

MAKING A GOOD LAYOUT



A Good Layout:

works (helps a reader quickly and easily understand a message)

is well-organized (shows what comes first, second, third, etc.)

is attractive (grabs a reader's attention) to effectively communicate a message.

The Elements of Design

Knowing what the basic elements of design are and how to use them will help you make the right choices to create a good layout:

LINE – any mark connecting any points

SHAPE – anything that has height and width

TEXTURE – the look or feel of a surface

SPACE – the distance or area between or around things

SIZE – how big or small something is

VALUE – the darkness or lightness of an area

COLOUR – the ultimate tool for symbolic communication

Basic Principles of Design and Layout

To Help Your Layout Function:

How it works:

Determine the piece's main message and plan your layout around it (e.g. choose a photo that supports that image)

Size the piece to fit its use. (e. g. if it is a brochure, make it a size that can be easily held and filed)

Keep in mind where the piece will be seen. (e. g. a magazine's title should be easily seen when it is in a rack)

Keep your target audience in mind when sizing photos and choosing type sizes. (e. g. make everything larger and easier to see the audience is older)

Choose a light coloured paper and a dark ink if the piece will have to be copied on a photocopier.

Make sure that logo is clear and readable at all the sizes it will be used.



How to organize:

Use different sizes of type. (e. g. headlines are bigger than subheads)

Put colours behind an important area of information.

Use rules to separate information into groups.

Change the weight of the type. (e. g. semi-bold stands out, but bold *really* stands out)

Leave white area around information.

Pick the best location. (e. g. the upper left corner is usually read first)

Put pictures next to important copy. (e. g. they attract the eye and reinforce the message)

Put type in a box or give it an interesting shape.

Call out items by putting bullets on front of them.

Use different coloured or reversed type to separate and emphasize.



How to attract:

Enlarge a photo of something small.

Surround a very small picture or bits of type with a lot of open space.

Choose bright colour when the piece will be viewed in a grey environment, such as a text-heavy magazine.

Use a solid black area or a large white area for a newspaper ad.

Crop an image in an unusual way. (e. g. show an eye, not a whole face)

Use very large type for a thought-provoking or humorous headline.

Make the piece a different size and shape from other similar pieces.

Choose a paper with an interesting, noticeable texture or colour.

Set important information in an atypical way, e.g. set a headline on a curve or try a script font or face)



Does it work? Is it organized? Is it attractive? If you can answer “yes” to each, you will know that you have made a good layout – no matter how you did.

Graphics software or image editing software

is a program or collection of programs that enable a person to manipulate visual images on a computer.

Computer graphics can be classified into two distinct categories:

1. STATIC:

- **raster graphics or pixel graphics** (e. g. *Adobe Photoshop*)
- **vector graphics** (e. g. *Adobe Illustrator*)

Many graphics programs focus exclusively on either vector or raster graphics (bitmaps), but there are a few that combine them in interesting ways. It is simple to convert from vector graphics to raster graphics, but going the other way is harder. Some software attempts to do this.

2. DYNAMIC:

In addition to static graphics, there are:

- **animation software**
- **video editing software**

Most graphics programs have the ability to import and export one or more graphics file formats. It also can export files to one or more files.

SOFTWARE

Computer graphics also can be used by other **editing software** such as *Adobe Photoshop*, *CorelDraw*, *Adobe Illustrator*, *Pizap*, *Microsoft Publisher*, *Picasa*, etc.

Other software that can be used is **animation software**,

and **video editor software**, such as *Windows Movie Maker*, etc.

The use of a swatch is a **palette of active colours** that are selected and rearranged by the preference of the user. A swatch may be used in a program or be part of the universal palette on an operating system. It is used to change the colour of a text or image and in video editing.

Vector graphics animation can be described as a series of mathematical transformations that are applied in sequence to one or more shapes in a scene.

Raster graphics animation works in a similar fashion to film-based animation, where a series of still images produces the illusion of continuous movement.

Image file formats

- are standardized means of organizing and storing digital images.

Image files are composed of digital data in one of these formats that can be rasterized for use on a computer display or printer. Once rasterized, an image becomes a grid of pixels, each of which has a number of bits to designate its colour equal to the colour depth of the device displaying it.

