- Clipboard	Ctrl + -“-	n/a	
Window to File	⌘ + ⌘ + 4, space, click window	n/a	
-“- Clipboard	Ctrl + -“-	Alt+PrtScr (active win)	
Notes	Can't take screen shots if <b>DVD Player</b> is running.	Unfortunately no standard means of directly getting shots to file.	
<b>Always Available (2)</b> – part of operating system but separate application that must be started			
Application(s)	Mac OS X 10.0 and later: <b>Grab</b> * Selection (⌘A) * Window (⌘W) * Screen (⌘Z) * Timed Screen (⌘Z)	Windows Vista / 7: <b>Snipping Tool</b> <sup>1</sup> * Free-form Snip * Rectangular Snip * Window Snip * Full-screen Snip	Win XP: sadly none
<b>Power Tools</b> – for more advanced capturing of images, and also audio and video; for podcasts, screencasts, webcasts, ...			
Just a few examples to get you going	Copernicus, Capture Me, Jing, Camtasia (\$\$), iShowU (\$\$), ScreenRecord (\$\$), Snapz Pro X (\$\$, 5/5 MacWorld), ...	Jing, CamStudio (OSS), Screen Hunter Free, Windows MediaEncoder, Paraben Screen Capture (\$\$), Camtasia (\$\$\$), ...	Capturefox (FF add-on). No shortage of tools for capturing images, audio, video...
<b>EDITING</b>			
Quick / basic editing	<b>Paintbrush</b> (DL, OSS) <sup>2</sup>	<b>Paint</b> (std); <b>Paint.NET</b> (DL) <sup>3</sup>	Mac: sadly no std app
Advanced – free	<b>GIMP</b> – GNU Image Manipulation Program; free OSS, available for Mac OS X, MS Windows, and many Linux distributions		<a href="http://www.gimp.org/">http://www.gimp.org/</a>
<b>WORK FLOWS</b>			
<b>1) Get screen shot → some editing → result into word processor (WP) / similar</b>			
1. Take screen shot	1. <b>Ctrl+</b> key comb. above	1. <b>(Alt+)</b> <b>PrtScr</b>	No difference in workflow. Mac provides more options compared to Win XP in what to capture. Vista/Win 7: see above. Office 2010: <sup>4</sup>
2. Editing	2. <b>In Paintbrush</b> (download) - ⌘V, paste - Edit and select what to use - ⌘C (copy) or ⌘X (cut)	2. <b>In Paint</b> (std), <b>Paint.NET</b> (DL) - <b>Ctrl+V</b> , paste - Edit and select what to use - <b>Ctrl+C</b> (copy) or <b>Ctrl+X</b> (cut)	
3. Paste into WP	3. ⌘V, paste in WP	3. <b>Ctrl+V</b> , paste in WP	
<b>2) Hash value of screen shot. Always good to have capture in own file for Integrity and Availability (think CIA).</b>			
1. Screen to File	1. ⌘ + ⌘ + 3, ⌘ + ⌘ + 4, ... (above, to file)	1. <b>(Alt+)</b> <b>PrtScr</b>	Mac OS X includes tools for calculating and verifying hash values*. MS Win doesn't, as far as known.
2. Get hash value	2. Use tool to get hash value	2. Paste into (e.g.) <b>Paint</b> 3. Save file 4. Use tool to get hash value	

**Legend:**

⌘	Command key	CIA	Confidentiality, Integrity, Availability <sup>5</sup>	* <b>md5</b> and <b>openssl</b> command line interface (CLI) utilities.
⌥, Alt	Alt/Alternative key	DL	Download	
Ctrl	Control key	FF	Firefox web browser	
⇧	Shift key	GPL	GNU Public License	
PrtScr	Print Screen key	OSS	Open Source Software	

**Bonus:**

**PrtScr** (re)assign on Mac. If using a PC-keyboard that include this – and other non-standard Mac keyboard keys, thus actually doesn't perform any – to this author at least – known functionality on Mac OS X 10.6. For Microsoft keyboards: Open Microsoft Keyboard (⌘ → System Preferences...), Key Settings tab: F13 Print Screen, change 'Handled by Mac OS' to (e.g.) ⌘ + ⌘ + 4.

**Did you know?** Take screen shot on iPhone by pressing Home and Sleep/Wake buttons.

<sup>1</sup> Quite nice - flexible capturing of screen content. But, be cautious with markup-feature - no Undo (Ctrl+Z)! (v6.1, 2010)

<sup>2</sup> Download from <http://paintbrush.sourceforge.net/> (free; GPL license)

<sup>3</sup> Download from <http://www.getpaint.net/> (free; not OSS; Creative Commons Attribution... license)

<sup>4</sup> Office 2010 (released Jun 2010) has new text and image editing effects and screen capturing and clipping tools. Not evaluated yet and can't comment on its capabilities.

<sup>5</sup> Cornerstones in information assurance, information security