

Vector vs Raster Graphics



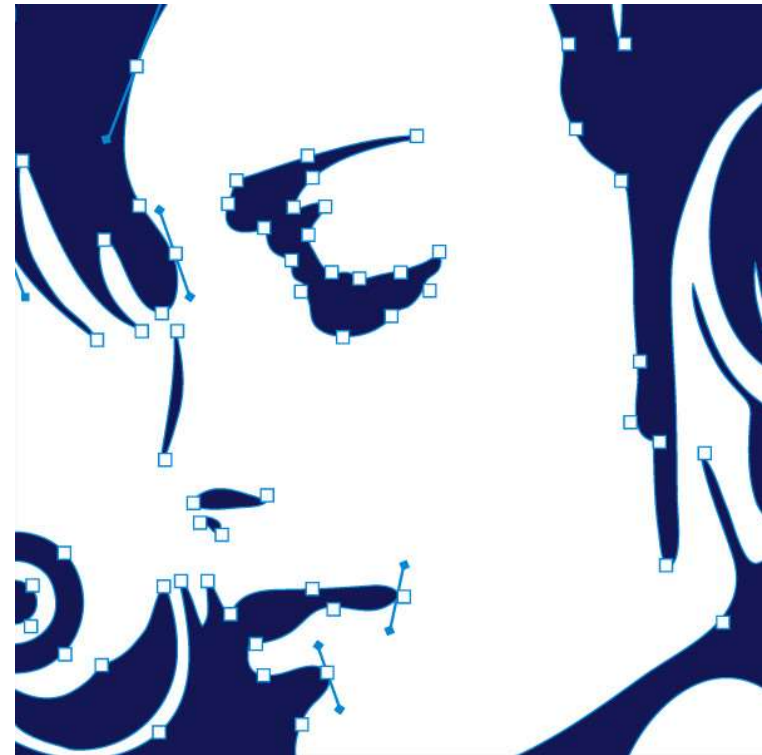
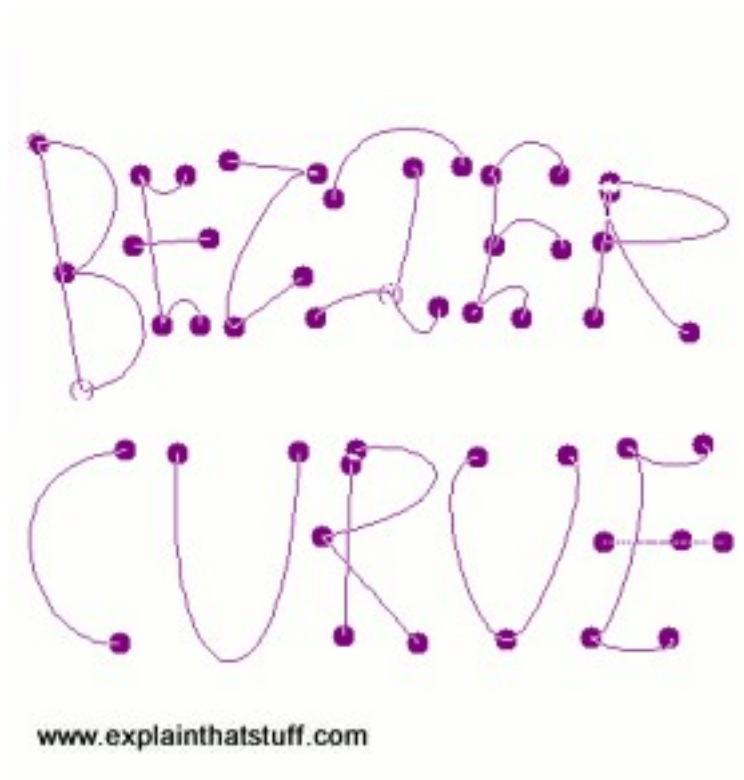
Vector Graphics



