

Screen Capture

Seminar by Eric Hein

Bowie Seniors Computer Club

Jan 2010

We'll explore what a "screen capture" is – and then 4 ways of doing one.

- Print Screen
- Vista & Win7 utility [Snipping_Tool]
- Freeware [WinSnap]
- Commercial app [HyperSnap]

So What Is a “Screen Capture”?

What it's not:

- A picture of a computer screen taken by a camera [at least not in this presentation]
- Any “Save As” function of an application (image editor, web browser, ...)

What it is:

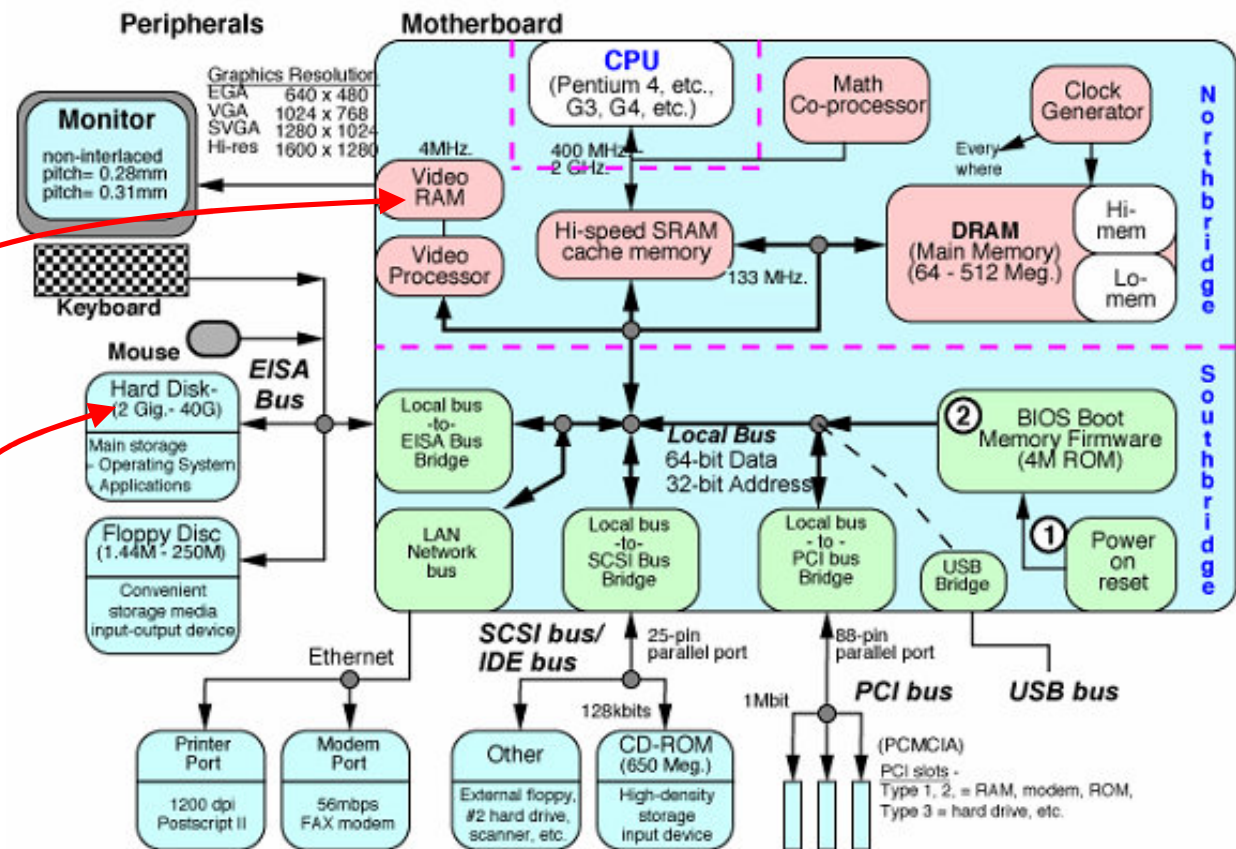
- An image file (JPG, PNG, GIF, BMP, ...) depicting a region of a computer screen...
- ...that was written to disk by software which is independent of the application that drew the screen...
- ...and that requires no cooperation from that application.

“Screen Capture” for Geeks

A “Screen Capture” app steals an image directly from the display adapter’s Video RAM

..and writes it to disk, thus completely bypassing the image-drawing application and requiring no cooperation from it.

PC Block Diagram



Hot Keys & Cursor Capture

- Most screen capture apps have “hot-keys”, and they are often customizable.
- You will probably have to use a hot-key if you want to capture the cursor. If you use the cursor to trigger a capture, then by definition it's in the capture application window – and not in any part of the screen you want to capture.
- Another way to get the cursor, is for the capture program to have a built-in capture delay. After clicking on the button to trigger a capture, the capture window disappears, and you have ~ 2 seconds to reposition the cursor before the capture occurs. This trick is less common.

Print_Screen

comes with all Microsoft operating systems

- Pressing the Print_Screen key (every keyboard has one) captures a screenshot of the entire desktop area, and places it in the clipboard. Pressing the combination of Alt-Print_Screen captures only the current active window.
- In most versions of Windows, captured screenshots do not include the mouse pointer.
- Video content in programs using a hardware overlay video renderer (e.g. some DVD players) is not captured.
- Since the captured image is “in the clipboard”, the user must paste the image into a separate imaging program (such as Microsoft Paint) for saving to disk.

This use to be the only FREE option, but now freeware exists that is much better!

Snipping_Tool

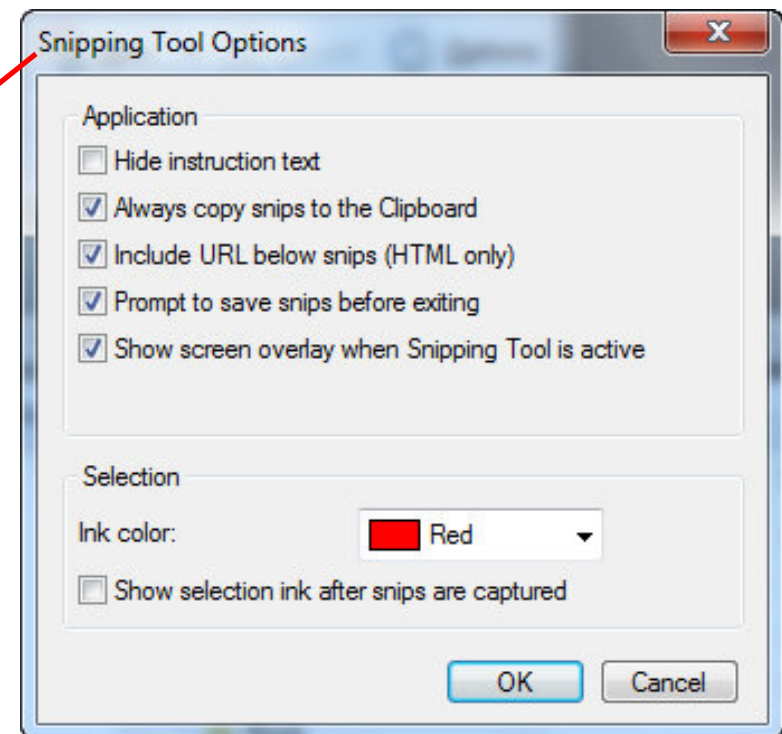
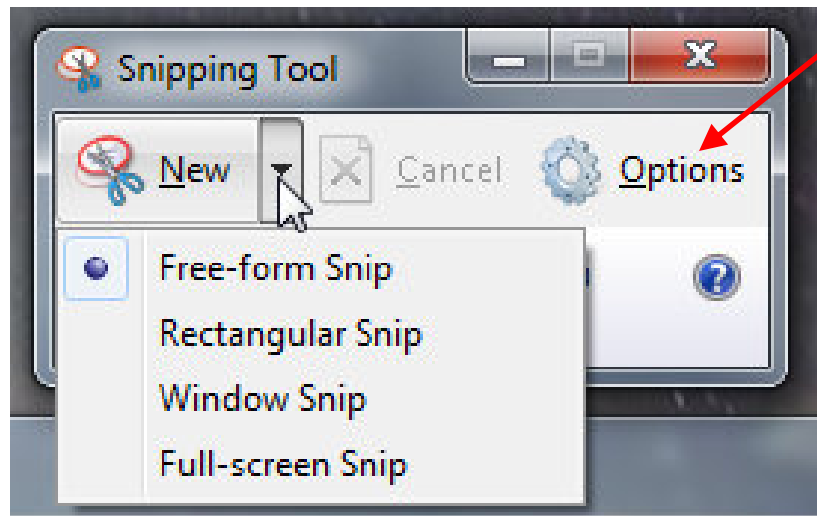
Vista and Win7 include a utility called Snipping_Tool. You can use Snipping_Tool to capture a screen shot of any object on your screen, and then annotate & save the image.

