

Professional Publishing

Session 8 Graphics for DeskTop Publishing

Bitmap Images

- Also known as Raster images
 - or 'Paint' images
 - used for photographs...
 - ...and scans
 - ...and web imagesImages are composed of pixels
- edit pixels, not shapes (e.g. circles)
 - pixels can be 'rubbed out' in a pixel editing program such as Photoshop

Bitmap Images

- Images lose definition if they are
 - Enlarged*or*
 - printed at a higher resolution than that for which they were created
- the image becomes coarser
 - an effect known as pixellation
- Images are resolution dependent

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Changing bitmap resolution

- If image resolution < output device resolution, must interpolate extra pixels
 - Always leads to loss of quality
- If image resolution > output device resolution, must *downsample* (discard pixels)
 - Quality will often be better than that of an image at device resolution (uses more information)
 - Image sampled at a higher resolution than that of intended output device is *oversampled*

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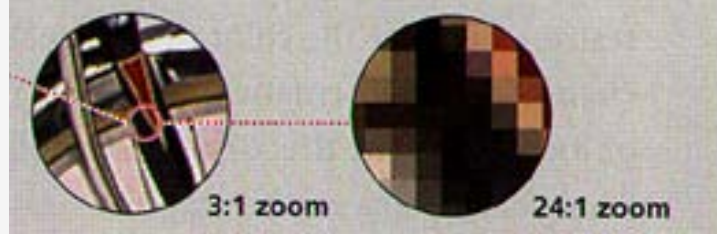
A Bitmap image can have subtle shading

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Bitmap images are good at reproducing the subtle shading found in continuous-tone images, such as photographs. However, bitmap images do not enlarge well and can show jagged edges when magnified or output to higher-resolution devices.



Bitmap images do not enlarge well

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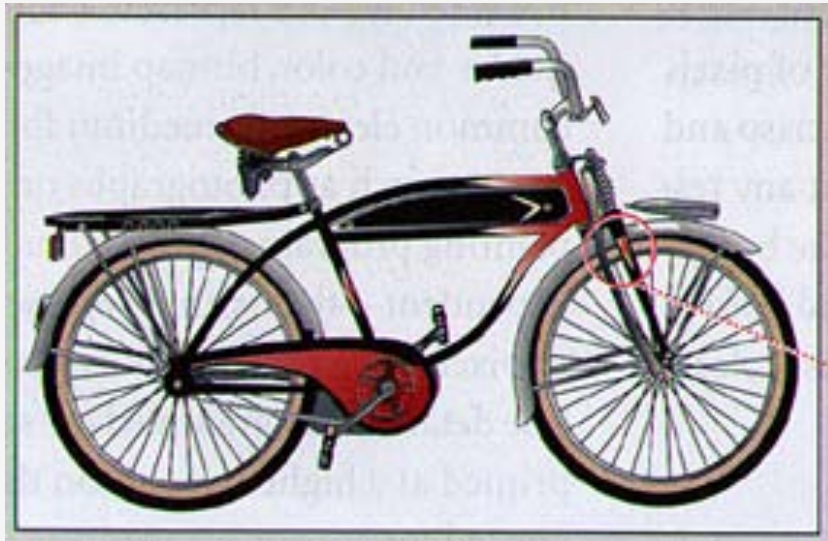
Vector Graphics

- Vector graphics programs
 - also known as Drawing programs
 - used for precise 'technical' drawing
 - maps and graphs
- Images are made of vectors
 - mathematical descriptions of shapes (e.g. coordinates of the ends of lines)
 - enables easy editing of 'shapes' (e.g. circles)
 - cannot edit individual pixels
 - examples are InDesign graphics tools and the Adobe Illustrator program
- Images are resolution independent

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A Vector graphic has detailed linework

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Vector graphics display or print at the resolution available on the displaying or printing device. As a result, such graphics enlarge well and are good at reproducing crisp outlines and details.



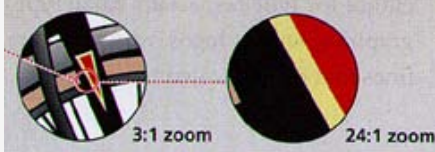
Vector images enlarge well

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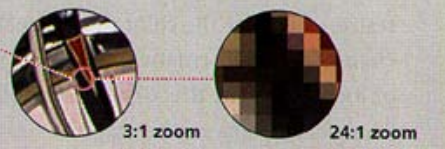
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Vector graphics display or print at the resolution available on the displaying or printing device. As a result, such graphics enlarge well and are good at reproducing crisp outlines and details.