Raster Graphics

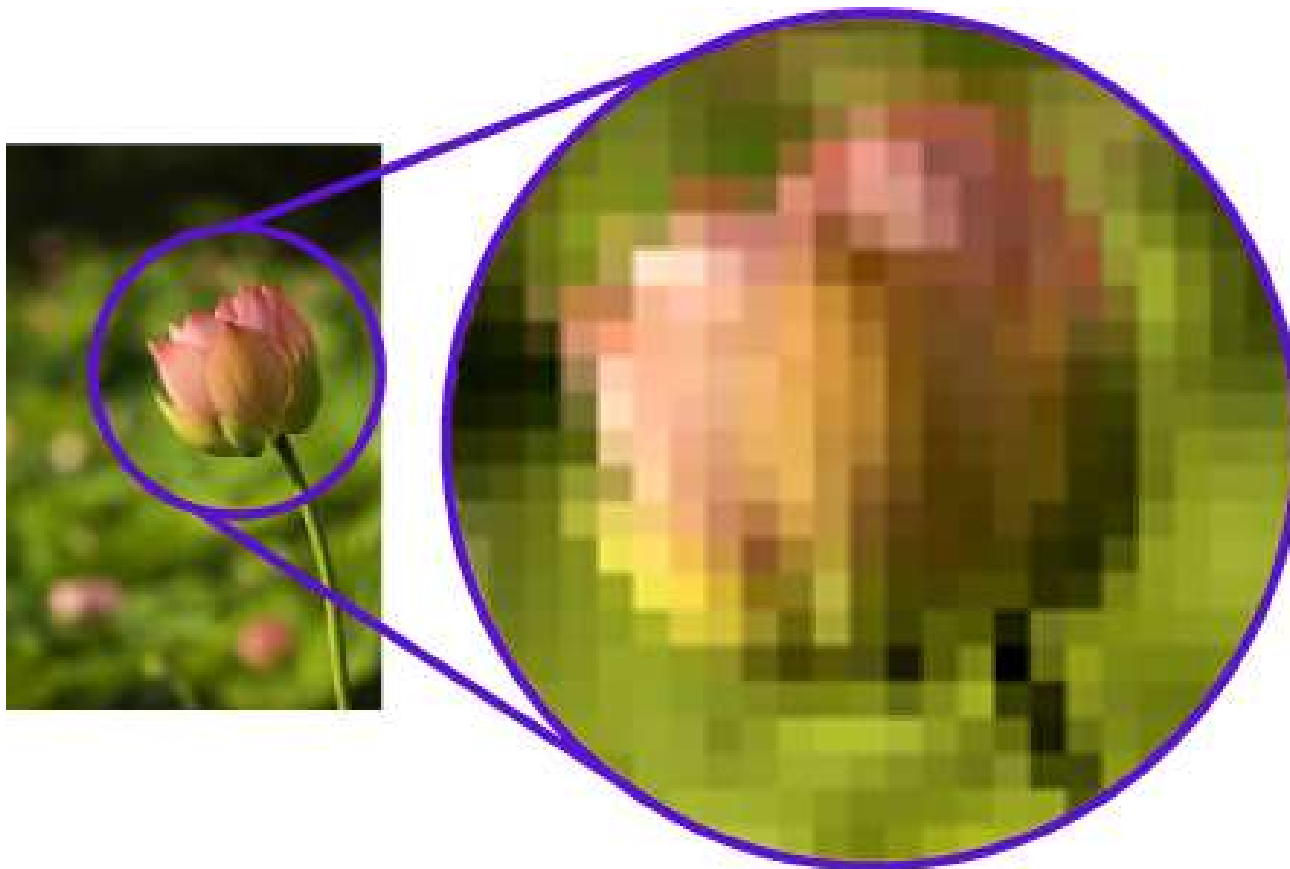
Vector Graphics

= Geometrical (mathematical) representation



Raster Graphics

= Rectangular grid of colored elements



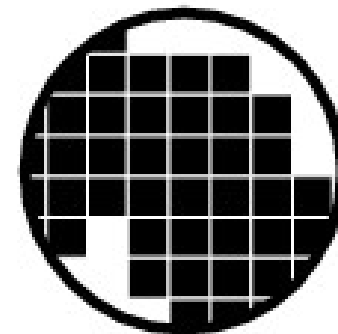
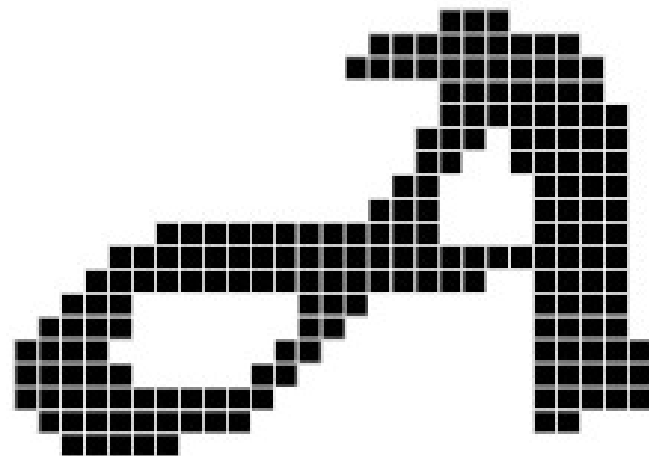
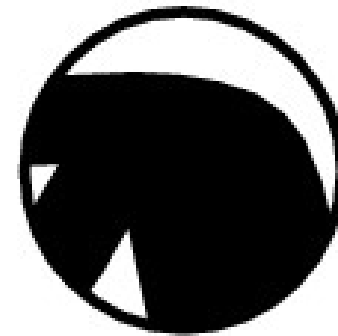