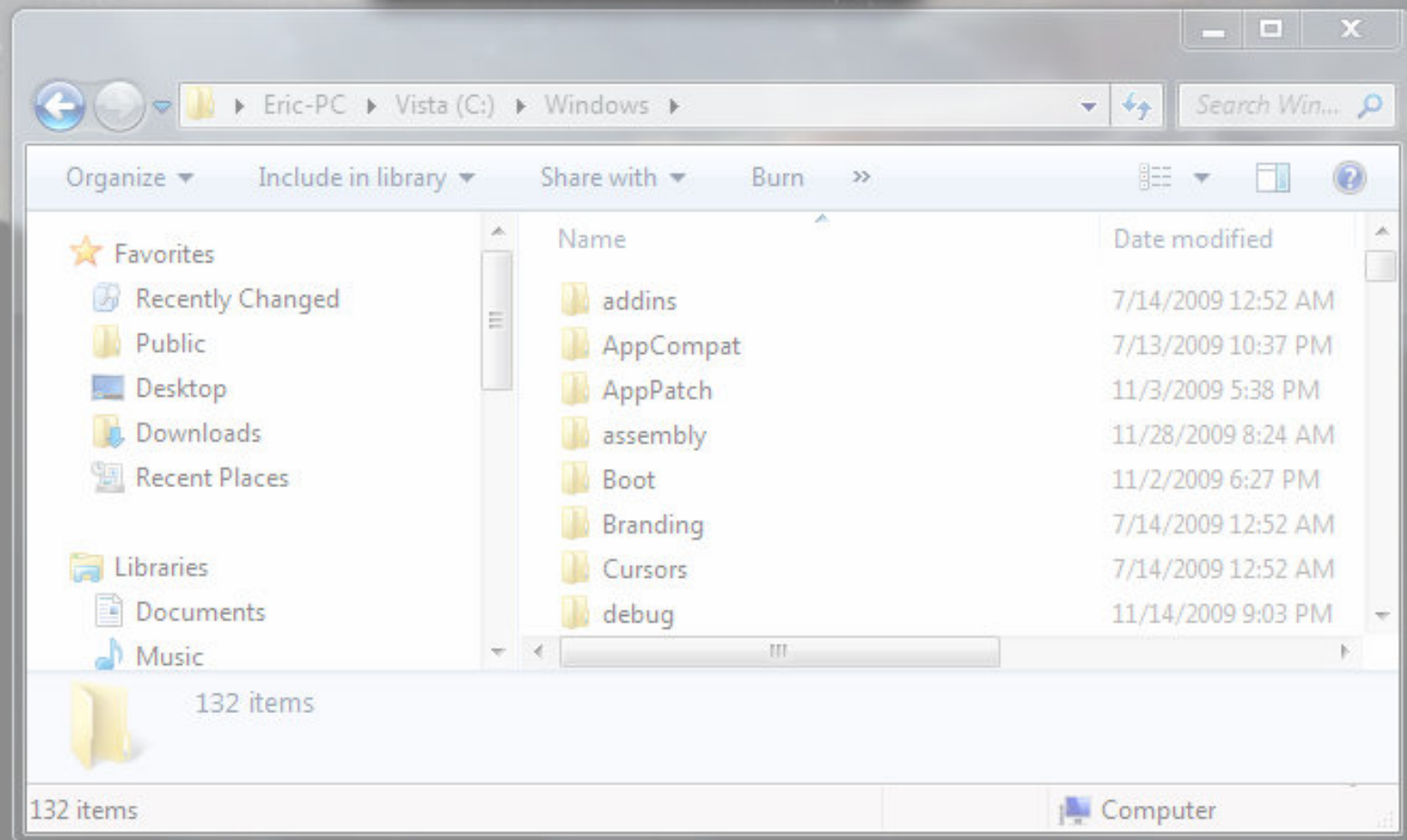
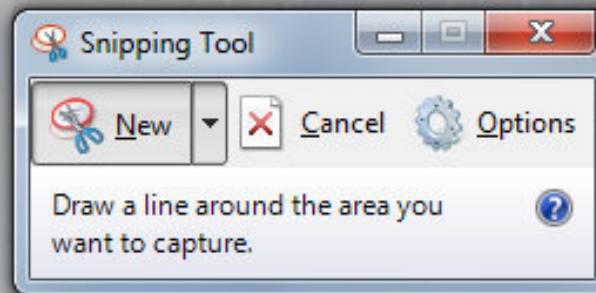
- Full-screen Snip: Capture the entire screen (like Print_Screen)
- Rectangular Snip: Click & drag the cursor to define a rectangle. Probably the most often used.
- Window Snip: Captures a “window”, such as a browser window or dialog box.
- Free-form Snip: Click & drag to draw an irregular line. Releasing the mouse button completes the region, then captures it.

Snipping_Tool

When Snipping_Tool starts, the entire screen has a semi-transparent grey cover – with a Snipping_Tool window on top.


You can set/change the type of capture with the “New” button dropdown.

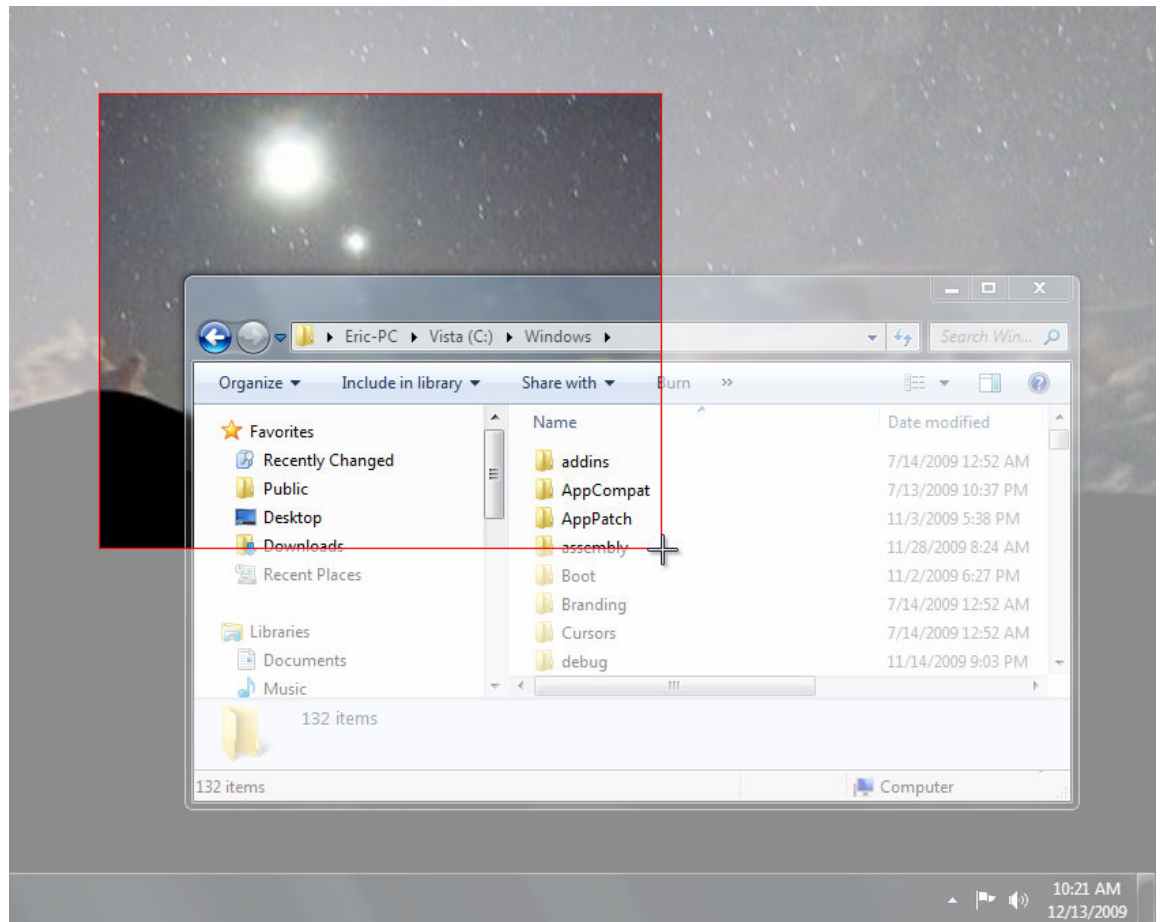




Snipping_Tool: Rectangular Snip

Make a new capture by clicking “New” (or press Cntl-PrtScrn). The Snipping_Tool window disappears, and the area to-be-captured has the semi-transparent grey overlay removed.

