



# **ACR101 - 2D Asset Creation: PIXEL ART, PS & You**

**Week 3**

**Danny McGillick**

# Daily Speedpaint!

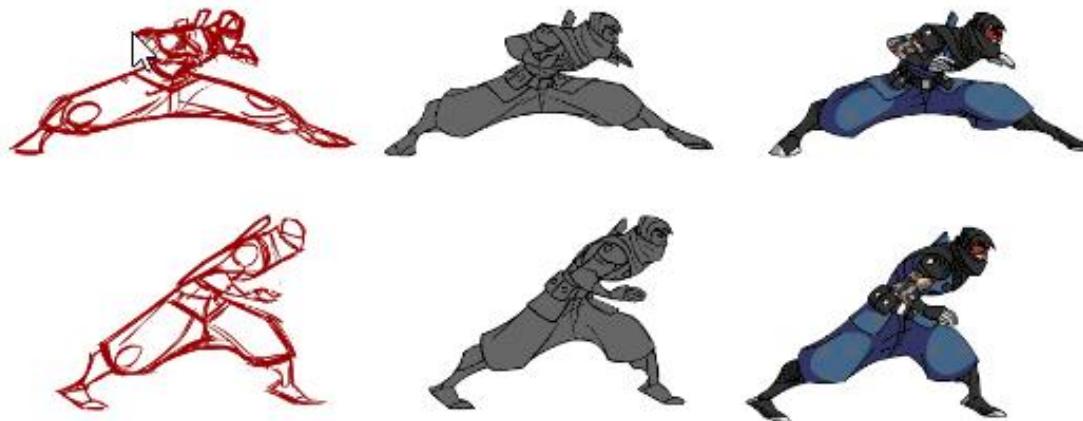
- You have 30 minutes to create an illustration from the following themes. Photo manipulation is not allowed.
- Tips:
  - Block out your colour areas – don't noodle!
  - Use a big brush.
  - If you're weak on colour, try painting in greyscale to get your lighting and depth right.
- Themes:

Playground - Crown of roses - God tears - Chibi horror

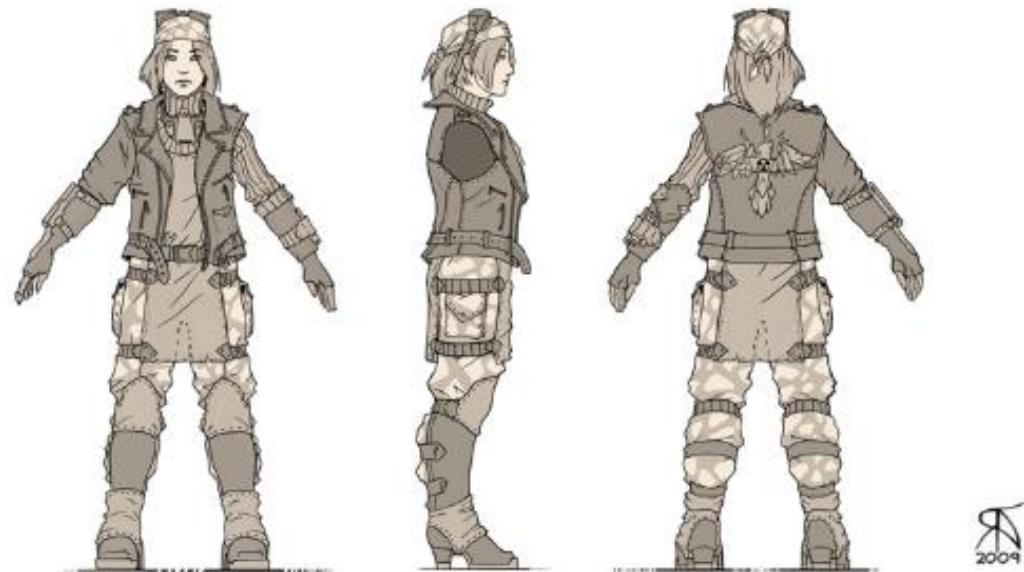
# Assessment 3

- Character folio
- Turnaround
- References
- Frames
- DEETS

[http://www.armyoftrolls.co.uk/website/portfolio/june\\_update/EDGE\\_POSTER\\_FINAL\\_VERSION.gif](http://www.armyoftrolls.co.uk/website/portfolio/june_update/EDGE_POSTER_FINAL_VERSION.gif)



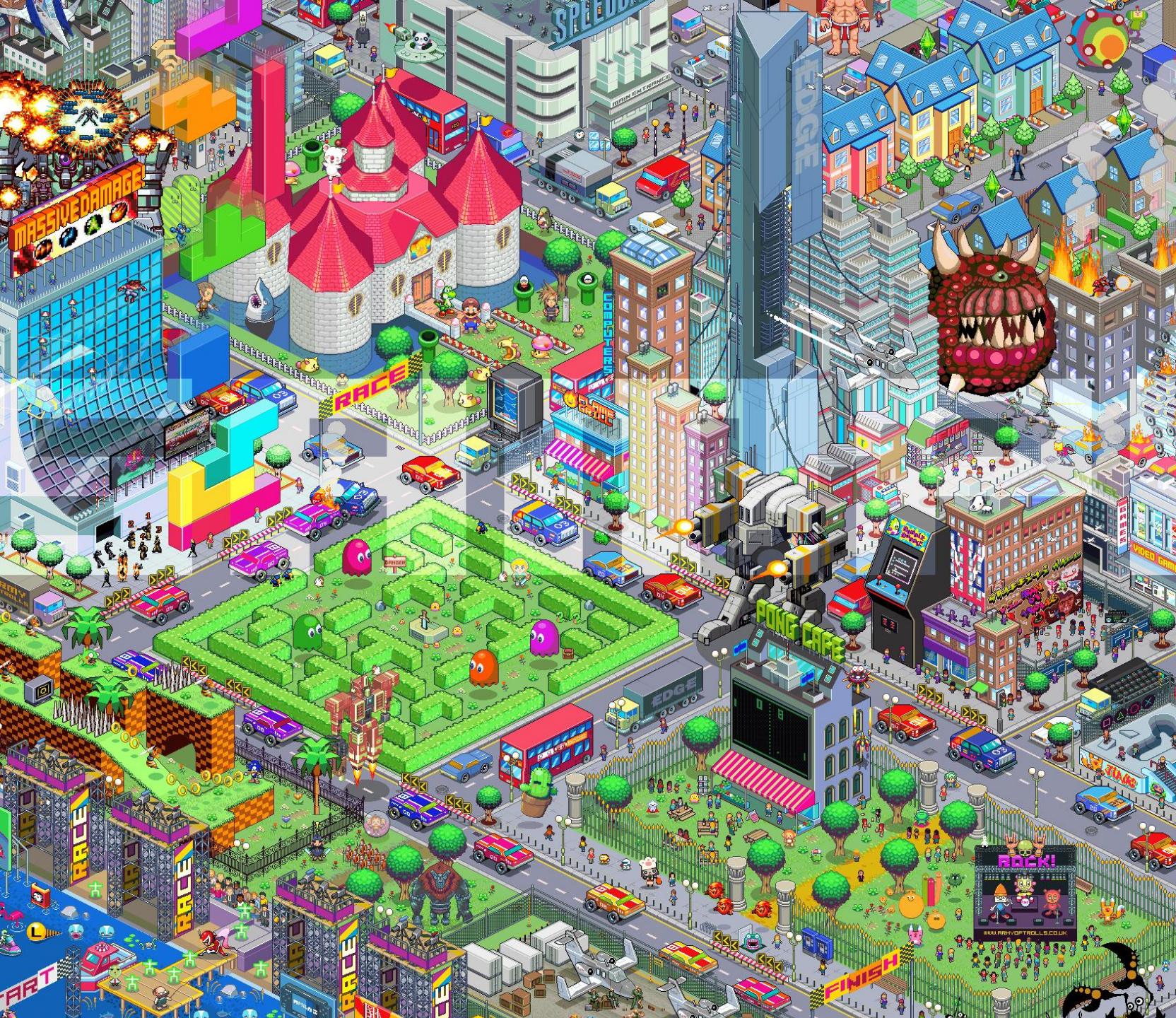
*Image Source: Mark of the Ninja Character sheet. (2012). Retrieved from <https://www.giantbomb.com/articles/the-long-road-from-ninja-to-mark-of-the-ninja/1100-4415/>*



# Pixel Art?

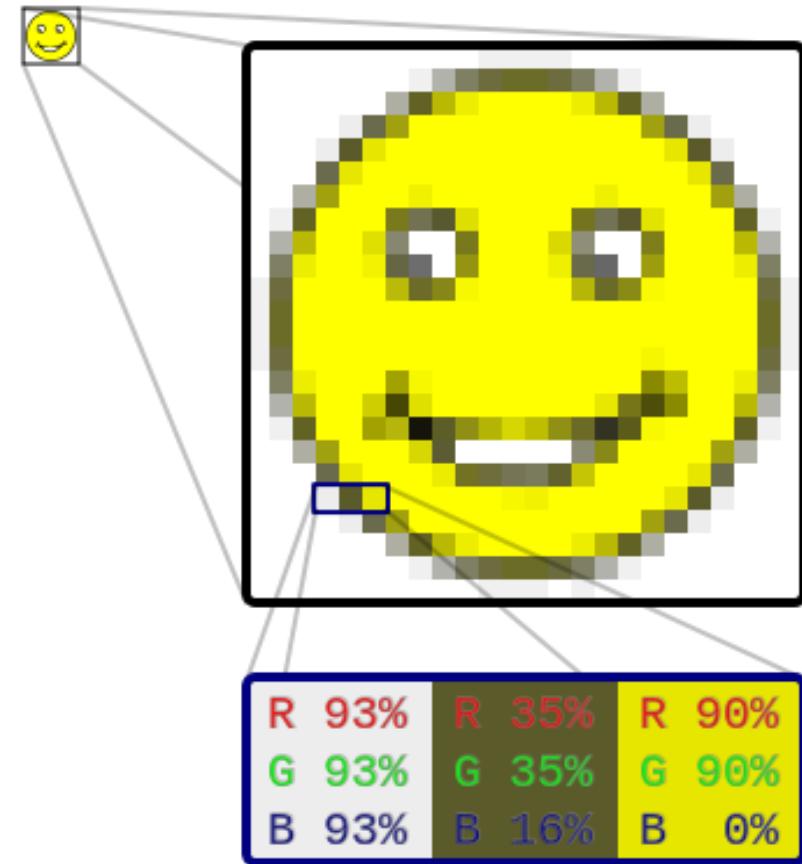
- History
- Tools
- Styles
- Process

[http://www.armyoftrolls.co.uk/website/portfolio/june\\_update/EDGE\\_POSTER\\_FINAL\\_VERSION.gif](http://www.armyoftrolls.co.uk/website/portfolio/june_update/EDGE_POSTER_FINAL_VERSION.gif)