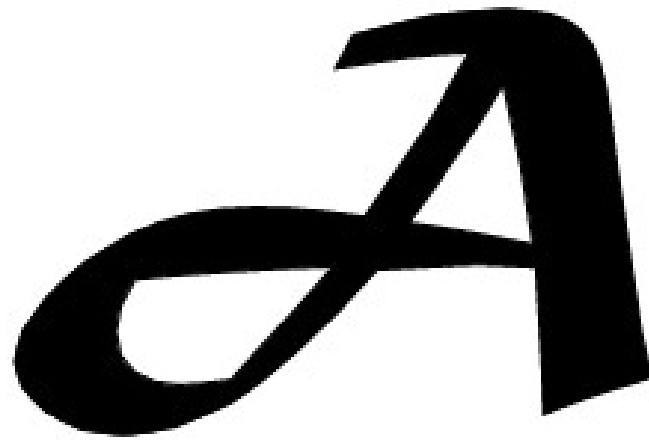


VECTOR **VS** **RASTER**

Style



Zoom



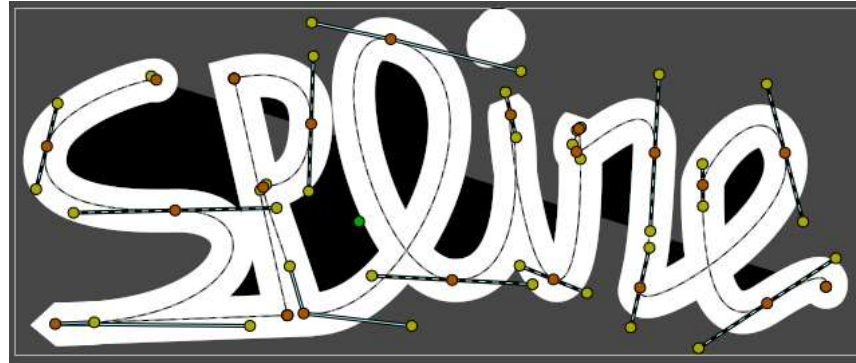
Arbitrary Content

- Vector graphics is hard to make
 - General
 - Fast on hardware
- Raster graphics is hard
 - To edit meaningfully
 - To store efficiently



