Ubua vera

16/sci01/048

Csc 406

VISUAL PERCEPTION AND FACTORS ASSOCIATED WITH VISUAL PERCEPTION

Visual perception is the ability to perceive our surroundings through the light that enters our eyes. The visual perception of colours, patterns, and structures has been of particular interest in relation to graphical user interfaces (GUIs) because these are perceived exclusively through vision. An understanding of visual perception therefore enables designers to create more effective user interfaces.

FACTORS ASSOCIATED WITH VISUAL PERCEPTION

1. Perceiving brightness: Brightness is in fact a subjective reaction to level of light. It is affected by luminance, which is the amount of light emitted by an object. The luminance of an object is dependent on the amount of light falling on the object’s surface and its reflective prosperities. Contrast is related to luminance: it is a function of the luminance of an object and the luminance of its background.

Although brightness is a subjective response, it can be described in terms of the amount of luminance that gives a just noticeable difference in brightness. However, the visual system itself also compensates for changes in brightness. In dim lighting, the rods predominate vision. Since there are fewer rods on the fovea, object in low lighting can be seen easily when fixated upon, and are more visible in peripheral vision. In normal lighting, the cones take over.

1. Perceiving colour:. Colour is usually regarded as being made up of three components:
2. Hue: Hue is determined by the spectral wavelength of the light. Blues have short wavelength, greens medium and reds long. Approximately 150 different hues can be discriminated by the average person.
3. Intensity: Intensity is the brightness of the colour.
4. Saturation: Saturation is the amount of whiteness in the colours. The eye perceives colour because the cones are sensitive to light of different wavelengths.