An image file format may store data in the formats:

- 1 **uncompressed** (Image file size is positively correlated to the number of pixels in an image and the colour depth of the image.)
- 2 **compressed** (bits per pixel of the image; Images can be compressed in various ways.)
 - **Lossless compression algorithms** reduce file size while preserving a perfect copy of the original uncompressed image.
 - **Lossy compression algorithms** preserve a representation of the original uncompressed image that may appear to be a perfect copy, but it is not a perfect copy.
- 3 **vector** (File size increases only with the addition of more vectors.)

1 FORMATS OF RASTER GRAPHICS EDITORS

These image formats contain various images, layers and objects, out of which the final image is to be composed:

CPT (Corel Photo Paint)

PSD (Adobe Photoshop Document)

PSP (Corel Paint Shop Pro)

2 VECTOR FORMATS

As opposed to the raster image formats above (where the data describes the characteristics of each individual pixel), **vector image formats contain a geometric description which can be rendered smoothly at any desired display size.**

At some point, all vector graphics must be rasterized in order to be displayed on digital monitors. Vector images may also be displayed with analogue CRT technology such as that used in some electronic test equipment, medical monitors, radar displays, laser shows and early video games. Plotters are printers that use vector data rather than pixel data to draw graphics.

2D vector formats

AI (Adobe Illustrator)

CDR (CorelDraw)

PPT (Microsoft PowerPoint)

3D vector formats

AMF - Additive Manufacturing File Format

.blend - Blender

.dwf

.dwg

.dxf

eDrawings

.flt - OpenFlight

VRML - Virtual Reality Modeling Language

3 COMPOUND FORMATS

These are formats containing both pixel and vector data, possible other data, e.g. the interactive features of PDF.

PDF (Portable Document Format)

PostScript, a page description language with strong graphics capabilities

PICT (Classic Macintosh QuickDraw file)

4 STEREO FORMATS

MPO (The Multi Picture Object),(.mpo) format consists of multiple JPEG images (Camera & Imaging Products Association) (CIPA).

PNS The PNG Stereo (.pns) format consists of a side-by-side image based on **PNG** (Portable Network Graphics).

Digital image editing

Layers are used in digital image editing to separate different elements of an image. A layer can be compared to a transparency on which imaging effects or images are applied and placed over or under an image. Today they are an integral feature of image editors.

Layers are available in **Adobe Photoshop**, but today there is a wide range of other programs (They represent a part of picture, either as pixels or as modification instructions).

In graphics software, a layer is the term used to describe the different levels at which you can place an object or image file. Layers can be partially obscured allowing portions of images within a layer to be hidden or shown in a translucent manner within another image, or you can use layers to combine two or more images into a single digital image. For the purpose of editing, working with layers allows you to go back and make changes within a layer as you work.

Layer (basic)

The standard kind of layer is called simply "Layer" in most programs. It contains just a picture which can be superimposed on another one. The picture can cover the same area as the resulting picture, just a part of it, or, in some cases, a bigger part than the final picture.



The blue sky used as background layer.

In this picture the top layer has a drop shadow, a red colour overlay of 40%, a gradient overlay from red to yellow of 20% opacity, and a slight bevel effect.

The top layer (the bird) is partially transparent, so the background clearly can be seen through its wing.

In a high program like Adobe Photoshop, a basic layer may have more than a hundred different possible settings. Two Layers can blend using one of several modes which result in different light and colour combinations.

ADJUSTMENT LAYER

An adjustment layer typically applies a common effect like brightness or saturation to other layers.



An example of colour adjustment using raster graphics editor

Colour adjustments



More examples of colour adjustment using raster graphics editor

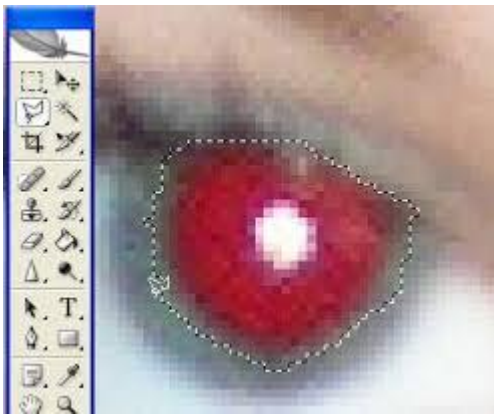
The colour of images can be altered in a variety of ways. Colours can be faded in and out, and tones can be changed using curves or other tools. The colour balance can be improved, which is important if the picture was shot indoors with daylight film, or shot on a camera with the white balance incorrectly set. Special effects, like sepia tone and gray scale, can be added to an image.



In addition, more complicated procedures such as the mixing of colour channels are possible using more advanced graphics editors.