The cursor  started in a corner (the upper left), then click-and-drag to the opposite corner.



Snipping_Tool

When the mouse button is released, the capture occurs, and an enlarged Snipping_Tool window is displayed with the captured region.

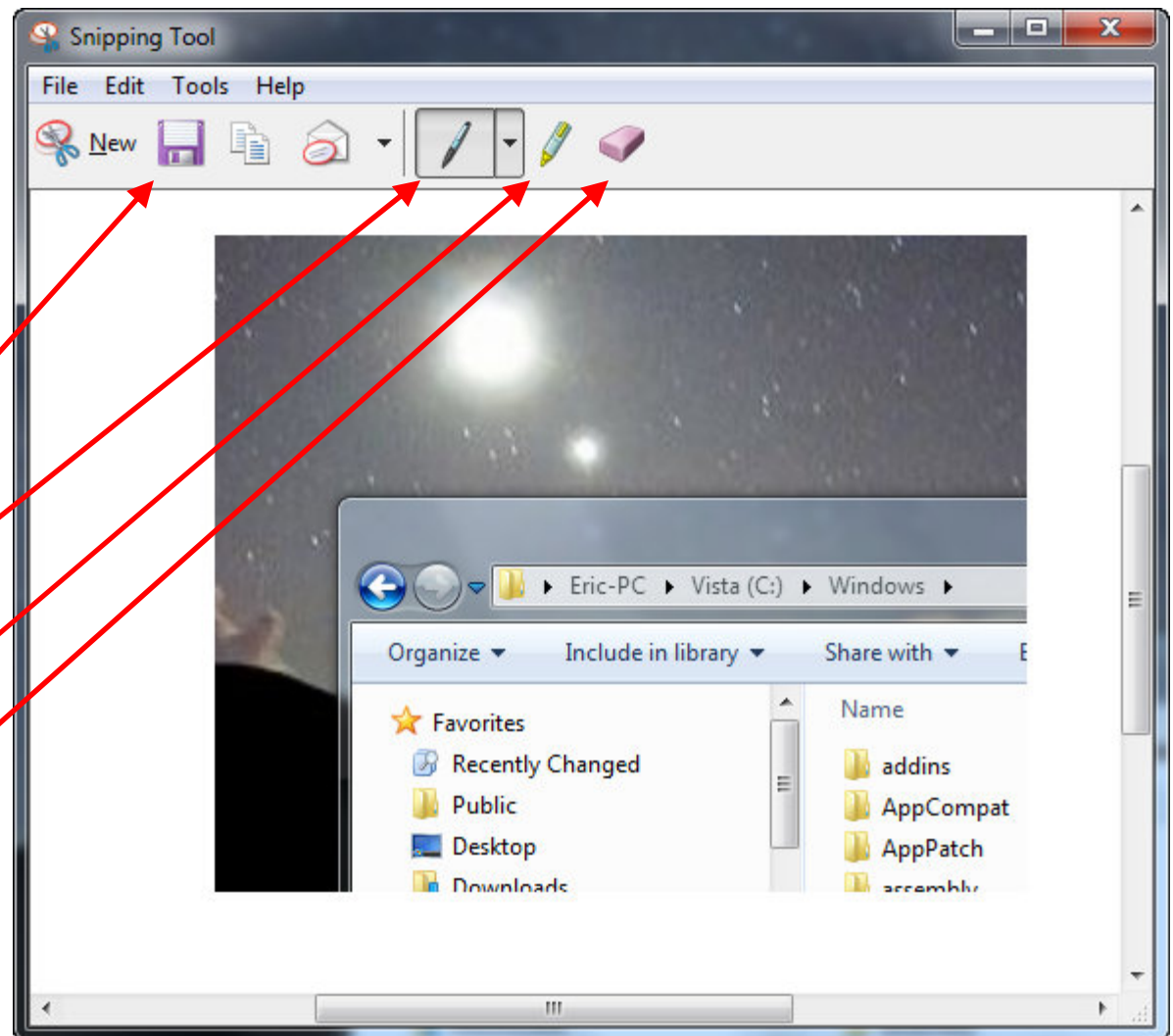
Other icons now appear.

Save to disk


Annotator

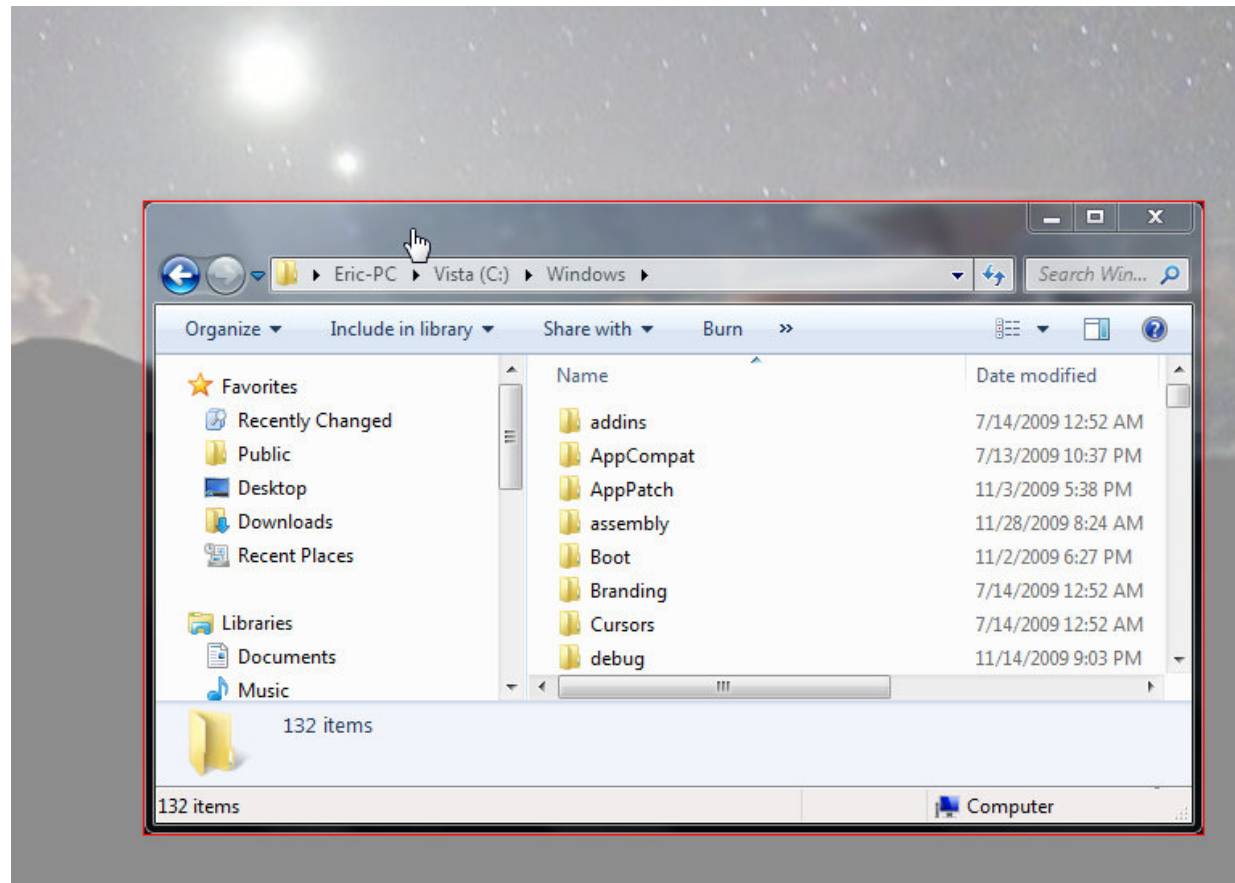
High-lighter

Eraser
(annotations &
highlights only)