# History

- A form of digital art created through the use of raster graphics software
- Raster graphics are dot matrix data structures representing a rectangular group of pixels, which correspond bit by bit
- The opposite of raster is vector – lossless images that follow paths through control nodes rather than scaling bit by bit



[https://en.wikipedia.org/wiki/Raster\\_graphics#/media/File:Rgb-raster-image.svg](https://en.wikipedia.org/wiki/Raster_graphics#/media/File:Rgb-raster-image.svg)

# History

- “The world ‘pixel’ was first published in 1965 by Frederic C. Billingsley to describe the elements of video images from space to the Moon and Mars.”



[http://en.wikipedia.org/wiki/Frederic\\_C.\\_Billingsley](http://en.wikipedia.org/wiki/Frederic_C._Billingsley)

Fred C. Billingsley, "Processing Ranger and Mariner Photography," in *Computerized Imaging Techniques, Proceedings of SPIE*, Vol. 0010, pp. XV-1-19, Jan. 1967 (Aug. 1965, San Francisco)

# History

- Susan started with a Ph.D. in Fine Art
- Worked as a curator for the Fine Arts Museum in San Francisco
- Started working with Apple Computers in 1982
- Susan developed first proportionally spaced digital fonts for the first Mac OS
- Began thinking of the GUI and how users would interact
- Designed icons on graph paper

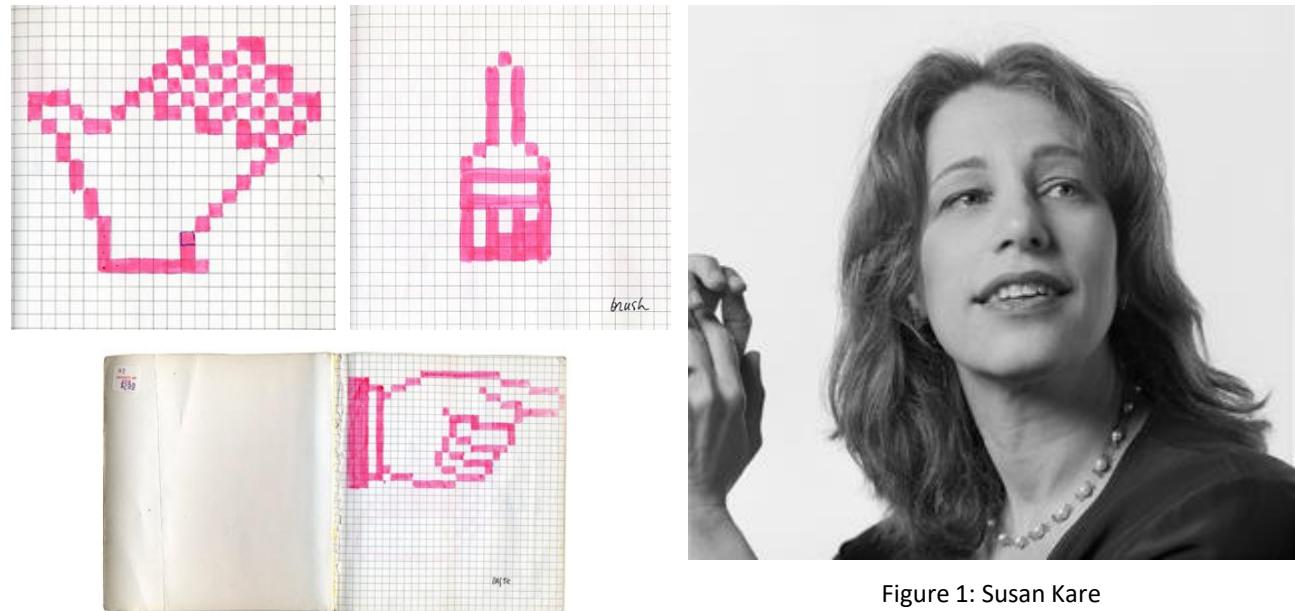


Figure 1: Susan Kare

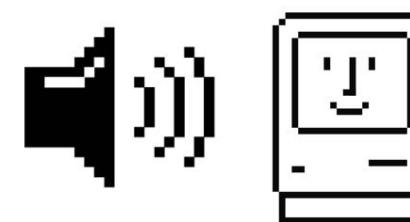


Figure 1: <http://blogs.plos.org/neurotribes/2011/11/22/the-sketchbook-of-susan-kare-the-artist-who-gave-computing-a-human-face/>

# History

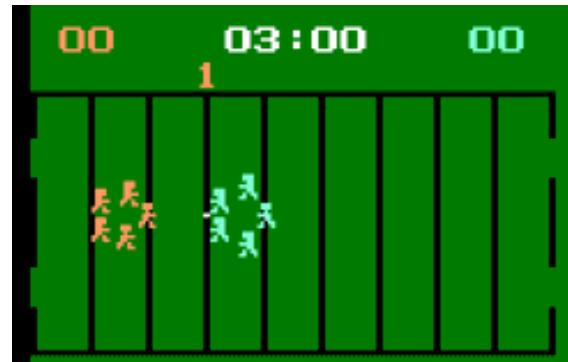


Figure 2: <http://mycotoopia.net/forums/attachments/resist-rebel/142301d1253726127-cops-caught-playing-wii-bowling-during-drug-raid-atari-game-pitfall.jpg>

Figure 3: <http://www.infendo.com/wp-content/uploads/2008/08/twilightprincessgb-495x445.jpg>

Figure 4: <http://videogamecritic.net/images/odd/football.gif>

# History

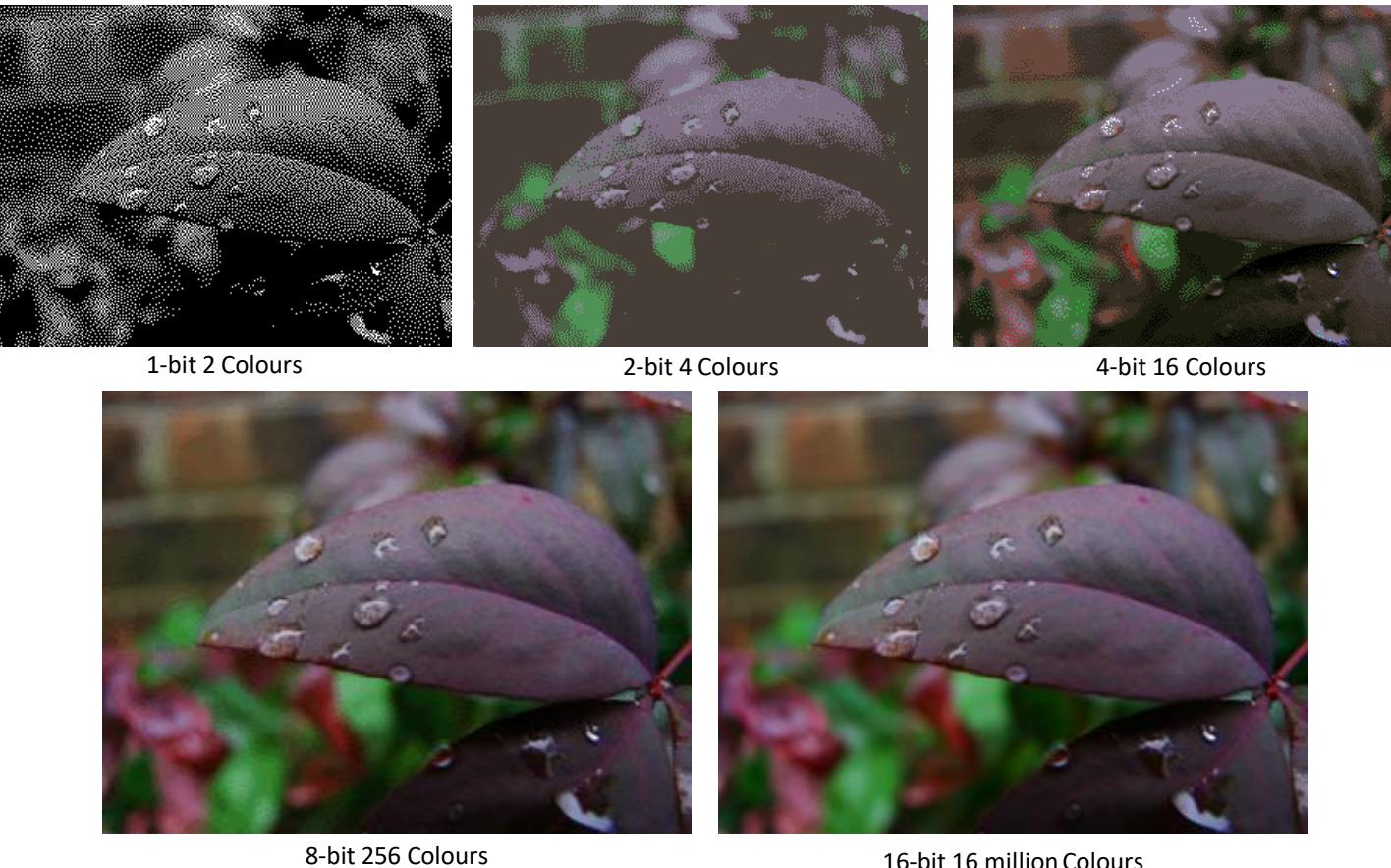
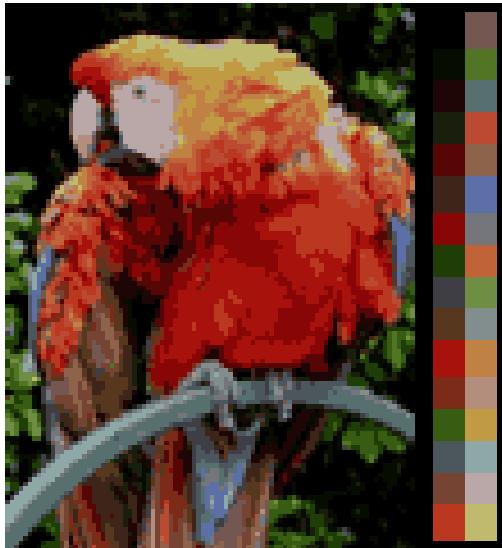