The red-eye effect

The red-eye effect, which occurs when flash photos are taken when the pupil is too widely open (so that light from the flash that passes into the eye through the pupil reflects off the fundus at the back of the eyeball), can also be eliminated at this stage.



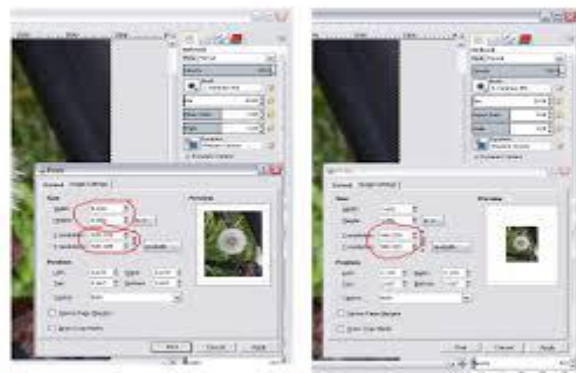
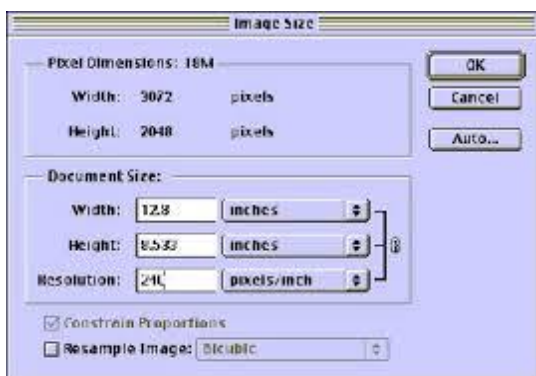
Printing



Control printed image by changing pixels-per-inch

The pixels-per-inch (ppi)

Controlling the print size and quality of digital images requires an understanding of the pixels-per-inch (ppi) variable that is stored in the image file and sometimes used to control the size of the printed image. Within Adobe Photoshop's Image Size dialog, the image editor allows the user to manipulate both pixel dimensions and the size of the image on the printed document. These parameters work together to produce a printed image of the desired size and quality. Pixels per inch of the image, pixel per inch of the computer monitor, and dots per inch on the printed document are related, but in use are very different.



Width and height in inches

The Image Size dialogue

The Image Size dialogue can be used as an image calculator of sorts. For example, a 1600×1200 image with a resolution of 200 ppi will produce a printed image of 8×6 inches. The same image with 400 ppi will produce a printed image of 4×3 inches. Change the resolution to 800 ppi, and the same image now prints out at 2×1.5 inches.



All three printed images contain the same data (1600×1200 pixels), but the pixels are closer together on the smaller prints, so the smaller images will potentially look sharp when the larger ones do not. The quality of the image will also depend on the capability of the printer.

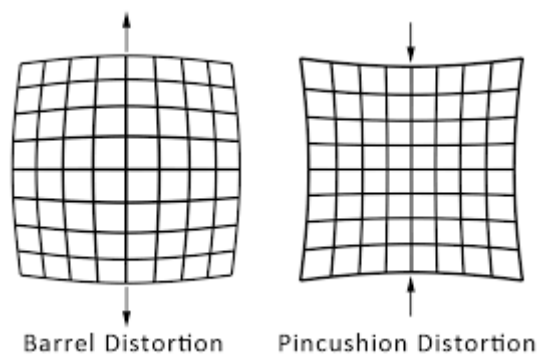
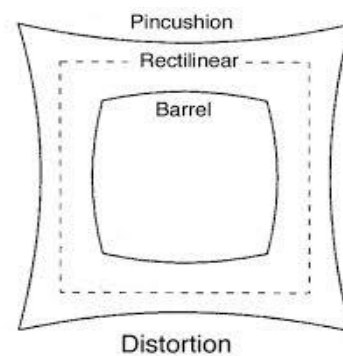
Distortions

= an aberration of a lens or optical system in which the magnification varies with the lateral distance from the axis.

Origin of terms

The names for these distortions come from familiar objects which are visually similar.

- In **barrel** distortion, straight lines bulge *outwards* at the centre, as in a barrel.
- In **pincushion** distortion, corners of squares form elongated points, as in a cushion.
- In **moustache** distortion, horizontal lines bulge up in the centre, then bend the other way as they approach the edge of the frame (if in the top of the frame), as in curly handlebar moustaches.