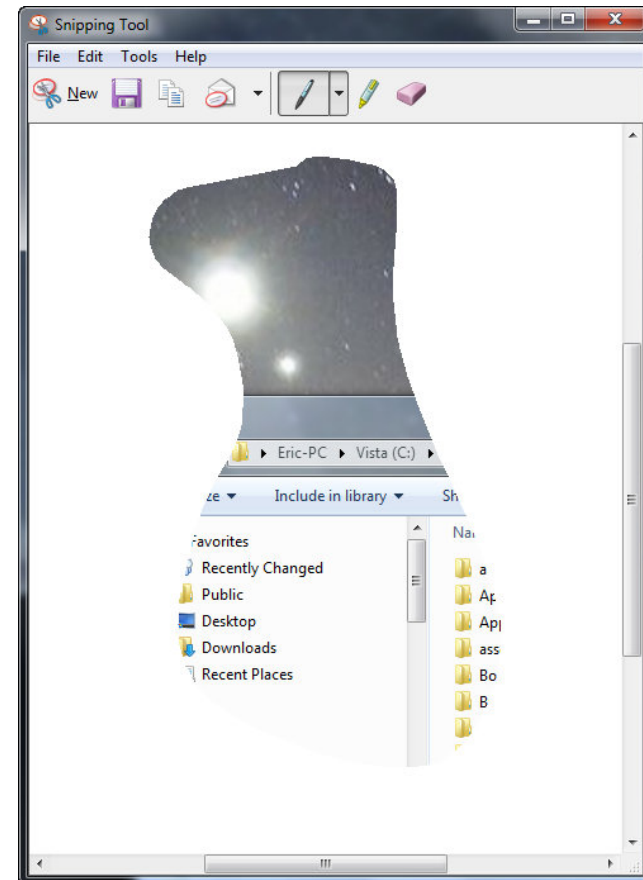
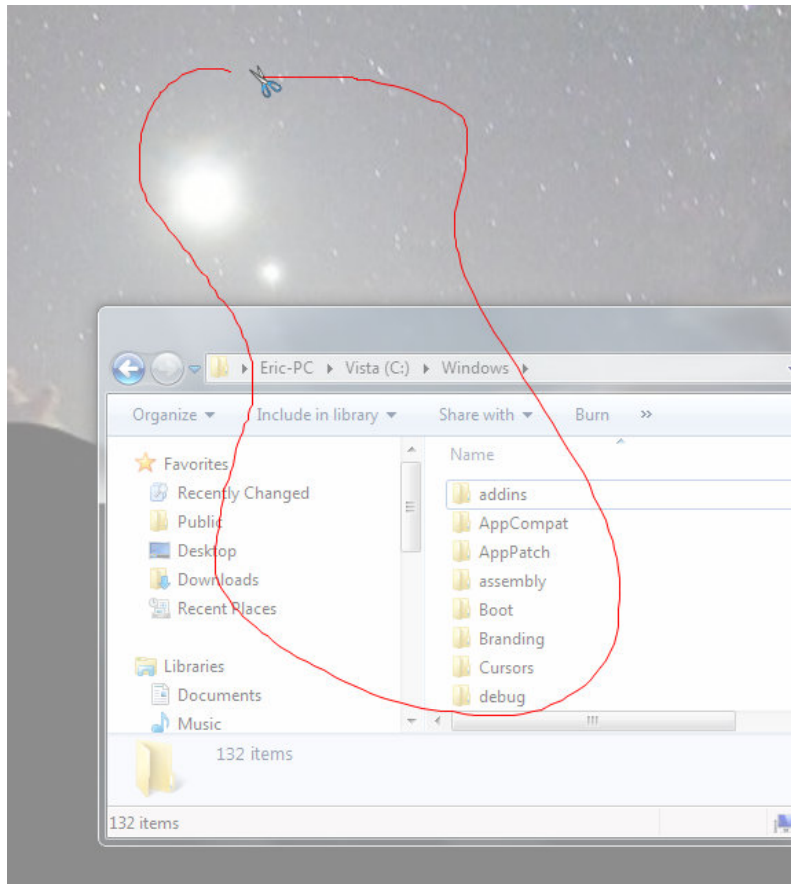
Snipping_Tool: Window Snip

With Window_Snip mode, clicking “New” presents a different cursor  and only entire windows are “un-greyed” as the cursor comes over them. Click on a window to capture it.



Snipping_Tool: Free-Form Snip

With Free-form Snip mode, clicking “New” presents still another cursor ✂. Click-and-drag to draw an arbitrary region. Releasing the mouse button completes the region & captures it. (This looks really cool, but I actually haven’t found it too useful.)



Snipping_Tool – Final Notes

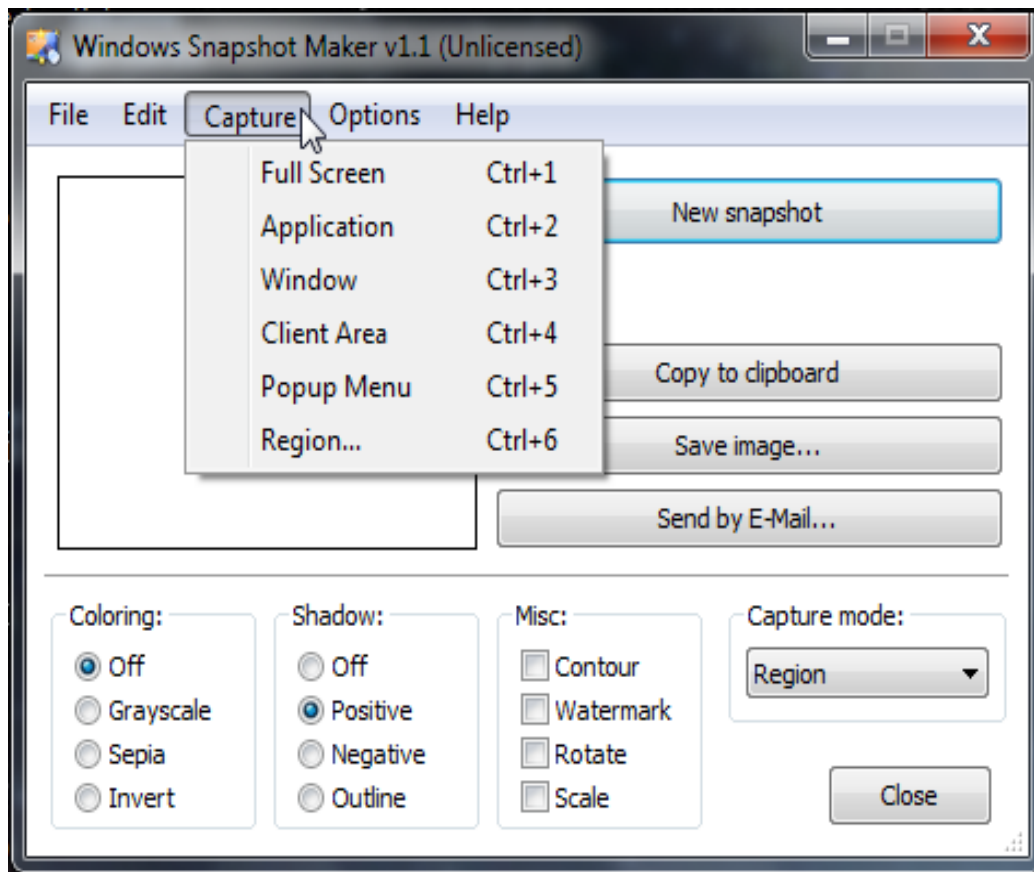
- Snipping_Tool is only available in Vista & Win7 (and not in the Basic versions).
- The cursor cannot be captured with Snipping_Tool !
- Pop-up_Menus and Tool_Tips can be captured by using the one hot-key (Cntl-PrtScrn).
- On my system, stills from the video display of Media_Player could be made.

