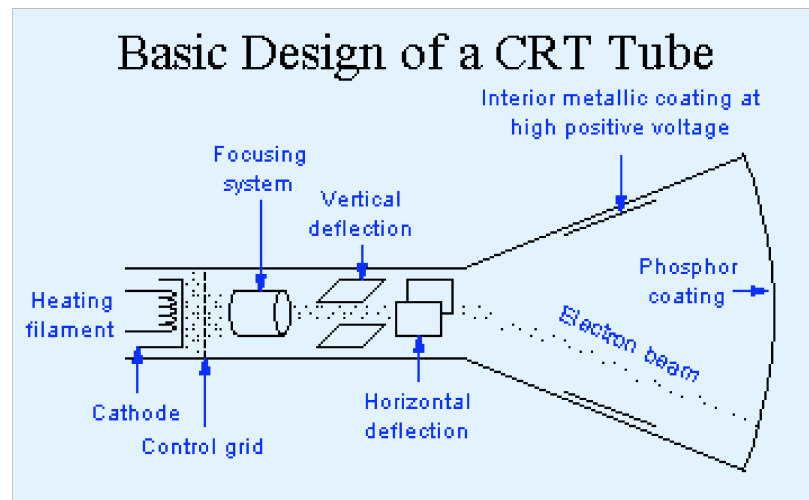


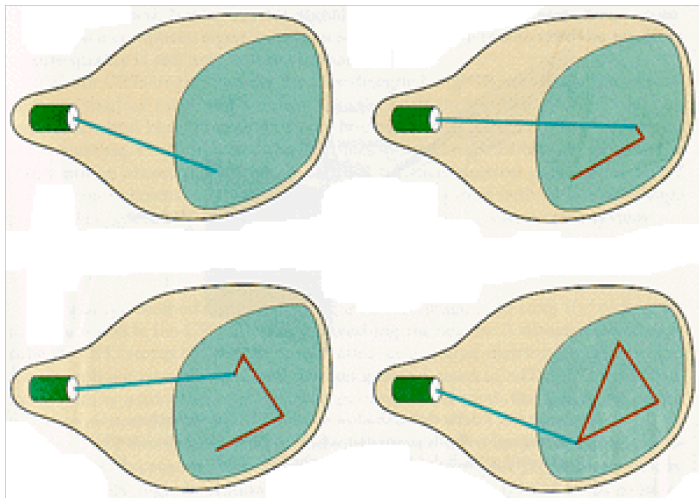
Display

CMSC 435/634

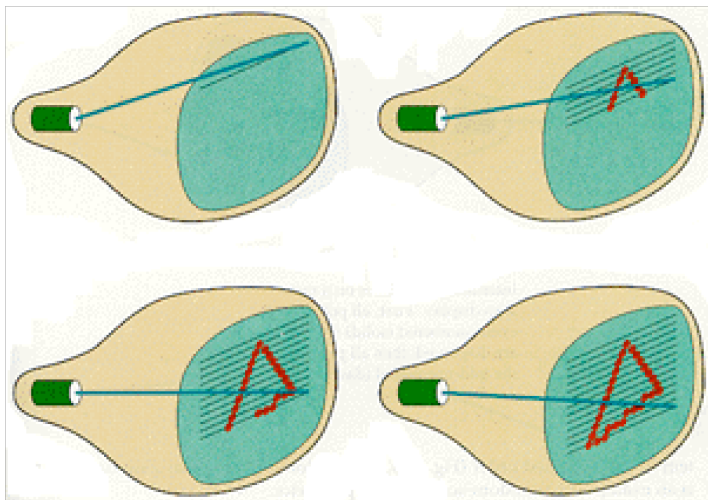
CRT Tube



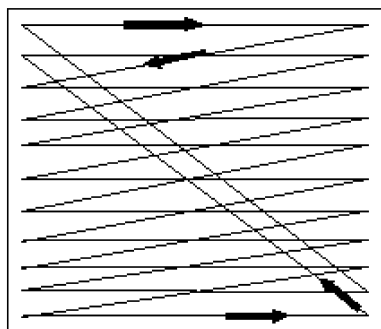
Random Scan



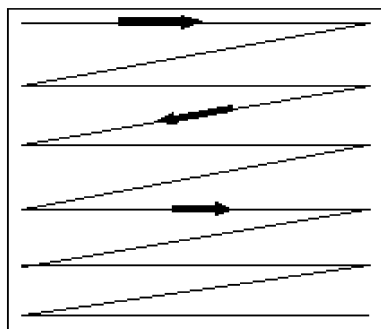
Raster Scan



Interlace Options



Interlaced



Non-Interlaced

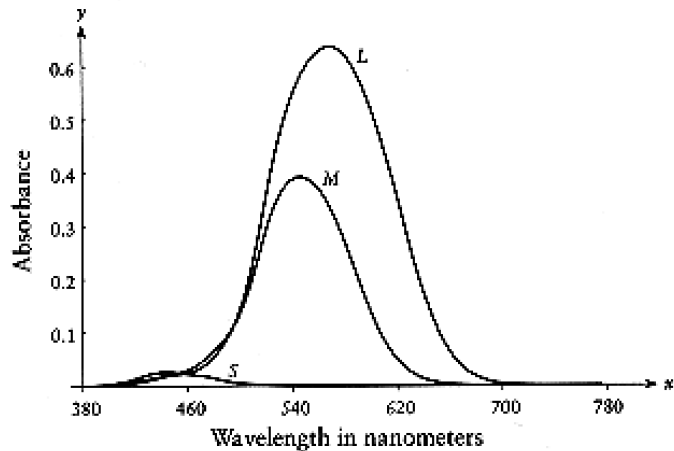
Light

- ▶ Visible Range: 390-700nm
- ▶ Luminance has large dynamic range
 - 0.00003 Moonless overcast night sky
