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Tugas Pertemuan 3 Pengantar multimedia

14.2.2 Extracting the different colours

If we have a colours image $p = (r_i, j, g_i, j, b_i, j)$ it is often useful to manipulate the three colours components separately as the three images

$$P_r = (r_i, j)_{i,j=1}^{m,n}, \quad P_g = (g_i, j)_{i,j=1}^{m,n}, \quad P_b = (b_i, j)_{i,j=1}^{m,n}$$

These are conveniently visualised as -grey-level images as in figure 14.5

14.2.3 Converting from colours to grey level

If we have a colours image we can convert it to a grey-level image. This means that at each point in the image we have to replace the three colours values (r, g, b) by a single value p that will represent the grey level. If we want the grey-level image to be a reasonable representation of the colour image, the value p should somehow reflect the intensity of the image at the point. There are several ways to do this.

It is not unreasonable to use the largest of the three colours components as a measure of the intensity i.e. to set $p = \max(r, g, b)$. The result of this can be seen in figure 14.6a.