*If you have Snipping_Tool,
that's probably all you will need.*



WinSnap v1.1

a freeware equivalent to Snipping_Tool for WinXP



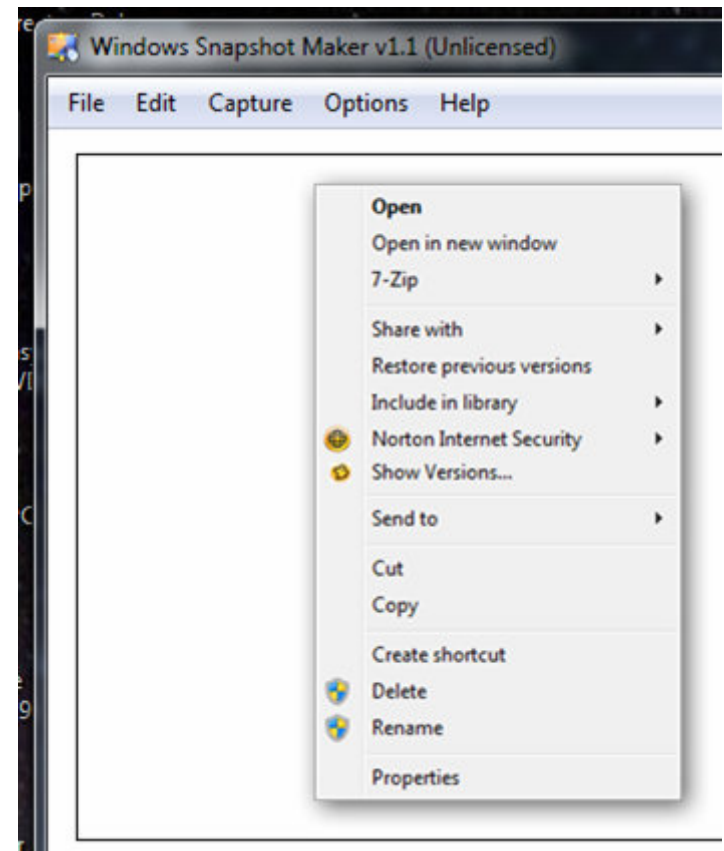
- Full Screen: Make snapshot of the entire screen.
 - Region: Rectangular region selection mode.
 - Window: Make snapshot of the active window.
- ** no "Free-form, but it does add...
- Client Area: Make snapshot of the active window without the caption and border.
 - Popup Menu: Make snapshot of the popup menu.
 - Application: Make snapshot of all visible windows of the active application.

WinSnap – Popup Menu

Typically trigger with a hot-key.

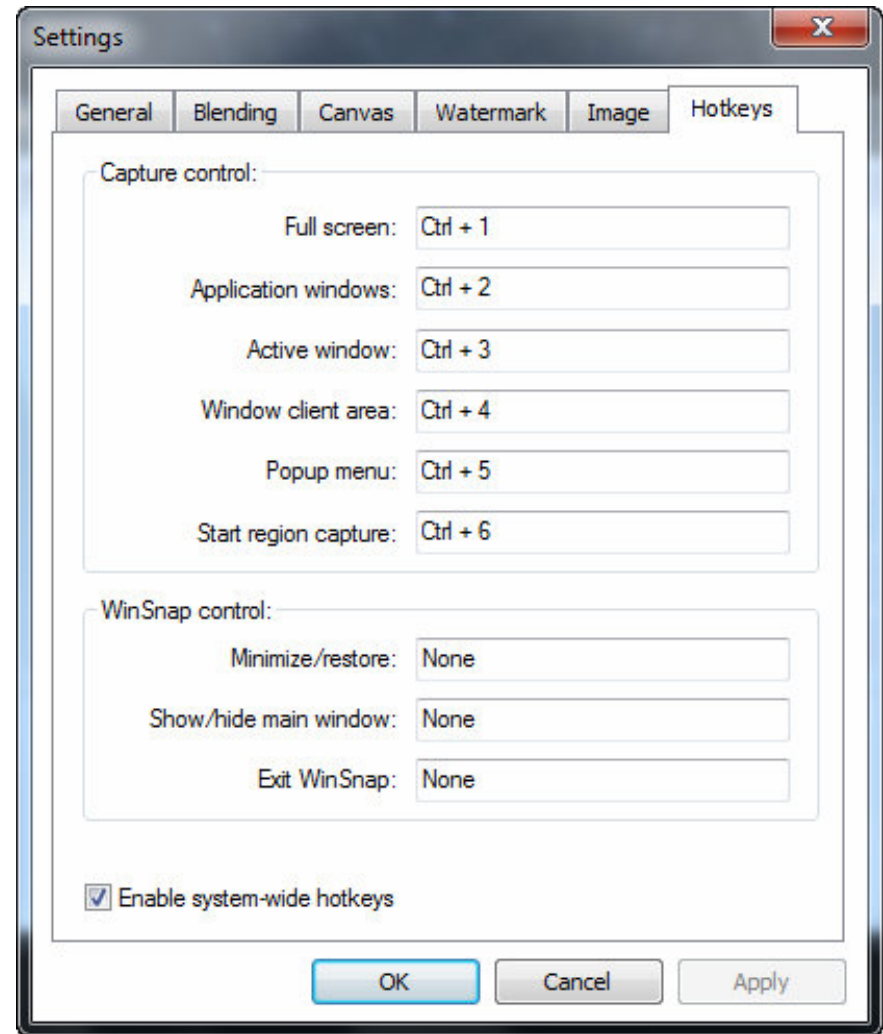
Though you may never need this, capturing popup-menus can be difficult without this mode.

The example to the right shows the popup from a Windows_Explorer right-click of a file.



WinSnap: Configuring Hot-Keys

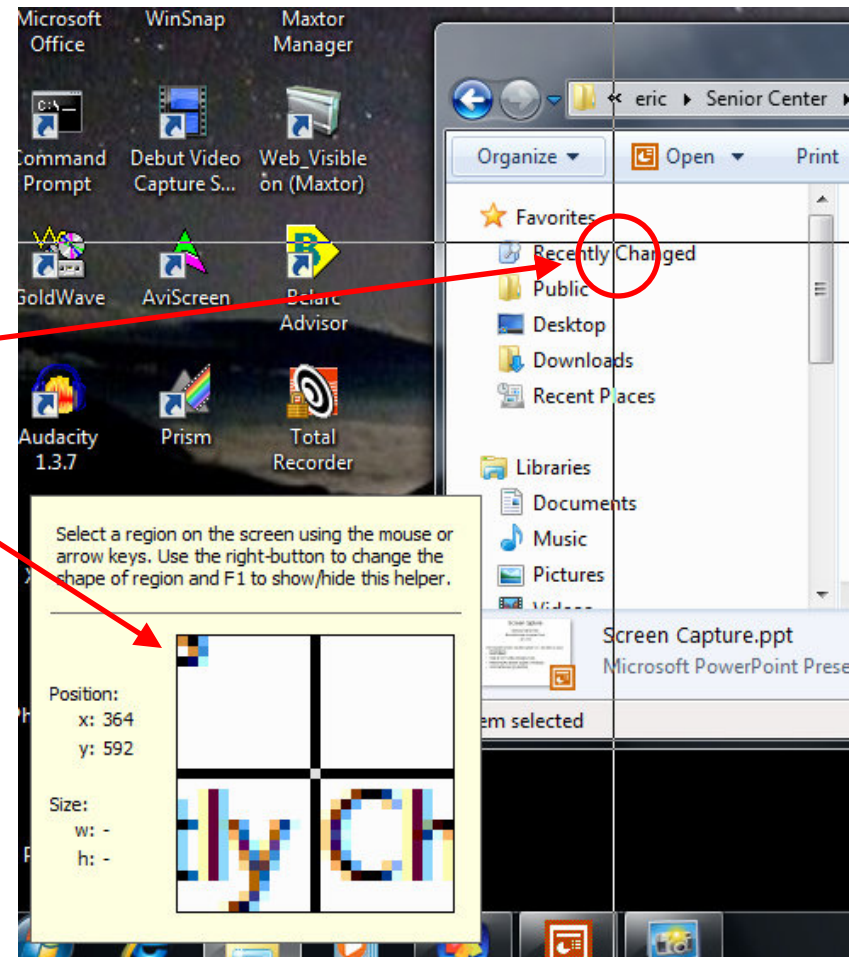
- Use >Options >Settings
- Click the cursor in the box for the “control” you want to change the hot-key for.
- Press some combination of keys (make it unique to this app).
- Click on “OK”



WinSnap: Rectangle Zoom

When capturing a rectangle,
the region around the
crosshairs...
is shown in a pop-up box.

This allows exact placement
of the capture corner right
down to the pixel.