Figure 5: Different Colour Depths

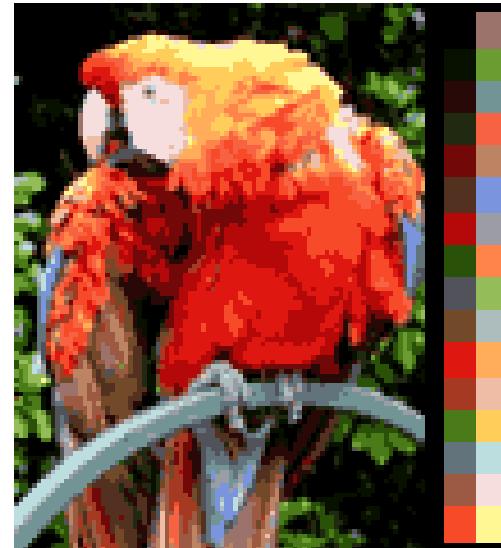
# Colour Limitations



Gameboy



Gameboy Colour



Gameboy Advance



Sega Master System



# History



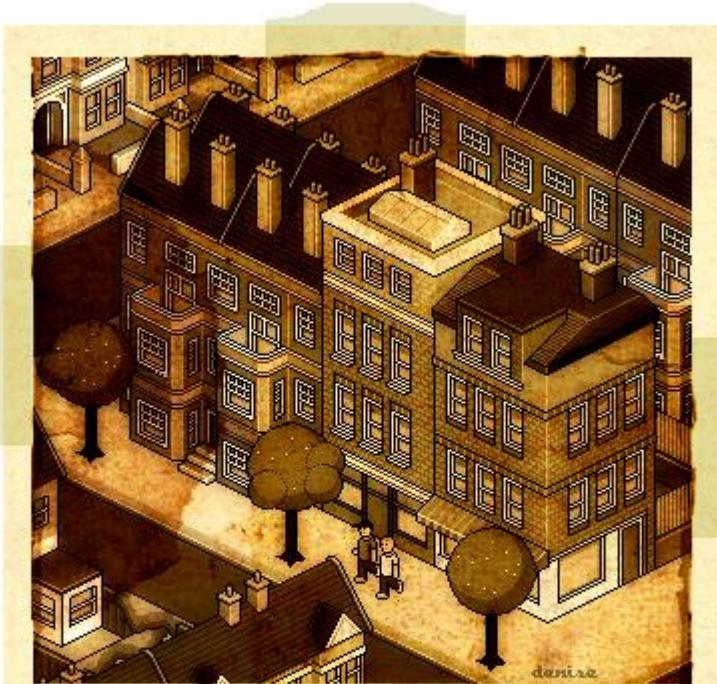
Figure 6: Halo: Combat Evolved (Fanart)



Figure 7: SoulCalibur (FanArt)

# Pixel Art Today

- Often used in indie titles because of the relative accessibility.
- Can be used to create simple but effective assets.
- Doesn't require a great deal of rendering power.
- Often used for a retro aesthetic, or to induce nostalgia.



<http://www.creativebloq.com/illustration/examples-pixel-art-2132036>

# Nostalgia/Retro – Shovel Knight



<http://assets1.ignimgs.com/2014/06/24/shovel-knight-button-v2jpg-6e4d5c.jpg>

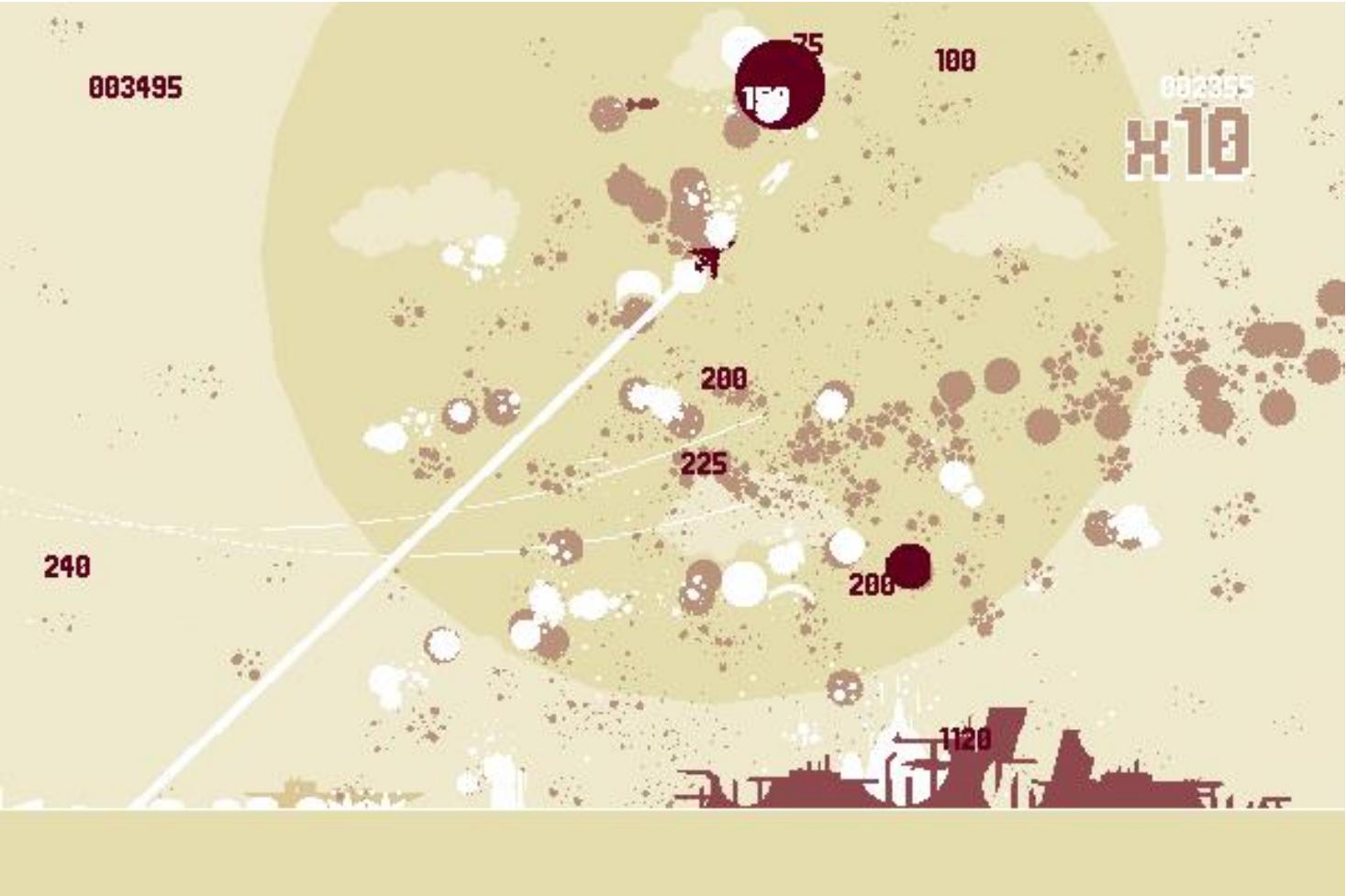


<http://yachtclubgames.com/wp-content/uploads/2013/10/Capture14.png>

# Limited Palette - Luftrausers



<http://orig01.deviantart.net/135e/f/2013/269/e/c/ecd56fe2ca602e7b0183288142adc7e8-d6nzfer.jpg>



<http://static.giantbomb.com/uploads/original/14/149021/2485951-0757671447-87652.jpg>

# Minimalist/Limited Palette – Papers, Please



[http://static.giantbomb.com/uploads/scale\\_small/8/87790/2478680-box\\_pp.png](http://static.giantbomb.com/uploads/scale_small/8/87790/2478680-box_pp.png)

<http://i143.photobucket.com/albums/r128/Varewulf/Blog%20stuff/PapersPlease2013-08-0922-48-06-62.jpg~original>

