

## *Artwork - The secret to a successful Print Job*

*The title might be obvious but in a computerised world, the 'how to' create or select the right artwork to get a quality print result is often not fully known nor understood.*

*Computer files come in 2 basic types - **Bitmaps** files or **Vector** files. Each has its place in achieving a print, and matching the type of electronic file with the type of file suitable for a specific printing process is key to achieving a successful print job.*

### *Bitmaps files.*

*The pictures taken with a digital camera are readily recognised as bitmaps (pixels). When the image is enlarged, the appearance of the file is a compilation of coloured squares which viewed from a distance provide a quality picture however when viewed as highly magnified become a blur of squares which are not suitable for some printing processes. Limitations of bitmap files are listed on the comparison chart following.*

### *Vector files.*

*Vector files are usually artwork that has been created by an artist or art studio and the elements of the artwork are smooth lines defining each colour, object and text. The sharpness of the image ensures that the final print quality can also be sharp and defined as well as allowing the print company to easily provide colour separations and thus keep costs to a minimum. Advantages of vector files are listed on the comparison chart.*

### **BITMAPS**

Bitmaps (pixels) graphic files are fixed files.

- \* No colour changes
- \* No colour separations
- \* No editing of text or graphics
- \* Retain all the characteristics as saved

Uses:

- \* Files with specific suffixes are usable only in programs that accept that suffix...  
eg. Publisher will allow graphics which are WMF , JPEG...but will not read some other graphics types

BMP (Windows Bitmap)  
TIF (TIFF Bitmap)  
JPG (JPEG Bitmap)  
GIF (Compuserve Bitmap)  
PSD (Adobe Photoshop)  
CGM (ComputerGraphicMetafile)  
WMF (WindowsMetafile)  
PCX (Windows Paintbrush)

### **VECTOR**

Vector graphics are layered & flexible files.

- \* Colours can be changed
- \* Colours can be separated
- \* Editing of all text and graphics
- \* All the characteristics can be changed

Uses:

- \* Files are used to prepare artwork with various colours
- \* Colour separations are produced for all printing processes
- \* Line values can be changed to achieve high quality reproductions.

EPS (Adobe Illustrator)  
AI (Adobe Illustrator)  
PDF (Adobe Acrobat)  
CDR (CorelDRAW)  
CMX (CorelExchange)  
SVG (ScalableVectorGraphics)  
DWG (AutoCAD)  
DXF (AutoCAD)

## ***Some Common Artwork Terms and Definitions***

### **Spot Colour:**

*Spot colours are the use of specific colours placed in various 'spots' on the product being printed.*

#### ***Specifying Spot Colour Printing:***

*Spot colours are defined by colour codes which are universally known and therefore allow for printing to be done anywhere to a specific colour standard.*

#### ***Most Common Colour Standard is:***

**PMS:** *Pantone Matching System - comes in two selections - Coated for glossy paper & Uncoated for matt paper. The colour is usually followed by a C or U*

### **Process Colours:**

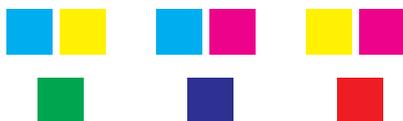
*Process colours refers to printing that is achieved by using four translucent colours which when blended achieve many shades of color - a photographic look. This process is most commonly called CMYK.*

#### **CMYK:**

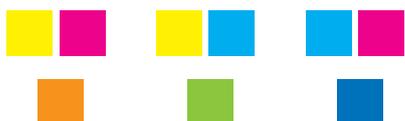
<b>C - Cyan</b>	<i>Also called Process Blue</i>
<b>Y - Yellow</b>	<i>Mid Yellow</i>
<b>M - Magenta</b>	<i>Deep Red</i>
<b>K - Black</b>	<i>Transparent Black</i>

### ***Examples of CMYK Colours***

#### ***100% of Each:***



#### ***100% + 50%:***



## *Artwork Terms and Definitions*

### Bitmaps:

*Bitmap files when viewed by magnification are a collection of square pixels which can be described as having a saw tooth edge. For some printing processes these files can be satisfactory and need to be printed as a black and white image to allow the accurate preparation of film or plate which is the next step in the printing process.*

*If the image has been produced in colour, difficulties will occur in film preparation as the edges of the colour blur with the background resulting in an inferior print quality.*



### Vector:

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*Vector files have smooth edges and when printed will maintain the smooth finish and reproduce as a sharp quality image.*

*Vector files are easily corrected or adjusted where necessary to achieve the best quality printing.*

*Our printing process requires that we include a screen over the artwork and this is most easily achieved by adjusting a vector file.*

**ZOOM in to appreciate the sharp edges**

### Vignettes:

*Vignettes or gradual shading is included in many graphic designs and an important element in visual communication. This may appear as a shadow effect on text or an image and this is achievable as part of the pad printing process. Embossing and foils printing does not lend itself to this process.*



### Drop Shadow:

**SHADOW**

*A 'drop shadow' is a duplicate of an image which is offset to the original image giving the effect of a shadow.*