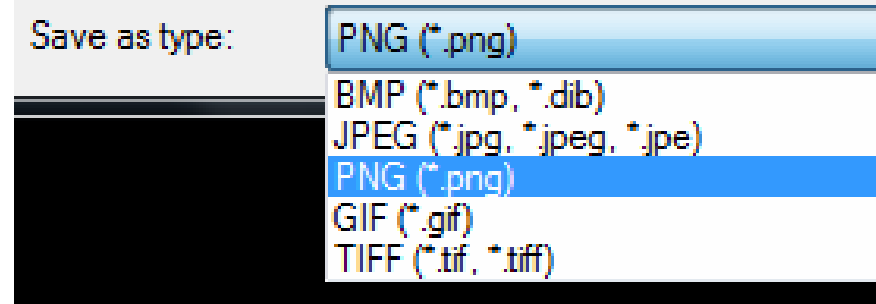
WinSnap – Final Notes

WinSnap can save in BMP, JPG, PNG, GIF & TIF.

It cannot capture the cursor or a curved region.

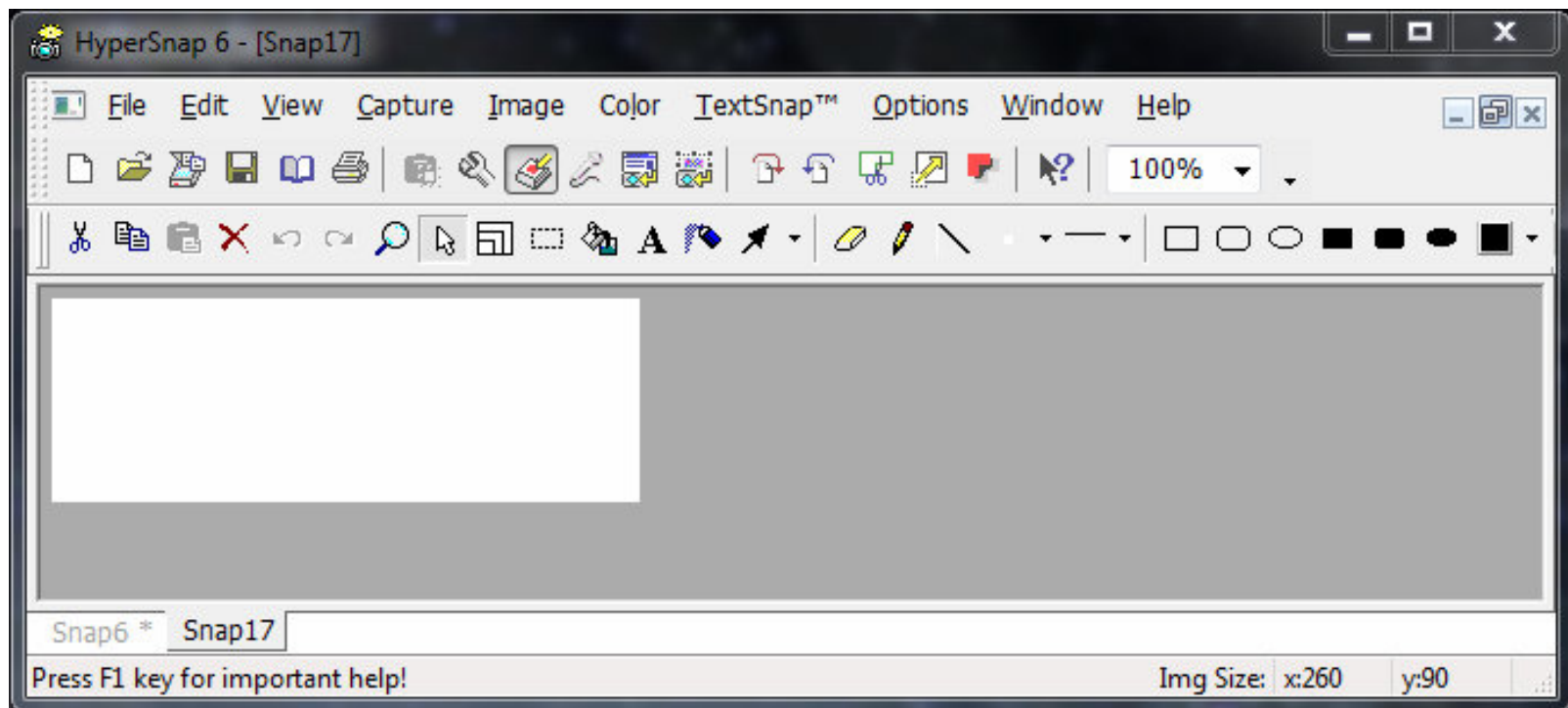
It does capture pop-up menus, tool_tips, and stills from Media_Player's video.

*Like Snipping_Tool,
WinSnap is also probably
all you will need.*



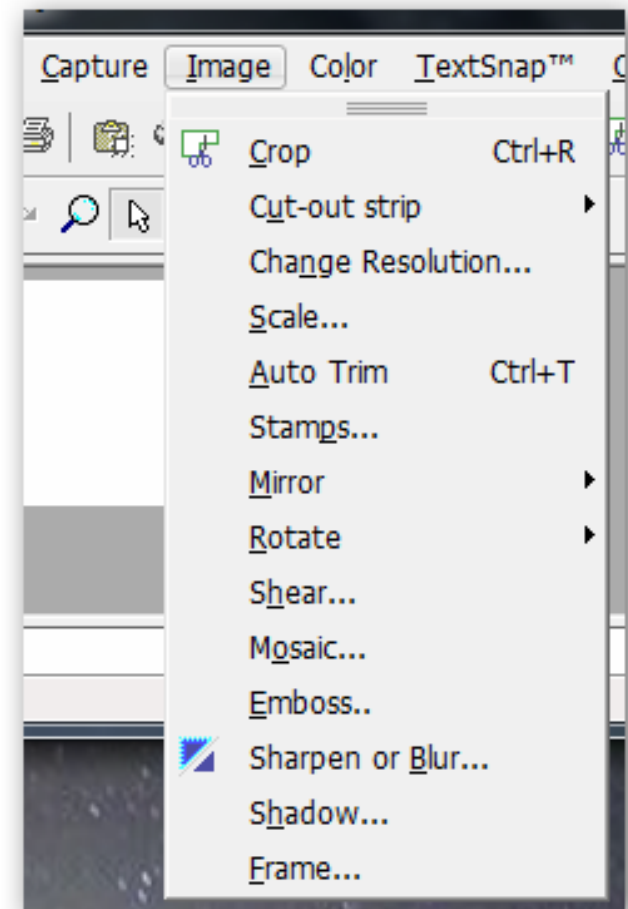
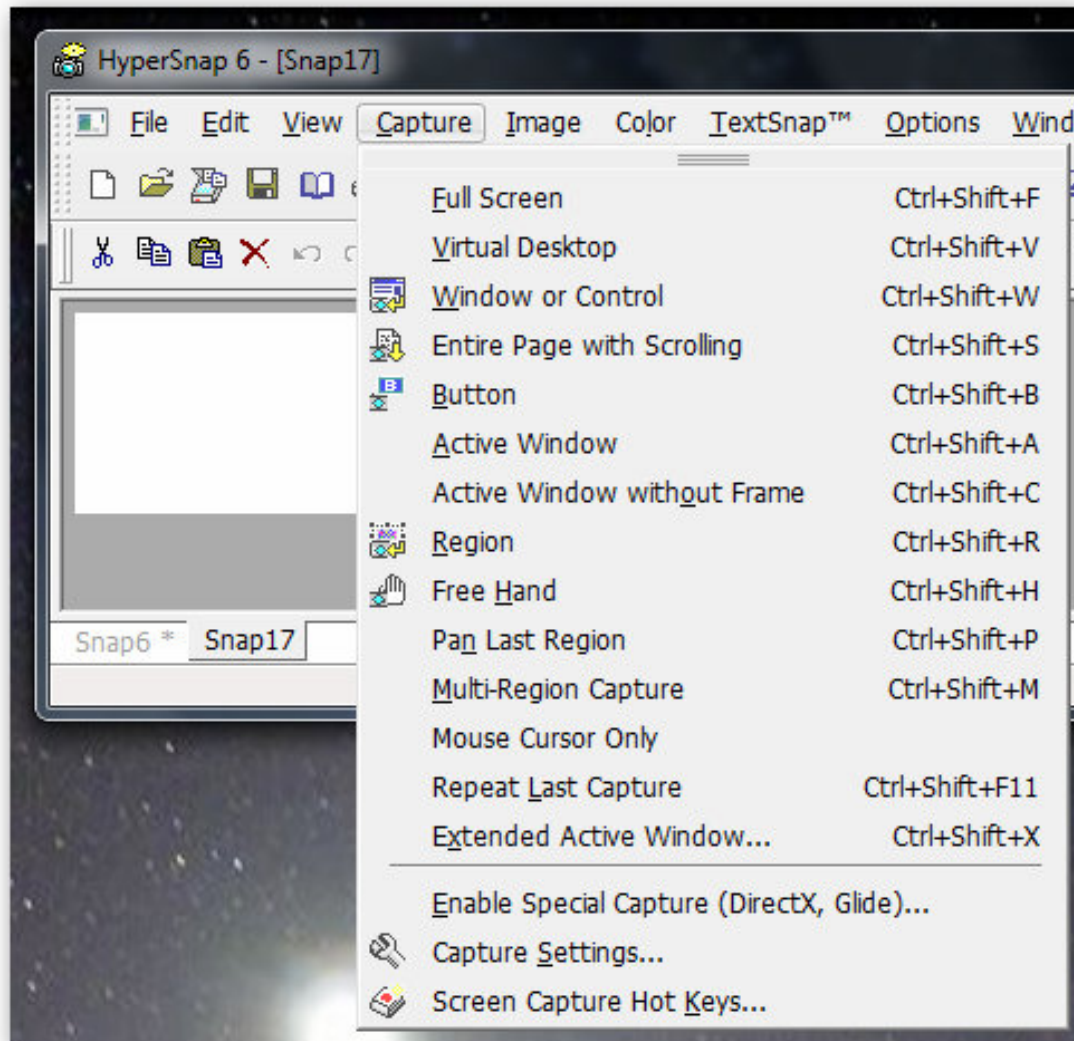
HyperSnap (costs \$40)