# Minimalist – Crawl

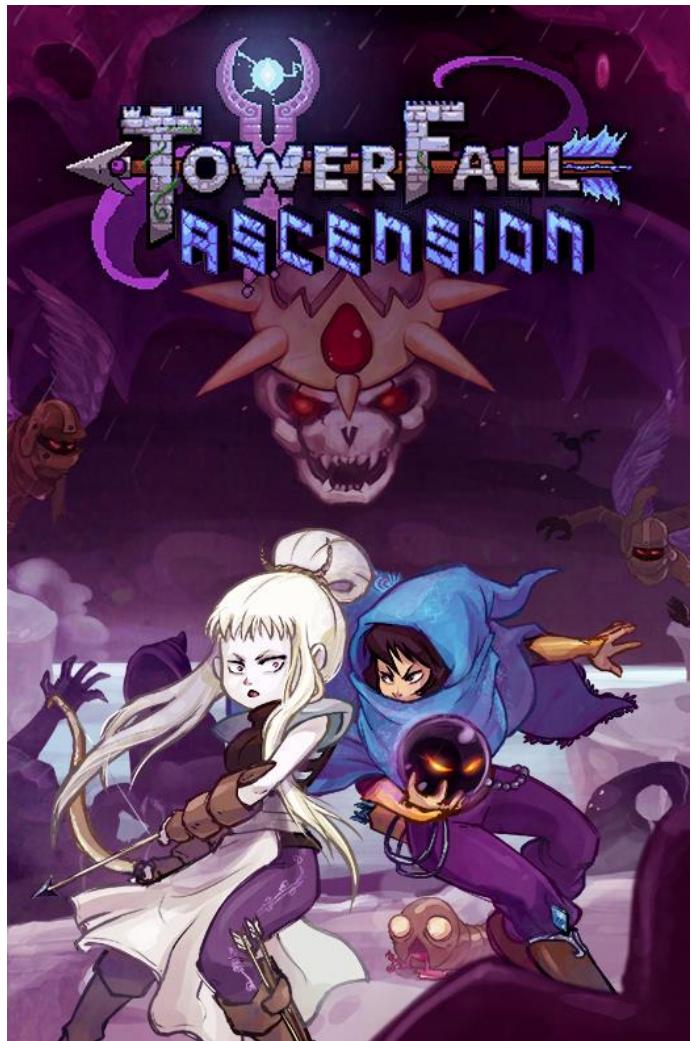


[http://cloud-4.steamusercontent.com/ugc/615043645846589420/E237625134C7E37487EC553109818982CE3FD0FD/?interpolation=lanczos-none&output-format=jpeg&output-quality=95&fit=inside%7C268:268&composite-to-\\*.%7C268:268&background-color=black](http://cloud-4.steamusercontent.com/ugc/615043645846589420/E237625134C7E37487EC553109818982CE3FD0FD/?interpolation=lanczos-none&output-format=jpeg&output-quality=95&fit=inside%7C268:268&composite-to-*.%7C268:268&background-color=black)



<http://thebitpulse.com/wp-content/uploads/2014/07/Crawl4.png>

# Detailed/Illustrative – Towerfall: Ascension



<http://www.godisageek.com/wp-content/uploads/Towerfall-Ascension-Boxart.jpg>



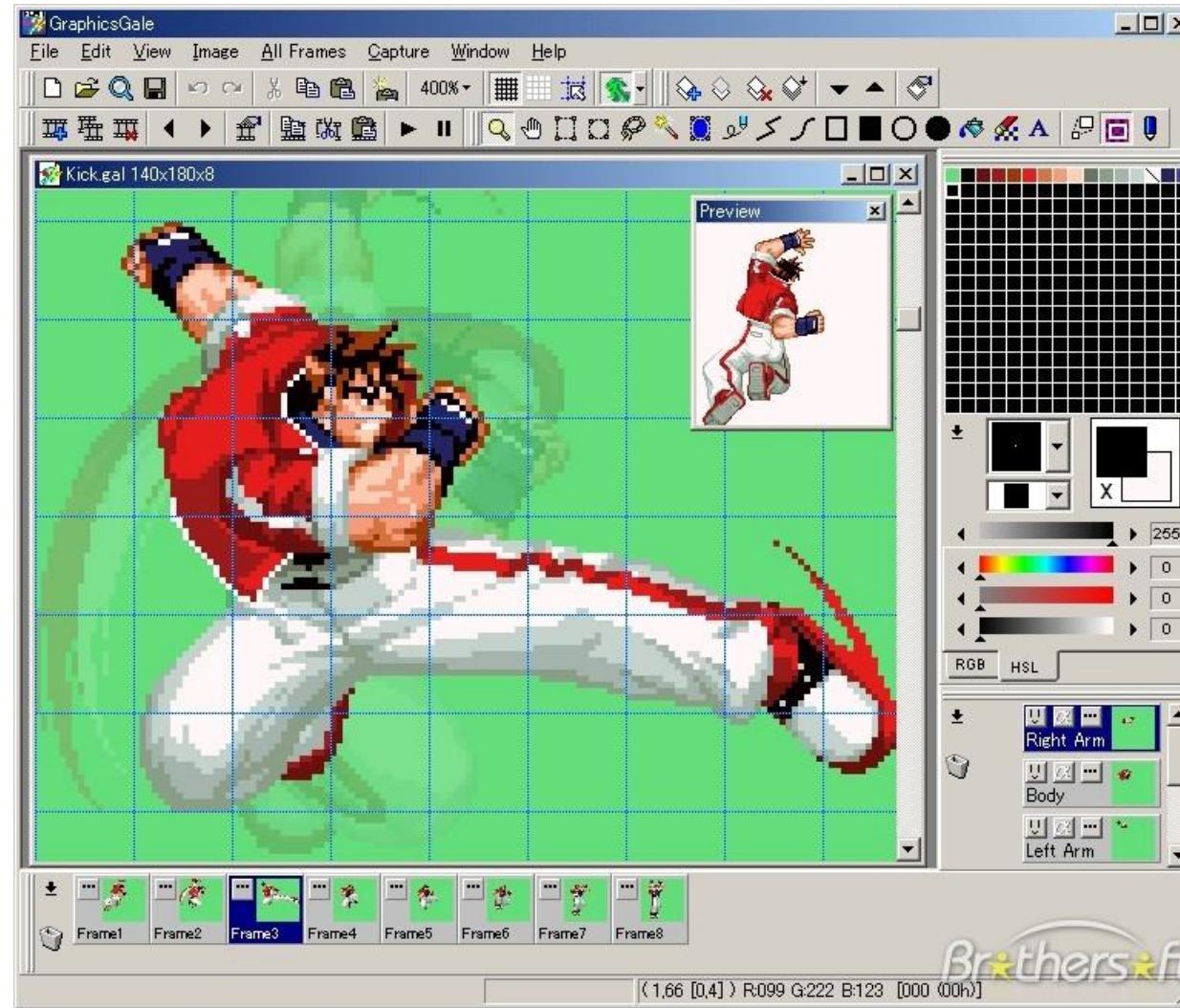
[http://static3.gamespot.com/uploads/scale\\_super/1197/11970954/2445008-kingscourt.png](http://static3.gamespot.com/uploads/scale_super/1197/11970954/2445008-kingscourt.png)  
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# Tools

- GraphicsGale
- Piskel
- Aseprite
- Photoshop
- SAI Paint Tool (Legacy Pen)
- Paint.NET
- GIMP