Vector Graphics is used by Software

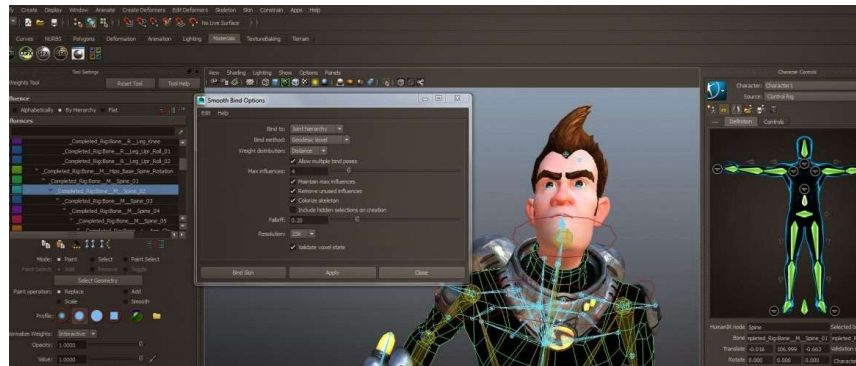
- True Type Fonts



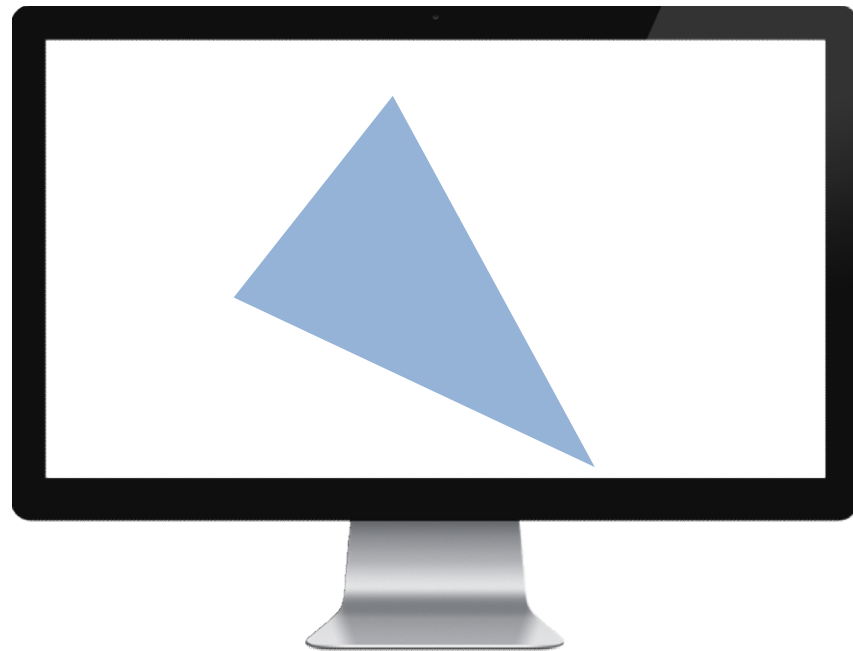
- Illustrator



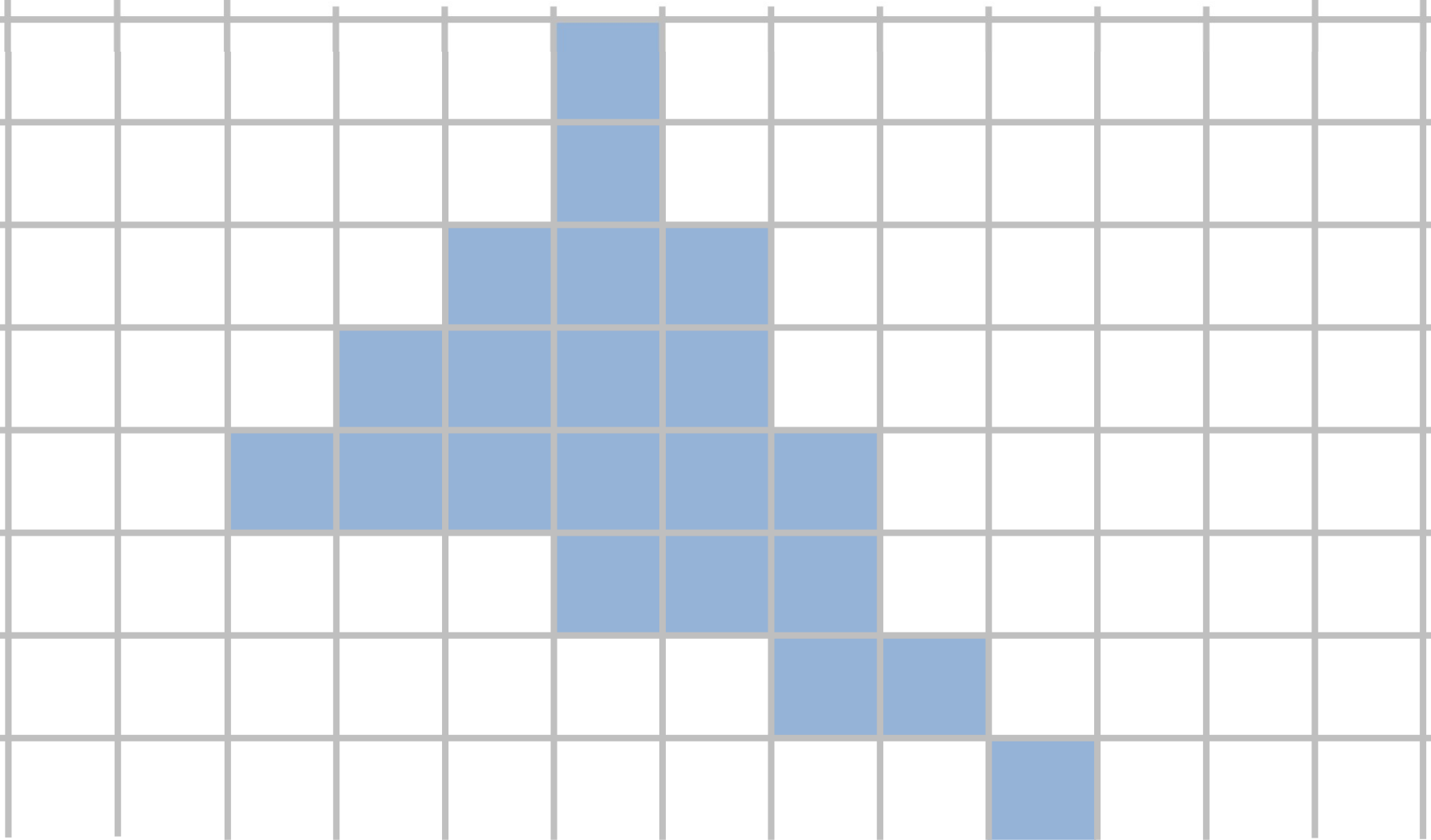
- Maya



Monitor – Vector or Raster Graphics?



Monitor – Raster Graphics



A 10x10 grid illustrating raster graphics. The grid is composed of 10 columns and 10 rows. A blue shape is drawn on the grid, consisting of the following cells (row, column): (1, 6), (2, 6), (3, 5), (3, 6), (3, 7), (4, 4), (4, 5), (4, 6), (4, 