- Not FREEWARE, but the class app in this comparison
- Has many image editing & file conversion options.
Some (e.g. cut-out-strip) are rare in image editors, and very useful in screen-capturing apps.



HyperSnap

has more than a few options

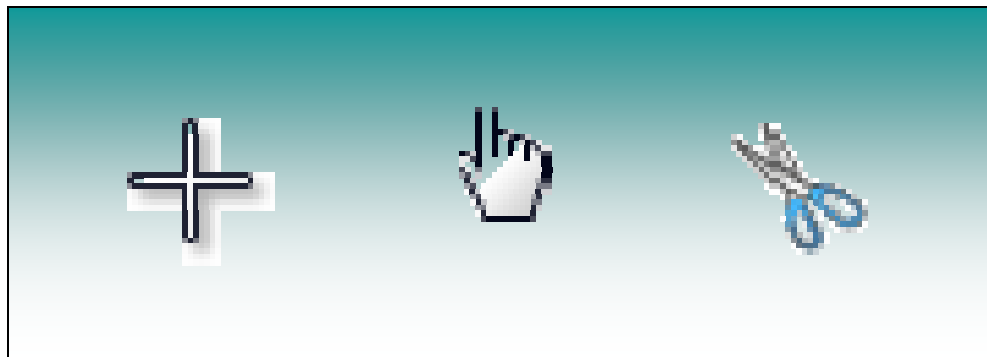


HyperSnap: Cursor Capture

HyperSnap was the only app to capture the cursor (something you will want to do when building a tutorial).

Triggered from a hot-key, you don't have to specify the region to capture.

Transparent pixels are captured as any specified color, or as transparent (must save to disk).



Example of the Snipping_Tool cursors, captured by HyperSnap, and displayed over a gradient background.

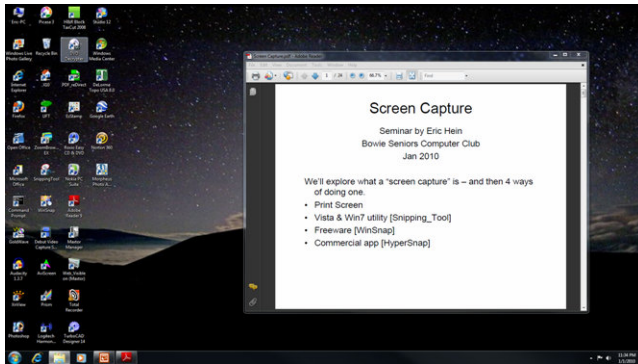
HyperSnap: Virtual Screen

HyperSnap was the only app to capture all video memory (Virtual Screen).

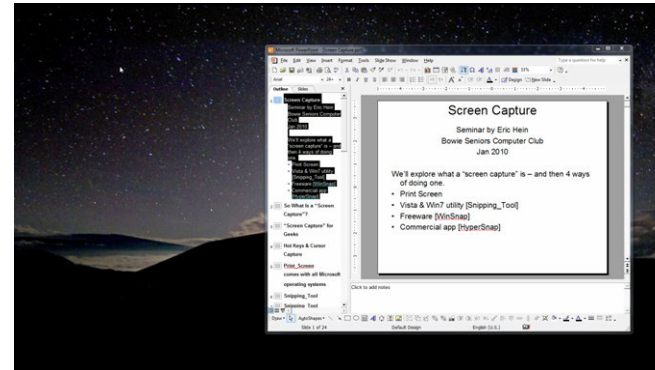
My computer at home has two “independent” monitors!! Each is a Win7 “desktop”. This is implemented by one double-width bank of video RAM (1 GB), with the left & right halves mapped to different monitors (one VGA, the other DVI). The cursor runs smoothly across the two monitors. A maximized window stays within its desktop.

With the HyperSnap app in the left desktop, a “Full Screen” capture captures the left screen. Ditto for the right screen. But, a “Virtual Screen” capture captures the whole double-width video RAM bank.