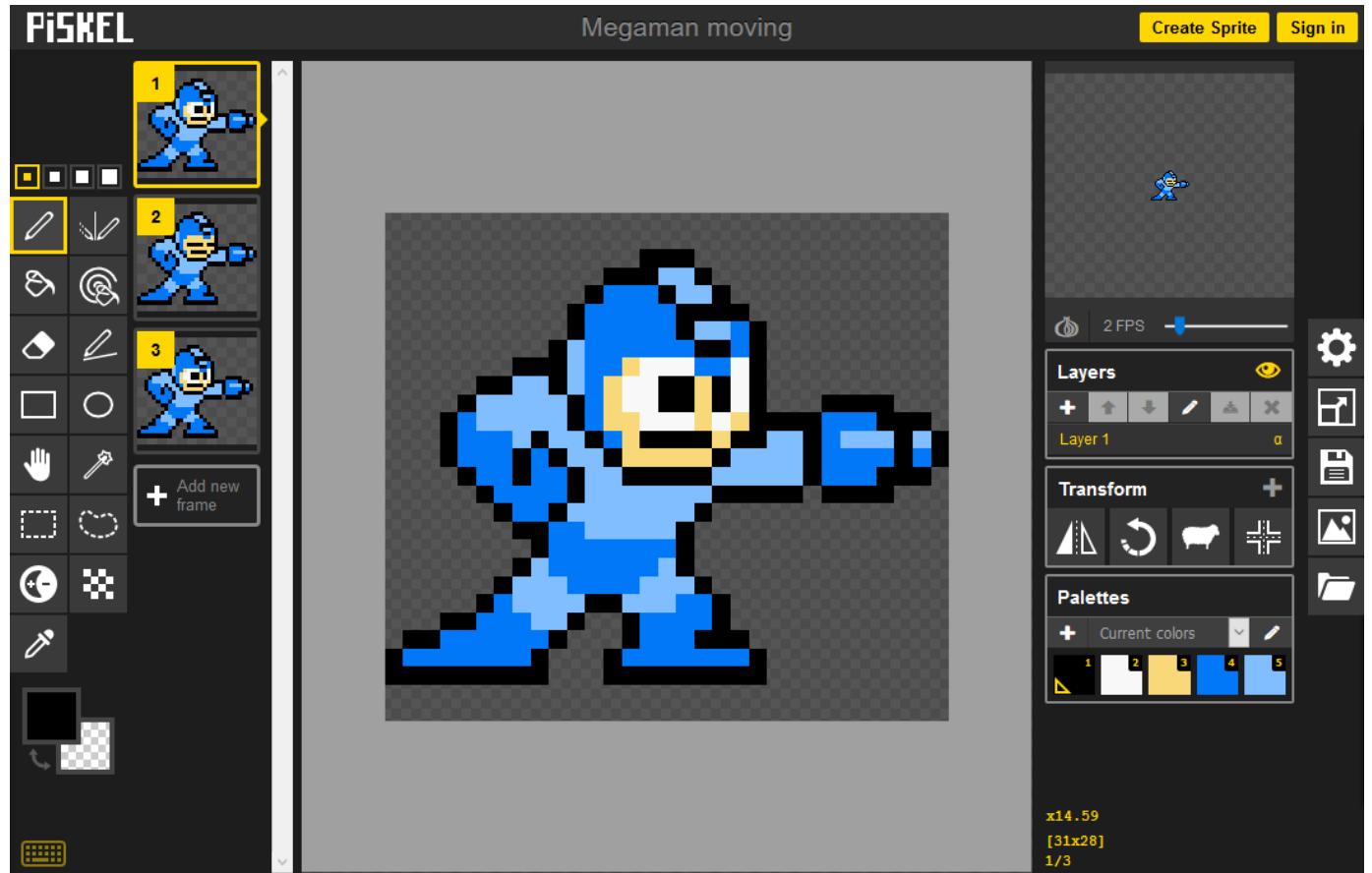
# GraphicsGale



<http://flashgamedojo.com/wiki/images/8/8a/Graphicsgalescreenshot.jpeg>

# Piskel

<https://www.piskelapp.com/>

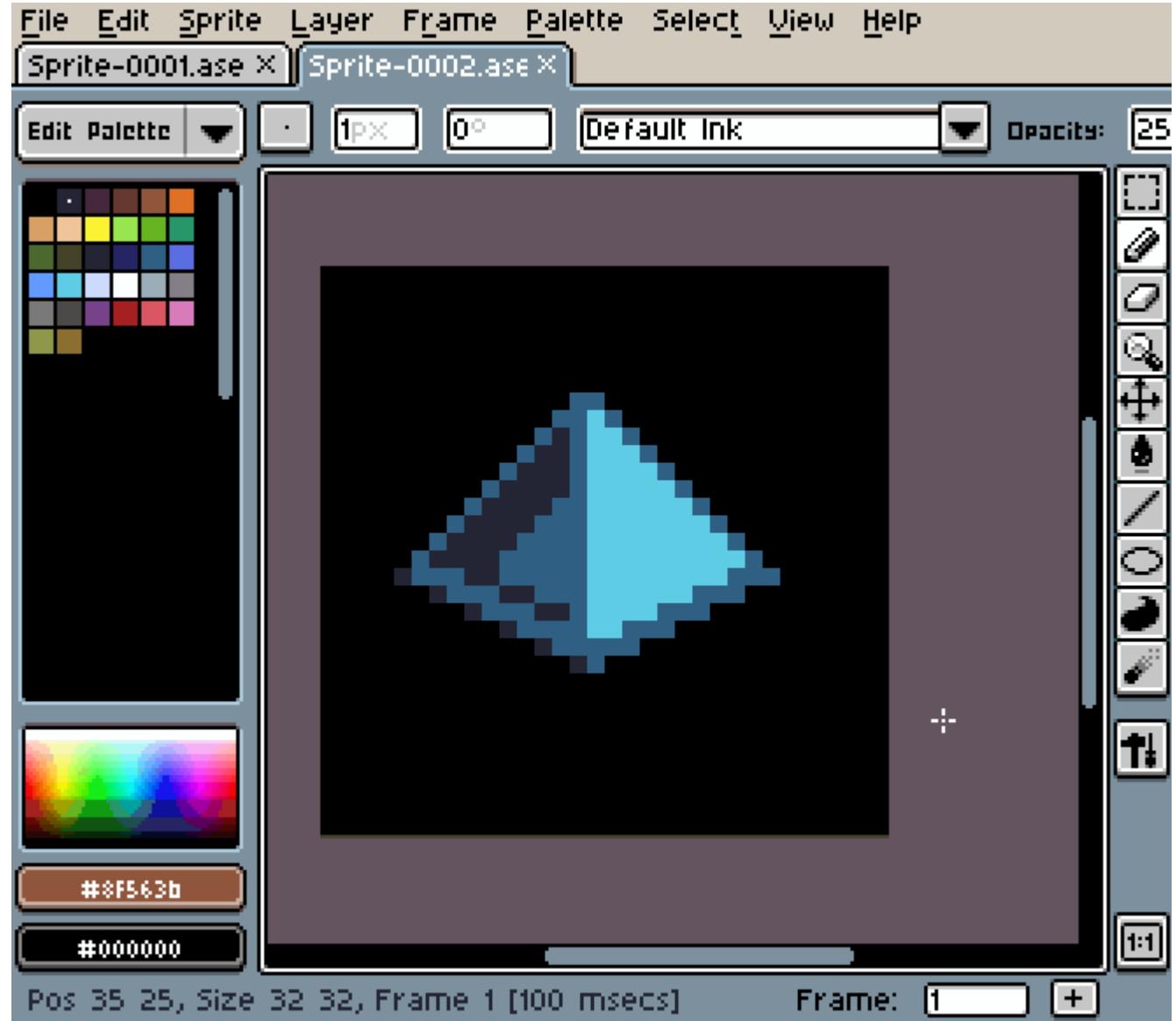


Free, browser based pixel editor (includes animation)

# Aseprite

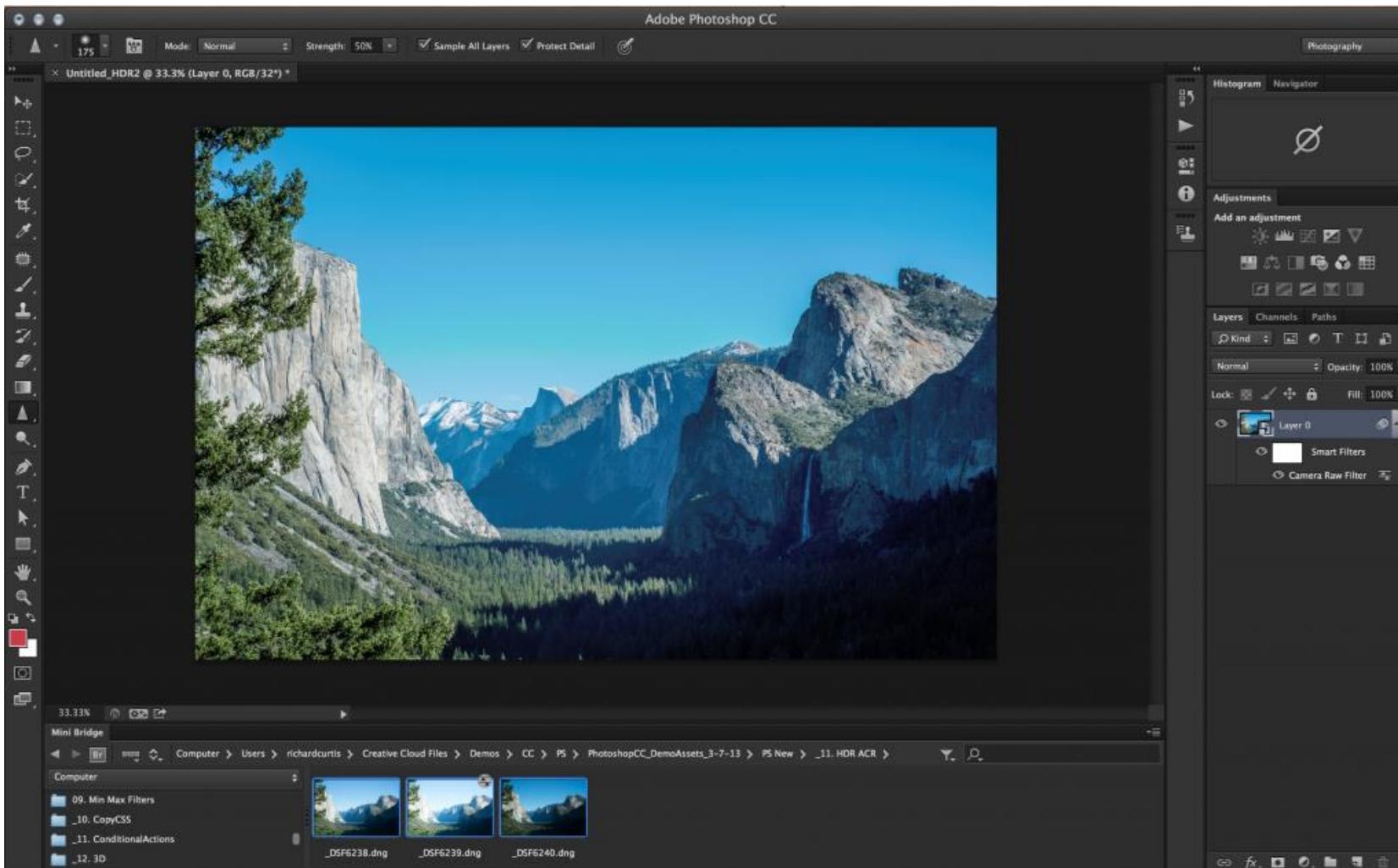
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<https://www.aseprite.org/>



