**Digital Graphics Course**

**Bitmap/Raster Graphics and Vector Graphics and File Formats**

A bitmap/raster image is a digital image which consists of dots or pixels. The range of colors available for each pixel in the image varies depending on the image and can be adjusted to determine the look of the image. The dimensions or number of dots in an image can also determine the quality of the image. Common raster file formats include windows Bitmap (.bmp), Graphic Interchange Format (.gif), Joint Photographic Experts Group (.jpg), Tagged Image File Format (.tiff) and Portable Network Graphic (.pang). Some common raster graphic editing applications include Photoshop, Fireworks, Corel Paint Shop.

A vector image is made up of geometric objects such as lines, curves and polygons. Many vector image formats are specific to certain vector image editing applications such as Illustrator (.ai) and Corel Draw (.car). Some applications, such as Flash, also rely heavily on vector graphics.

The following table summarizes some of the differences between raster and vector graphics:

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| Raster Graphics | Vector Graphics |
| * Good for complex artwork and realistic images such as photos | * Good for simpler artwork such as diagrams and logos |
| * Large file sizes since information is stored about thousands of pixels | * Smaller file sizes as only information about several shapes is being stored |
| * Quality can decrease with resizing and editing | * Can be simpler to edit |
| * Common on the web | * Common on the web in Flash animation |

Some raster image editing applications, such as Photoshop, also allow for limited vector editing. However, for anything more than just basic vector editing, it is better to use a more suitable application, such as Illustrator.