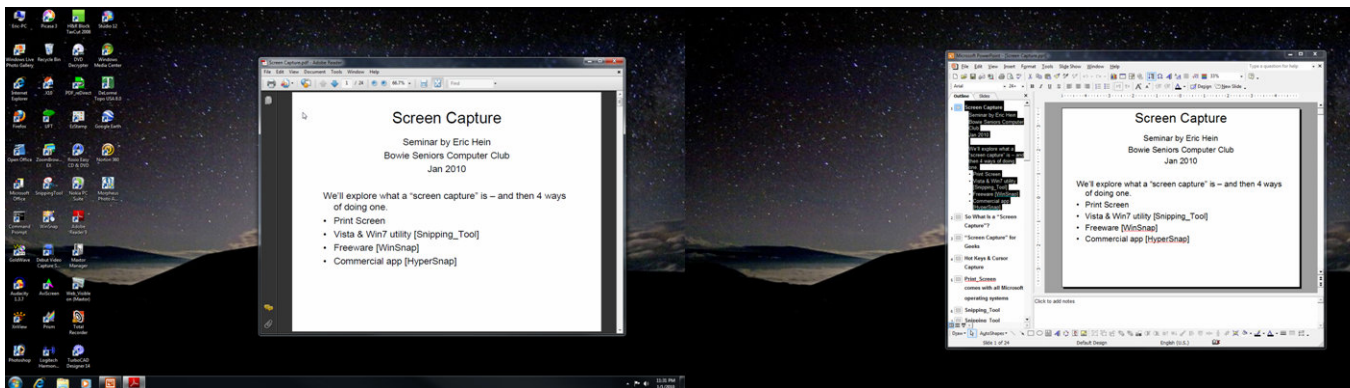
HyperSnap: Virtual Screen



“Full Screen” - left

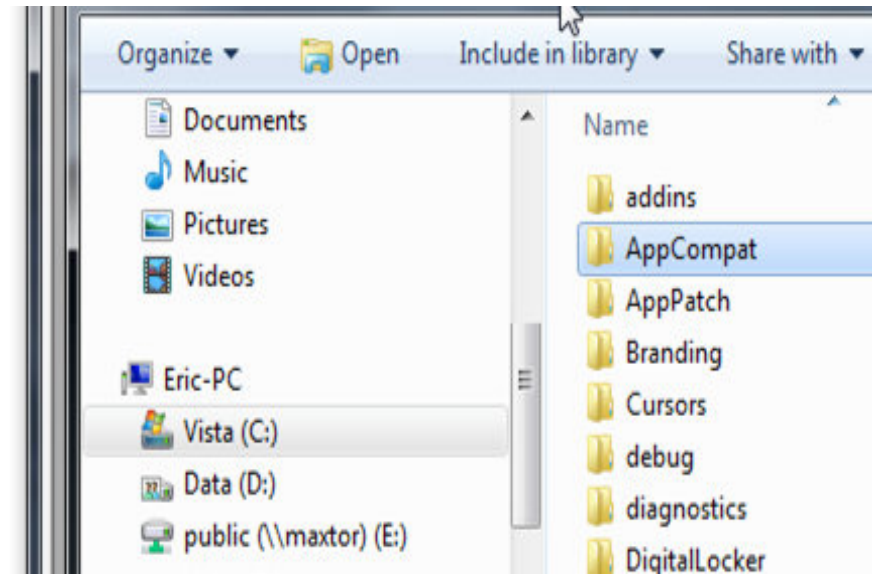
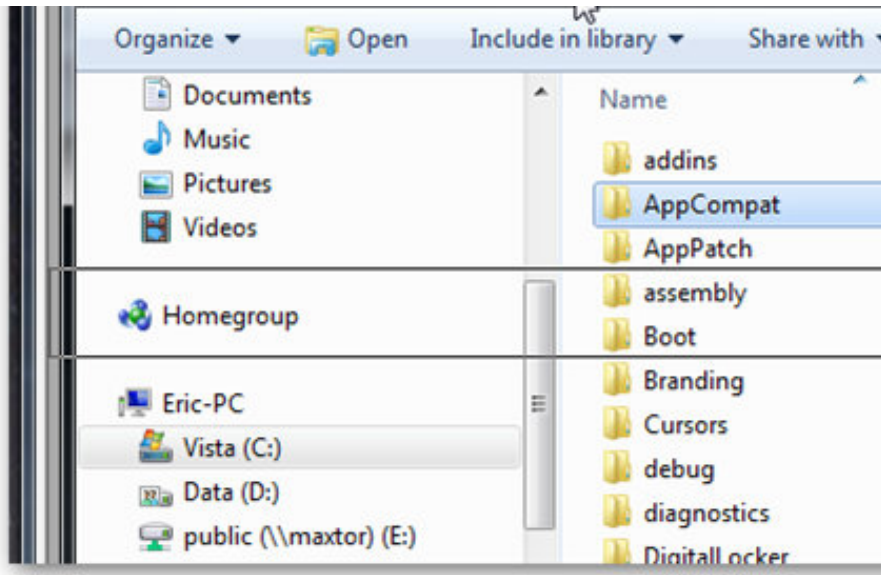
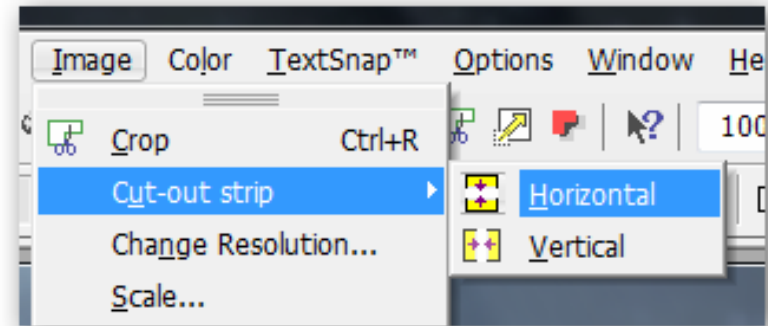


“Full Screen” - right



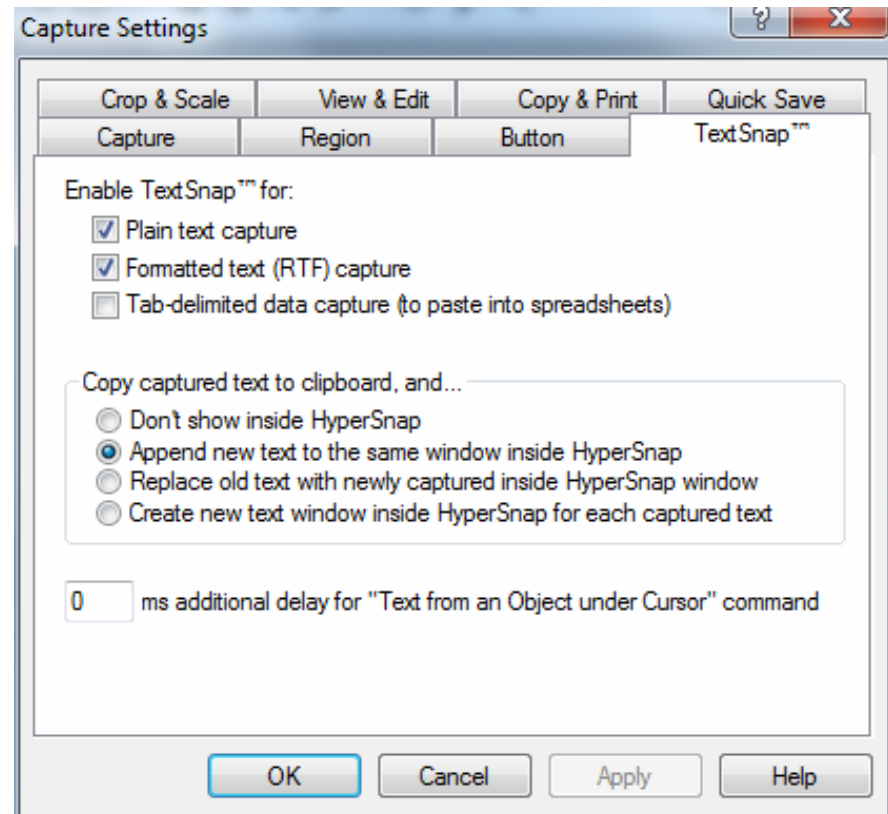
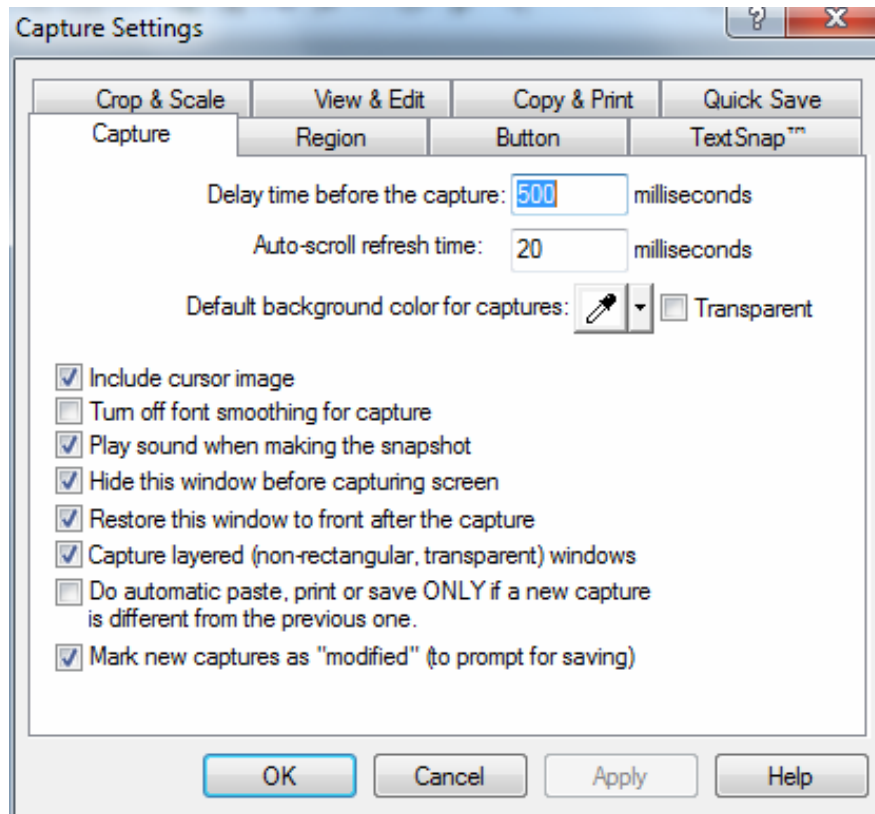
“Virtual Screen”

HyperSnap (cut-out-strip)



Very useful in getting rid of “white space”

Delayed & Text Capture



Final Comparisons

	Snipping_Tool	WinSnap	HyperSnap
Size (MB)	1.3	.3	6.4
Ease of use	Easy	Easy	Easy (for basics)
Captures cursor	No	No	Yes
Features (1-10)	7	7	10+
availability	Vista/Win7 (not Basic)	free	\$40

Commercial products have additional features over FREEWARE. I use HyperSnap exclusively.