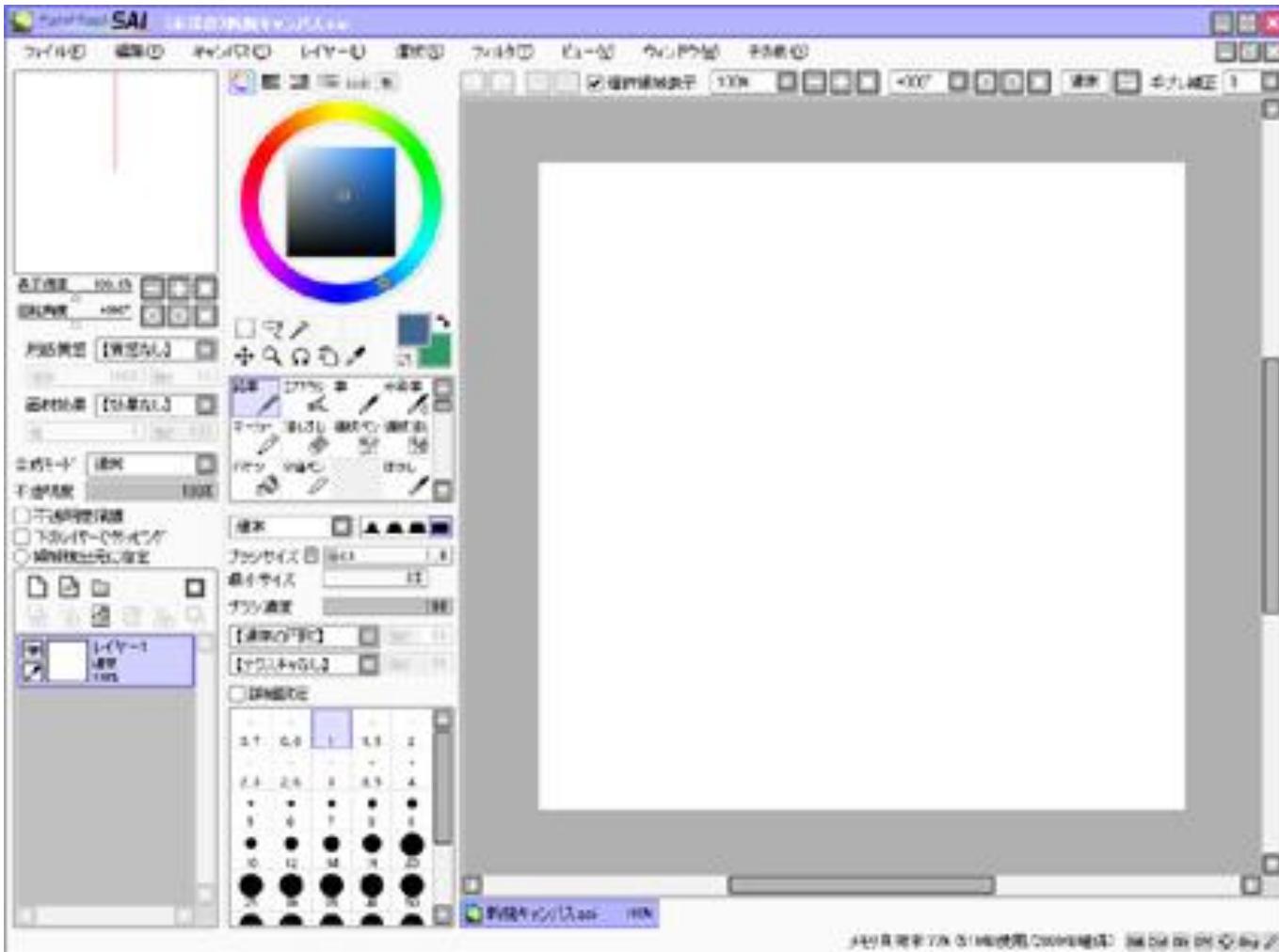
Actively developed, cheap (\$20) or compile it for free

# Photoshop (CC)



[http://photo-graphics.softwareinsider.com/sites/default/files/746/media/images/Adobe\\_Photoshop\\_CC\\_827616.png](http://photo-graphics.softwareinsider.com/sites/default/files/746/media/images/Adobe_Photoshop_CC_827616.png)

# Paint Tool SAI



[https://www.systemax.jp/image/sai\\_shot.jpg](https://www.systemax.jp/image/sai_shot.jpg)

# Style

- Various graphical projections are used to convey depth in a 2D game space.
- These are all known as Axonometric Projections
- Orthographic
- Isometric
- Dimetric
- Trimetric
- Oblique
- Perspective

# Styles – Orthographic Projection



Figure 8: Ghosts and Goblins



Figure 9: Hotline Miami

Figure 8: <http://www.freewaregenius.com/wp-content/uploads/2007/08/gg1.jpg>

Figure 9: <http://www.hardcoregamer.com/wp-content/uploads/2012/10/HotlineMiami-2012-10-22-17-01-53-42.jpg>

# Styles – Isometric Projection



Figure 10: Sim Town



Figure 11: Darkmere

Figure 10: <http://theodor.lauppert.ws/games/s/screen1/simtown.png>

Figure 11: [http://hobring.esero.net/gamesscreens\\_cf.htm](http://hobring.esero.net/gamesscreens_cf.htm)

# Styles – Dimetric Projection



Figure 12: Mystic Towers



Figure 13: FIFA International Soccer

Figure 12: <http://i.ytimg.com/vi/FynPFVjTorl/0.jpg>

Figure 13: <http://www.ibiblio.org/GameBytes/issue21/greviews/fifa2.gif>

# Styles – Trimetric Projection

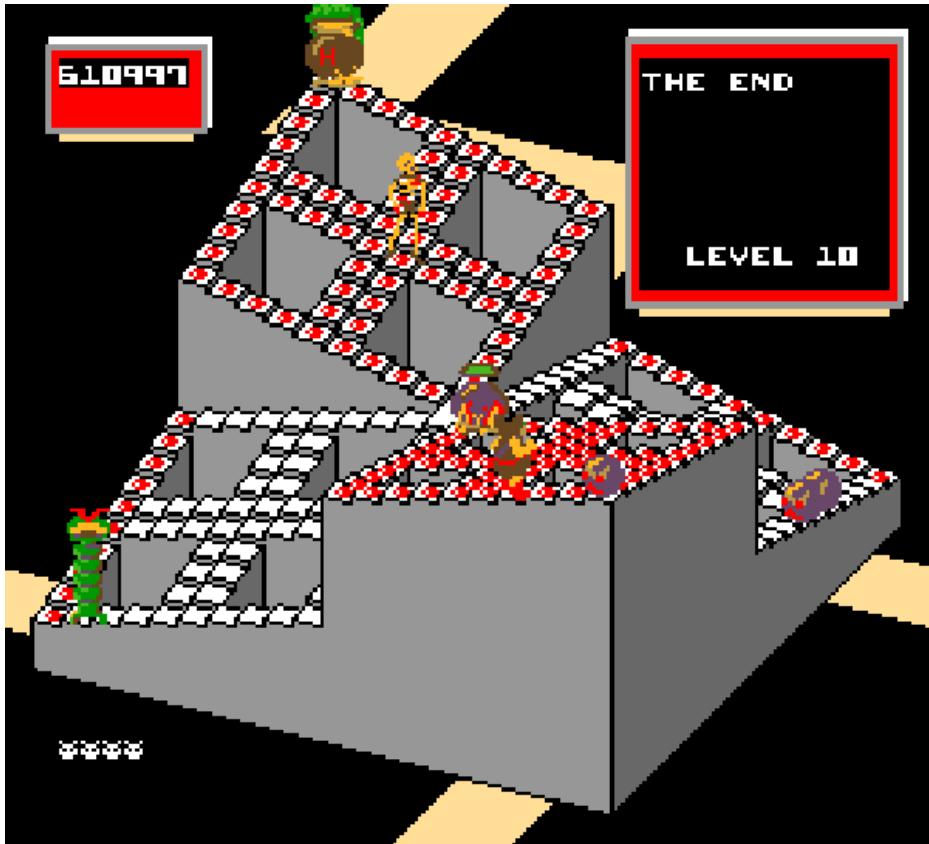


Figure 14: Crystal Castles



Figure 15: Fallout

Figure 14: [http://www.significant-bits.com/wp-content/uploads/2009/04/crystal\\_castles\\_the\\_end.gif](http://www.significant-bits.com/wp-content/uploads/2009/04/crystal_castles_the_end.gif)

Figure 15: <http://www.significant-bits.com/wp-content/uploads/2009/04/fallout1.gif>

# Styles – Oblique Projection



Figure 16: Banshee



Figure 17: Secret of Mana

Figure 16: [http://hobring.esero.net/pics/screenshots/banshee\\_008.png](http://hobring.esero.net/pics/screenshots/banshee_008.png)

Figure 17: <http://www.cubed3.com/media/2008/December/jesusraz/secretofmana/screen108.jpg>

# Styles – Perspective Projection



Figure 18: Ambermoon



Figure 19: Street Fighter

Figure 18: [http://hobring.esero.net/pics/screenshots/ambermoon\\_005.png](http://hobring.esero.net/pics/screenshots/ambermoon_005.png)