 - 30. Sky on overcast day
 - 30000. Sky on clear day
 - 16,000. Snowy ground in full sunlight
- ▶ Actual colors result from spectral curves
 - ▶ dominant wavelength, hue
 - ▶ brightness, lightness
 - ▶ purity, saturation

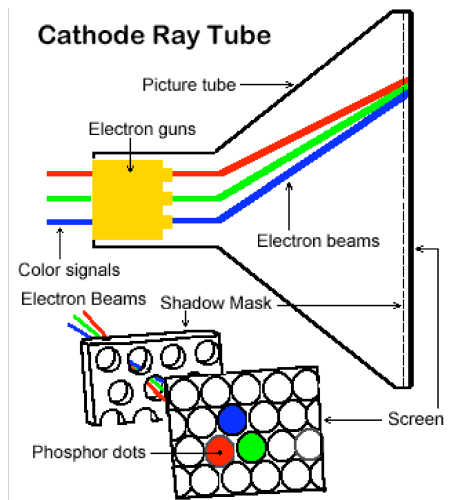
Physiology

- ▶ Rods
 - ▶ active at low light levels (scotopic vision)
 - ▶ only one wavelength sensitivity function
- ▶ Cones
 - ▶ active at normal light levels
 - ▶ three types: sensitivity functions with different peaks

