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Tugas 4 Pengantar multimedia

14.3 Image formats

Just as there are many audio formats, there are many image formats, and in this section we will give a superficial description of some of them. Before we do this however, we want to distinguish between two important type of graphics representation.

14.3.1 Raster graphics and vector graphics

At the beginning of this chapter we saw the everything that is printed on a computer monitor or by a printer consist of small dots. This is a perfect match for digital images which also consist of a large number of small dots. However as we magnify an image, the dots in the image become visible as is evident in figure 14.2

Fact 14.16. In vector graphics a graphical image is represented in terms of mathematical primitives like lines and curves, and can be magnified without any loss in quality. In raster graphics, a graphical image is represented as a digital image, i.e., in terms of pixels. As the image is magnified, the pixels become visible and the quality of the image deteriorates.

14.3.2 Vector graphics formats

The two most common vector graphics formats are Postscript and PDF which are formats for represented two-dimensional graphics. There are also standards for three-dimensional graphics, but these are not as universally accepted.

Post Script. Postscript is a Programming language developed by adobe system in the early 1980s. Its a principal application is Representation of page image, i.e information that may be displayed on monitor or printed by a printer.

14.3.3 Raster graphics formats

There are many formats many for representing digital image we have already mentioned Postscript and PDF; here we will mention a few more which are Pure image formats (no support for vector graphics).

Before we describe the formats we need to understand a technical detail about representation of colours. As we have already seen, in most colours images the colours of a Pixels is represented in term of amount of red, green and blue (r, g, b). Each of these number is usually represented by eight bits and can take integer values in the range 0 - 255. In other words, the colour information at each pixel requires three bytes. When colours image and monitor became commonly available in the 1980s, the file size for a 24 bit images file was very large compared to the size of hard drive and available computer memory.