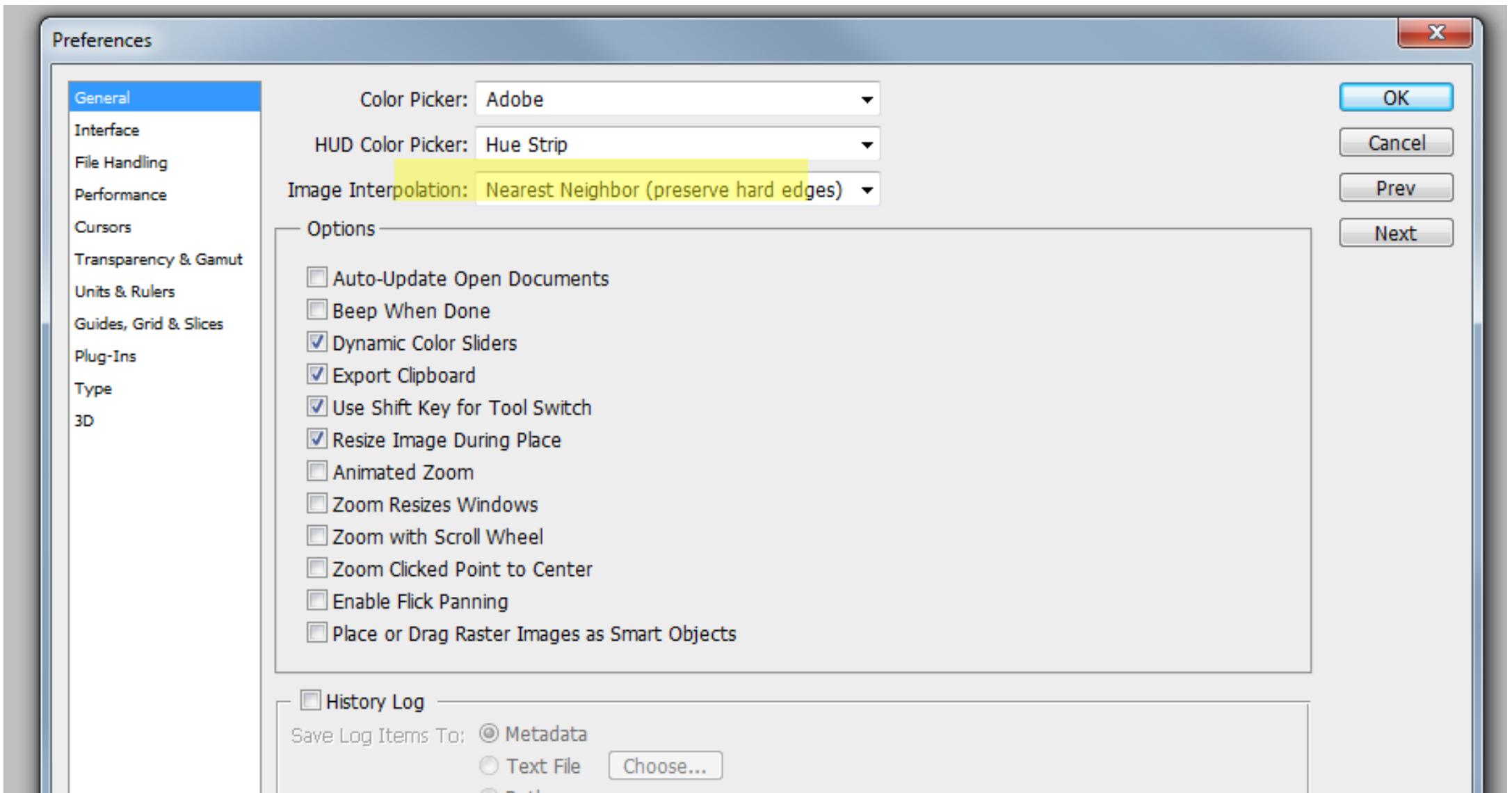
Figure 19: [http://schestowitz.com/Interests/Screenshots/Street\\_Fighter\\_2/honda.jpg](http://schestowitz.com/Interests/Screenshots/Street_Fighter_2/honda.jpg)

# Process

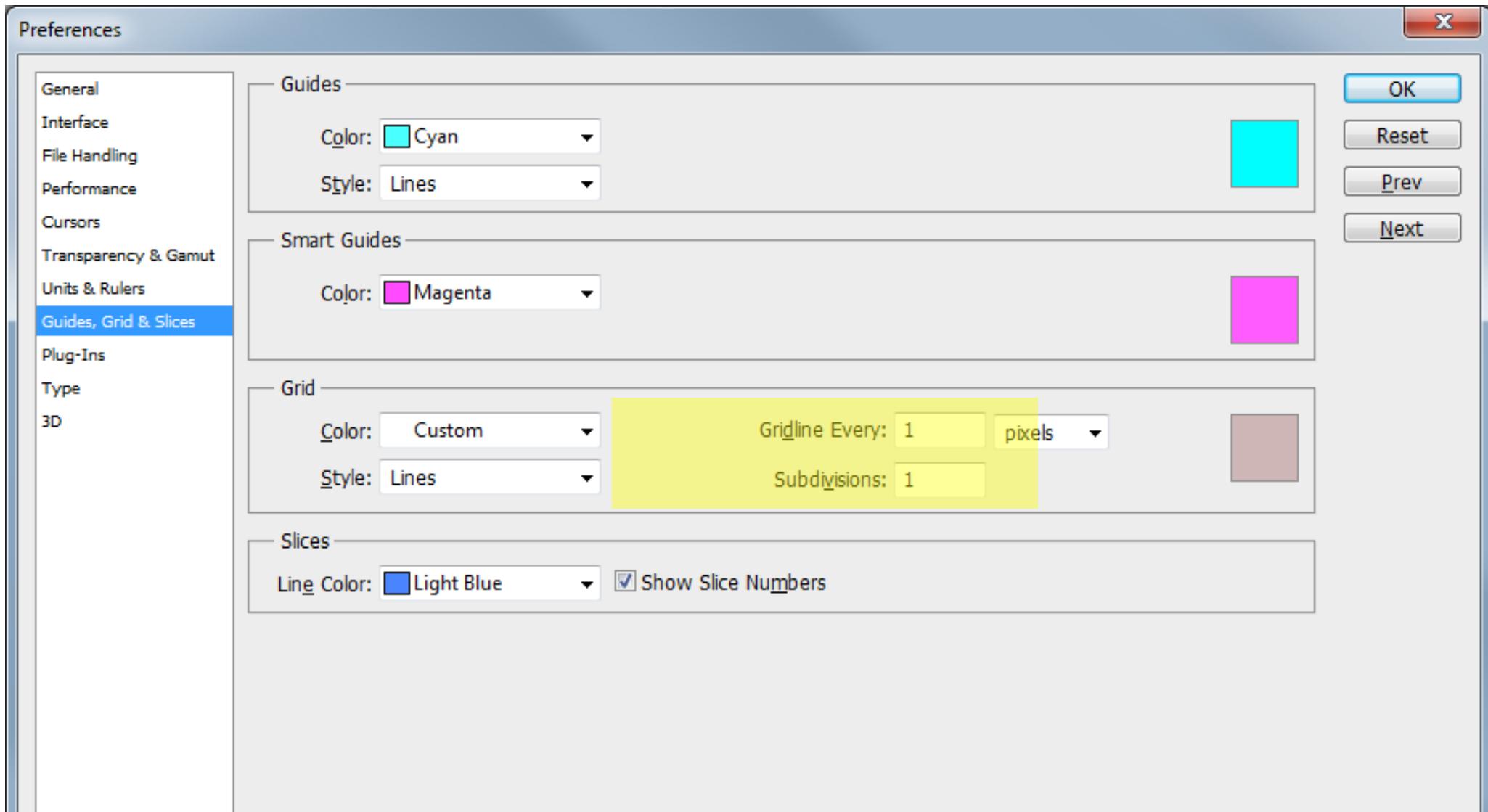
- Setting up PS for Pixel Art
- Basic Lines
- Creating tools
- Colour
- Anti-Aliasing
- Dithering
- Selective Outlining