***Bitmap images** are good at reproducing the subtle shading found in continuous-tone images, such as photographs. However, bitmap images do not enlarge well and can show jagged edges when magnified or output to higher-resolution devices.*



Comparison of Bitmap images and Vector Graphics

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Bitmap / Raster Images on a screen

- Screens are made of pixels
- Computer Images are rendered on the screen by 'colouring' the screen pixels
- Pixel editing programs render their images directly into the pixels, making it possible to edit each pixel in an image

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Vector Graphics on a screen

- Vector editing programs render their shapes into pixels for display on the screen
- You cannot edit individual pixels
- Enlarging an image on screen does not affect the image quality

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Adobe Photoshop and Adobe Illustrator Interaction

- Photoshop and Illustrator blur the distinction between raster and vector images
- Photoshop can 'rasterise' Illustrator vector graphics to enable pixel editing
- But Photoshop cannot open an Illustrator image and edit the vector data
- Illustrator can rasterise images and use Photoshop filters *within Illustrator*

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Printing Graphic images

- Two types of printer
- 'Dumb' printers
 - Low resolution output
 - Uses the screen image for printing
 - Dot matrix, Inkjet printers, Non postscript laser printers
- 'Intelligent' Postscript printers
 - High resolution output
 - Uses postscript code written into the file
 - Vector image quality only limited by the resolution of the printer

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Transferring and printing graphics in InDesign

- Images and graphics are 'placed' into InDesign (not copy and pasted)
- InDesign requires a Postscript printer for the highest quality output
- InDesign can be set for different quality display options
 - View>Optimised Display
 - View>Typical Display
 - View>High Quality Display

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InDesign Graphics

- Create a Graphic Frame for layout purposes
 - Change frame content
 - Object>Content>Graphic
 - Object>Content>Text
 - Object>Content>Unassigned
- Selection tools
 - Selection Tool - Solid Black arrow
 - Direct selection tool - Hollow White arrow
- Speciality frames
 - Multiple frames that act as one item
 - Creates a Compound Shape

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InDesign Page
25 image frames
One image
How?

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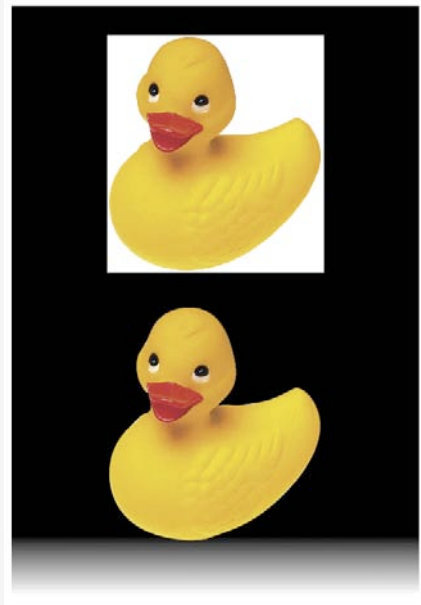
InDesign Page
Multiple image frames
One image
How?

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InDesign page
Gradient background
Top image has no
clipping path
Bottom image has
clipping path created
in Photoshop



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Selection Tool, i.e. black arrow, to
colour the background (white)
pixels

Direct Selection Tool, i.e. white
arrow, to colour the foreground
(black) pixels

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Preserving Photoshop transparency

- Must be a .psd file format
- Place the original Photoshop file, not tiff or other format

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Graphics capabilities

- Images can be
 - Inline - part of text block
 - In their own graphics frame
 - Compound - across multiple graphics frames
 - Within text that has been converted to outlines
- Graphics frames can have
 - Drop Shadow
 - Feathered edges
 - Rounded corners
- Use the direct selection tool to select graphics within frames

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- Use selection tool on a graphics frame
 - Apply a fill
 - Colour or tint a grayscale image
May not be advisable if sending to an outside print bureau
 - Duotone using Selection tool on Frame and Direct Selection Tool on Graphic
- Link graphics to your InDesign file and ensure that they are always available for printing and when handing in work!