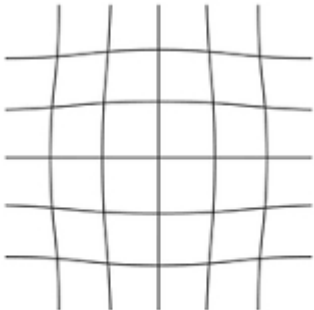




Barrel distortion



Pincushion distortion



Mustache Distortion



Types of digital photo manipulation

The term *image editing* encompasses everything that can be done to a photo, whether in a darkroom or on a computer. **Photo manipulation** is often much more explicit than subtle alterations to colour balance or contrast and may involve overlaying a head onto a different body or changing a sign's text, for examples. Image editing software can be used to apply effects and warp an image until the desired result is achieved. The resulting image may have **little or no resemblance to the photo** (or photos in the case of compositing) **from which it originated**. Today, photo manipulation is widely accepted as an art form.

There are several subtypes of digital image-retouching:

Technical retouching

Manipulation for photo restoration or enhancement:

- adjusting colours
- contrast
- white balance (i.e. gradational retouching)
- sharpness
- noise
- removing elements or visible flaws on skin or materials, ...)

Creative retouching

Used as an art form or for commercial use to create more sleek and interesting images for advertisements.

Creative retouching could be **manipulation for fashion, beauty or advertising photography**.

One of the most prominent disciplines in creative retouching is **image compositing**. Here, the digital artist uses multiple photos to create a single image. Today, 3D computer graphics are used more and more to add extra elements or even locations and backgrounds. This kind of image composition is widely used when conventional photography would be technically too difficult or impossible to shoot on location or in studio.



GLOSSARY

ad, advert, advertisement	inzerát, reklama
adjust, adjustment	upraviť, upravovanie
alternation	úprava, premena, zmena, striedanie
axis	os, súradnica
background	pozadie, podklad
barrel	sud
blend	splynúť
bulge	vyduť, výduť v obraze
call out	vyvolať
capability	schopnosť, kapacita
colour balance	farebná vyrovnanie
colour depth	hĺbka farby
coloured and reversed type	farebné a stranovo obrátené písmo
composite, image compositing	zložiť, skladať
compress	komprimovať, zhustiť
corelate	usúvzťažniť, korelovať
crop	výrez, výsek, vyrezať, osekať
curve	krivka, ohyb, oblúk
designate	určiť, označiť
determine	určiť, stanoviť, vymedziť
distortion	skreslenie, skomolenie, pretvorenie
drop shadow	tieň
elongated point	pretiahnutý, predĺžený bod
encompass	obklopiť, zahrnúť, obostrieť
enlarge, enlargement	zväčšiť, zväčšenie
explicit	explicitný, jasný, jednoznačný
fade in, fade out	roccoziemať, zatmievať
flash photo	foto urobené s bleskom
flaw	chyba
gradient overlay	prekrývanie pod nejakým uhlom
handlebar	turecké, oficierske, dôstojnícke (fúzy)
Image Size dialogue	
image-retouching	retušovanie obrázka
impose	uložiť
inch	palec, miera 2,54 cm
involve	zahrnovať, obsiahnuť
lateral	priečný
layout	úprava
lens	šošovky
line	čiara
magnification	zväčšenie
moustache	fúzy
obscure	zakryť, zatemniť, neurčitý, neviditeľný, tmavý, nejasný
occur	vyskytovať sa, objaviť sa, stať sa

opacity	nepriezračnosť, nepriesvitnosť, opacita
overlay	prekrývanie
pincushion	iheľnica
ppi pixel-per-inch	
preserve	zachovať si, udržať si
pupil	zrenica
rack	rám, ramček
rectilinear	priamkový, priemočiary
render, rendering	vykresľovať, vykresľovanie, rendering
resemblance	podobnosť
resolution	rozlíšenie
setting	prostredie
shape	tvar
sharp, sharpness	ostrý, ostrosť
size	formátovať, určiť rozmery
sleek image	lesklý, prúdnicový
slight bevel effect	mierny sklon
smoothly	hladko, plynule
solid	priestorový, trojrozmerný
stand out	vyčnievať, kontrastovať,
still image	statický obraz
subtle	jemný
swatch, colour swatch	ukážka, plôška, vzorkovnica farieb
text-heavy magazine	časopis s textami
texture	textúra povrchu
translucent	priehľadný, priesvitný
transparency	priehľadnosť, priesvitnosť
value	kvalita, hodnota
warp, warping	osnova, osnovanie textu
width	šírka

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