# Setting up Photoshop for pixel work



# Setting up Photoshop for pixel work



# Basic Lines

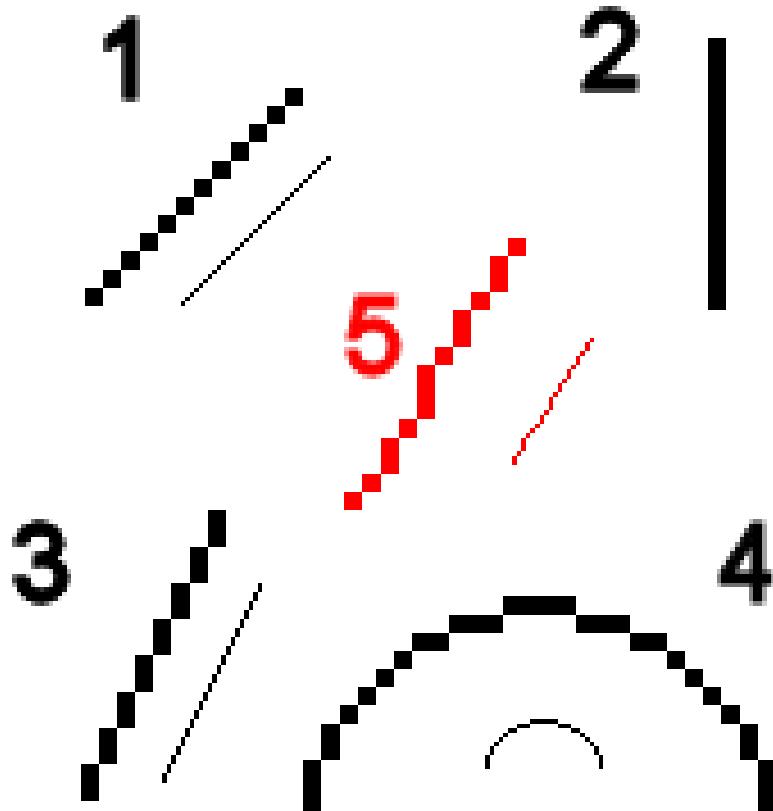


Figure 20: Good and Bad

Figure 20: <http://purloux.com/images/artwork/tutorials/rundown/lines3.png>

# Creating Tools

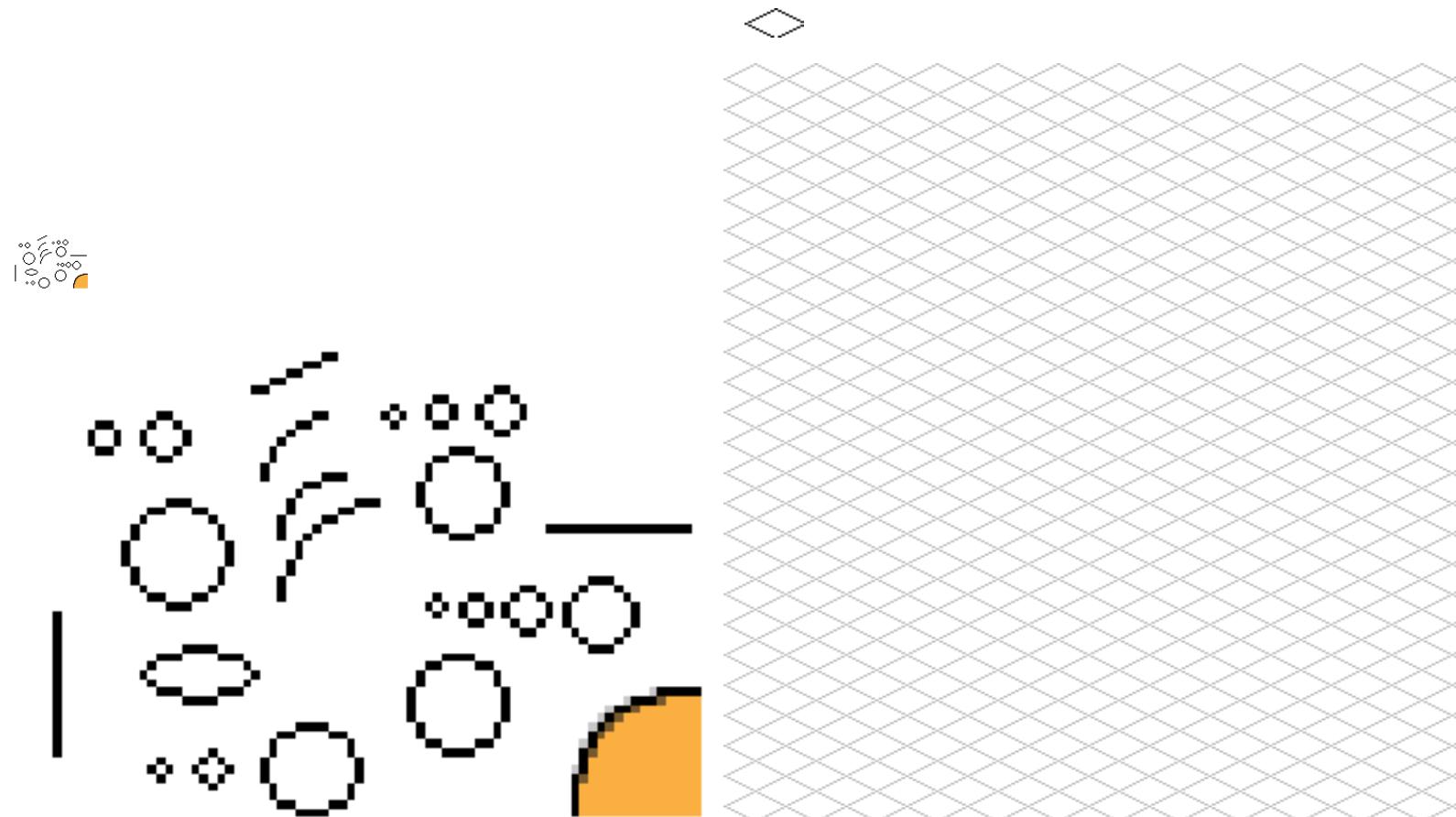


Figure 21: Examples of tools

# Anti-Aliasing



Figure 23: Examples of AA

# Colour

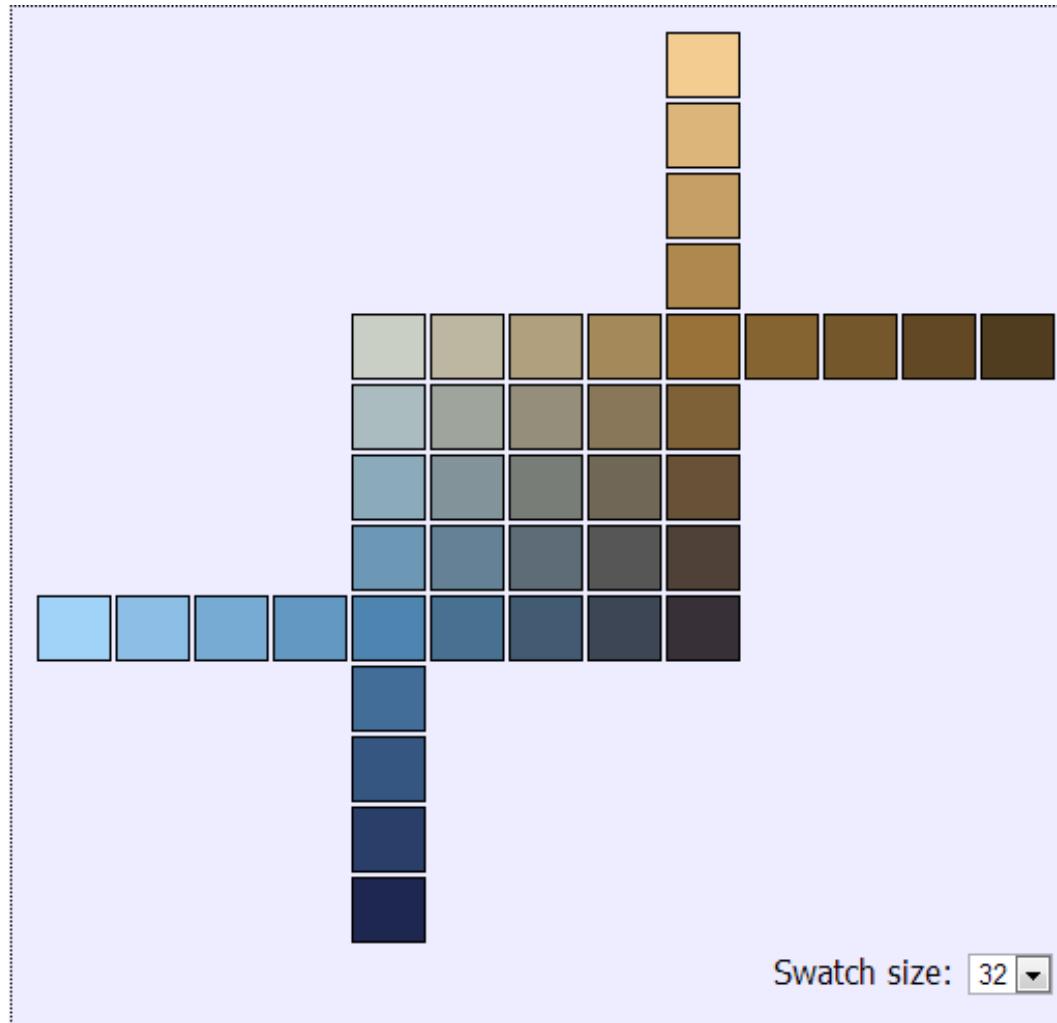


Figure 22: Palette

Figure 22: <http://www.snowy-day.net/current/colorthing.php>

# Dithering

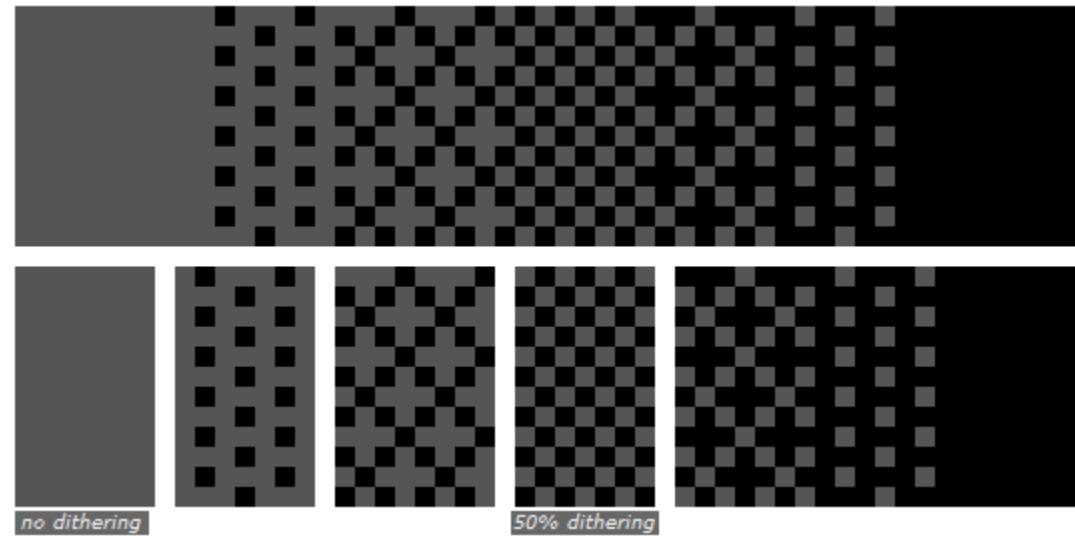


Figure 24: Examples of dithering

# Selective Outlining



Figure 25: Examples of AA

# Overview – Limited Palettes

- Using limited palettes trains you to use space sparingly in pixel art.
- Open a 64x64 canvas in Photoshop and draw a figure (portrait or whole body) using the following limited palette (horizontally four colours). You have 30 minutes.
- The palette may be found in the 'Resources' web link on Blackboard.



# Overview – Texture Art

- In-Class Exercise:

- Create a character!
- 96x96px

Occupations:      Pirate - Doctor - Soldier

Type:                  Male - Female - Monster

Setting:              Space - Medieval - Psychedelic

- Post your final images to your Journal!

# Keen on pixel art?

## Extra Resources:

- [https://twitter.com/Pixel\\_Dailies](https://twitter.com/Pixel_Dailies) - A Twitter with daily exercises for pixel artists, beginning or expert
- <http://derekyu.com/makegames/pixelart.html> Tutorial by Derek