7), (5, 3), (5, 4), (5, 5), (5, 6), (5, 7), (6, 6), (6, 7), (6, 8), (7, 8), (7, 9), (8, 9). The shape is a stylized, pixelated letter 'A'.

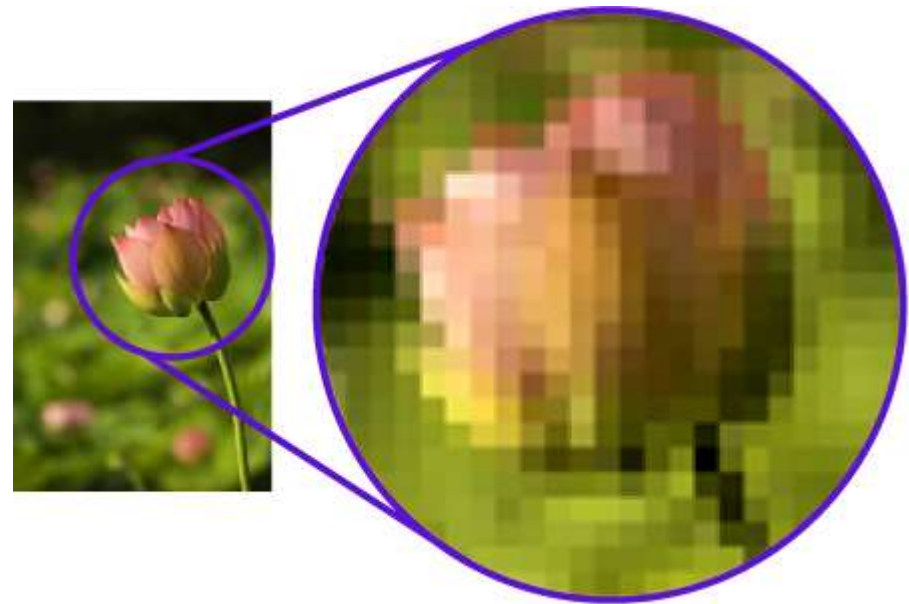
Raster Graphics is used by Hardware

- Monitor
- Handy
- TV
- Digicam
- Printer
- Scanner
- VR/AR
 - Google Glass
 - Holo Lens
- Mouse
- ...



Why is it used by hardware?

- Easy and cheap to produce
- Very fast
- Arbitrary content



From Software to Hardware

- Conversion from Vector Graphics into Raster Graphics



Rasterisation

