

Unit 3.2: Digital Imaging

Digital imaging or digital image acquisition is the creation of digital images, such as of a scene or of the structure of an object.

The term is often assumed to imply or include the processing, compression, storage, printing, and display of such images.

But, before going deeper, let us discuss the basic concept of colour.

Colour is an important component of digital image. So, pick the correct colors and blend two or more colors for your multimedia project.

But the process needs you to try time and again until you get the perfect blend of colours.

On the computer screen, a color is created by combining colored light sources in three primary colors: red, green, and blue (RGB).

RGB is an additive color mode, which means you add the red, green, and blue light into your monitor to get all the colors. The more light you add, the brighter everything gets.

This colour is produced on for cathode ray tube (CRT), liquid crystal (LCD), and plasma displays monitors.

A colour is created from a combination of coloured light sources in three primary colours (RGB).

RGB is the format for video monitors, projection, and digital photography.

Paint program uses RGB to create the colors on your monitor.

On the other hand, the printer uses three primary colors: cyan, magenta, and yellow (CMYK) plus K (Black).

In RGB Combination (R, G, B) format, the numbers in parentheses indicate the amount of red, green, and blue (in that order) used to create each of the colors.

Using the 24-bit RGB (red, green, blue) format or model, you specify a color by setting each amount of red (R), green (G), and blue (B) to a value in a range from 0 to 255.

For example, if the number is (255,0,0), then the perceived colour is red. If all RGB value is none (0,0,0) then the perceived colour is black.

If all RGB value is full (255,255,255) then the perceived colour is white.

With this combination, theoretically we have 16,777,216 total photorealistic number of different colors!

