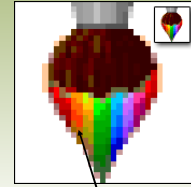


# Raster Graphics

2.01 Investigate graphic image design.

## Raster Graphics

- Also called **bitmap** graphics
- Consist of grids of tiny dots called pixels
- Have a fixed resolution and cannot be resized without altering image quality
- Edited in paint programs



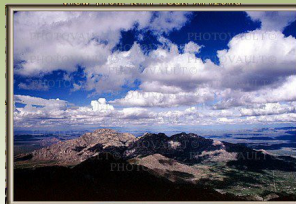
Notice the pixels  
Bitmap enlargement

Image source: <http://graphicssoft.about.com/od/aboutgraphics/a/bitmapvector.htm>

## Common Raster Formats



- GIF
- JPEG
- BMP
- PNG
- TIFF



## GIF – Graphics Interchange Format

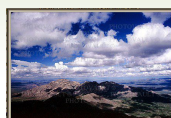
- ✓ **Animation** – Standard format for animation on the Internet.
- ✓ **Transparency** – yes
- **Lossless compression**
- **Colors** = 256 (8-bit)
- Most common format for:
  - Text
  - Clip art, animations, icons, logos
  - Simple diagrams, line drawings
  - Graphics with large blocks of a single color
  - Graphics with transparent areas
  - Images displayed on computer screens and on websites.

Animated Gif



## JPEG – Joint Photographic Experts Group

- X **Animation** – No
- X **Transparency** – No
- **Lossy** compression
- **Colors** – 16.7 M (24-bit)
- High quality but larger file size than a GIF
- Commonly Used For:
  - Desktop publishing photographs
  - Photographs and natural artwork
  - Scanned photographs
  - Emailing photographs
  - Digital camera photographs



## BMP - Bitmap

- X **Animation** – No
- X **Transparency** – No
- **Uncompressed**
- **256 colors**
- Large file size - not well suited for transfer across the Internet or for print publications
- Commonly Used For:
  - Editing raster graphics
  - Creating **icons** and **wallpaper**
  - On-screen display



Icons

## PNG – Portable Network Graphics

- X **Animation** – no
- ✓ **Transparency** – yes
- **Lossless** compression
- **256 colors**
- **Not** suited for photographs
- Biggest Disadvantage: Not widely supported by web browsers and image viewers/editors without plug-ins.
- Commonly Used For:
  - Replacing GIF and TIFF images
  - Online viewing of images
- See examples at <http://graphicssoft.about.com/od/freedownloads/blfreepng07.htm>

## TIFF – Tagged Image File Format

- Available in compressed and un-compressed formats
- Compressed is advised
- Commonly Used For:
  - Storage container for faxes and other digital images
  - To store raw bitmap data by some programs and devices such as scanners
  - High resolution printing
  - Desktop Publishing images