

Images and Media Cheat Sheet

Conventions

Menu items and Commands will be in ***bold italics*** so that you can tell them from the rest of the text. Menu items and commands will also be capitalized. We a submenu is referred to it will be connected to the menu by a forward slash (/) such as ***File/Save as*** where the ***Save as*** is a submenu of the ***File*** menu.

Graphics and Still Images

Types

- Bitmaps
 - Original digital image
 - Tends to be very large
 - At each pixel, 2,4,8,16,24,32 bits of gray or color
- GIF (Graphics Interchange Format)
 - Copyrighted format so use purchased software
 - Compression on Color not Space.
 - 8 bits deep. Builds a color look up table (LUT)
 - Best used for graphics
 - Each time same get same image back
- JPEG
 - Free format
 - Compression is spatial not color
 - Best used for photographs
 - Lossy
 - Each time same image loose some quality so keep original around

The Monitor

- Spatial
 - Finer resolution better, but smaller images
 - Each pixel is made up of at least three dots (one for each primary)
 - Drawn in lines
- Temporal
 - Flickers at usually better than 60 Hz in horizontal lines
- Chromatic
 - Limited to colors falling within range defined by primaries
- Luminance
 - Numbers for intensity do not directly relate to intensity
 - Varies across screen

Using ImageJ

- Freeware developed at NIH
- Scientific Grade image program
- Download page: <http://rsb.info.nih.gov/ij/index.html>
- Adding Shortcuts:

- Lists all current commands Under *Plugins/Utilities/Shortcuts* will show all current shortcuts
- Under *Plugins/Shortcuts* click on *Create Shortcut*
- Pick command
- Type letter that will be matched with control button.
- Basic tasks
 - Selecting a region
 - Select shape at top of program
 - Cutting, Copying, Pasting
 - Under *Edit* menu
 - Like other windowing programs
 - Rotating
 - Under *Image* Menu
 - Resizing
 - Under *Image/Adjust: Size* (give size in pixels)
 - Under *Image: Scale* (CTRL-E) (Proportion of Current Size)
 - Saving
 - Under *File/Save As*
 - Pick format, usually JPEG for pictures (Here is a good place to create a shortcut)
- Plug-in
 - Useful Plug-ins
 - iMorph – gradually change one image into another
 - AVI Writer, convert stack into movie
 - Adding Plug-ins
 - Save in Plugins folder in ImageJ folder

Media for Social Psychology

General Discussion:

In general movies are too large to be useful for research purposes. As suggested in other research, the longer the study the more likely people will leave the study.

Streaming is still inconsistent for most purposes and image quality is too low and the frame rate is too inconsistent to be more than a study of our perception of them.

Slide-shows

- Justification:
 - Indicate sequence of events
 - Carries sense of change
 - Think of Loftus early eyewitness studies
 - Sense of momentum in photo
- Development
 - Just create photos
 - Can use the stacks in ImageJ
 - Open images: Image/Stacks: Create Stack from Images

- Play with = to start and stop
- Code: Suggest using the Meta refresh codes.
- Each Image will come up one at a time, then can have a form or other code


```
<html>
<head>
<title>Image Sequence</title>
<META HTTP-EQUIV="refresh" CONTENT="3; URL=nextpage.html">
• Number is number of seconds before redirect

</head>
<body>
<p>This will change in 3 seconds, about</p>
<p align = "center">
</p>
</body>
</html>
```
- Example at: <http://ati.fullerton.edu/jkrantz/bobby/page00.html>

Movies

- If use: use short clips
- Formats:
 - MPEG (public format)
 - AVI (Windows)
 - MOV (quicktime)
 - RT (streaming format for Real Players)
- Editing: QuickTime is cheap (\$30.00 to make QuickTime pro)
 - Selecting Frames: use tool bar below movie
 - Cut and Paste like other windowing programs