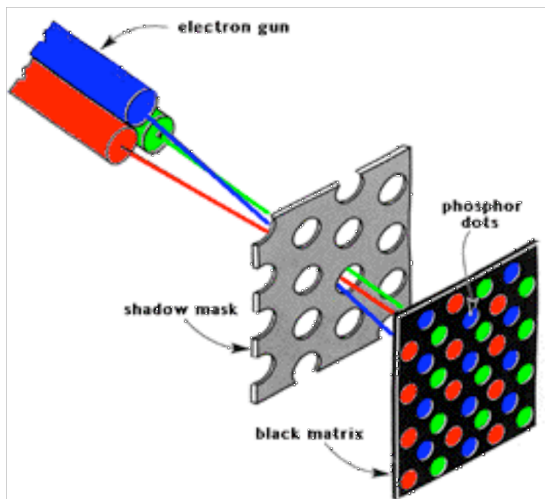
Spectral Sensitivity



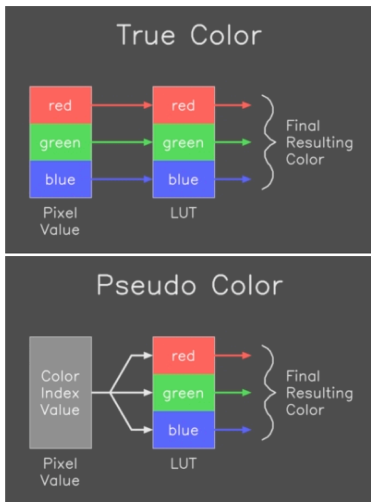
Color CRT



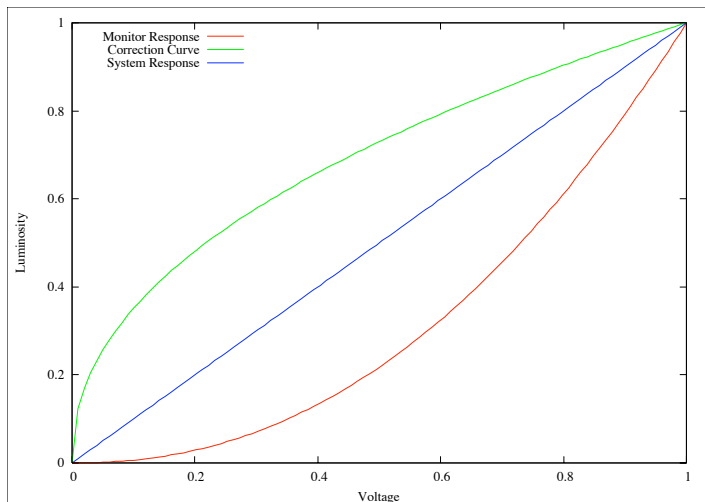
Shadow Mask



Color Options



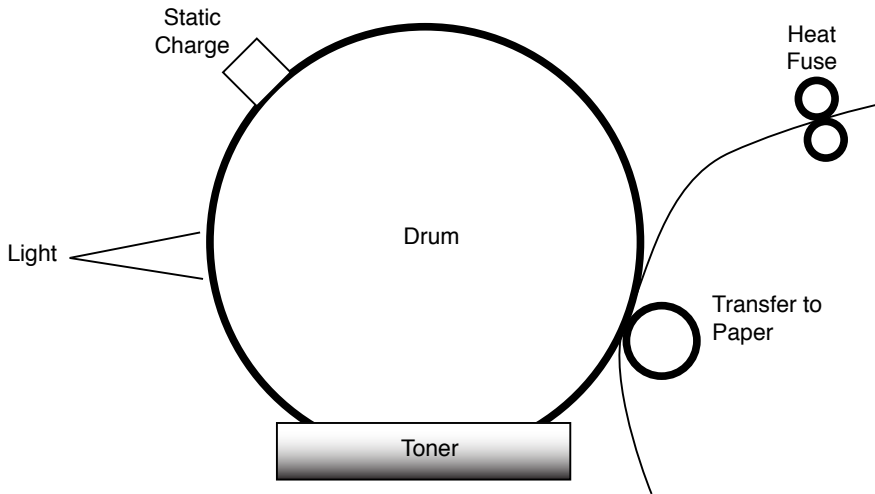
Gamma Curve



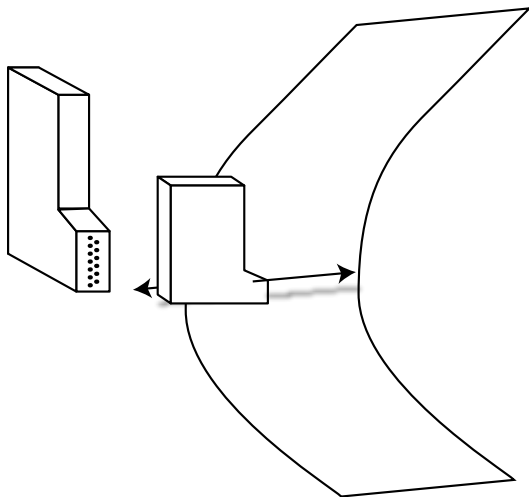
Gamma Correction



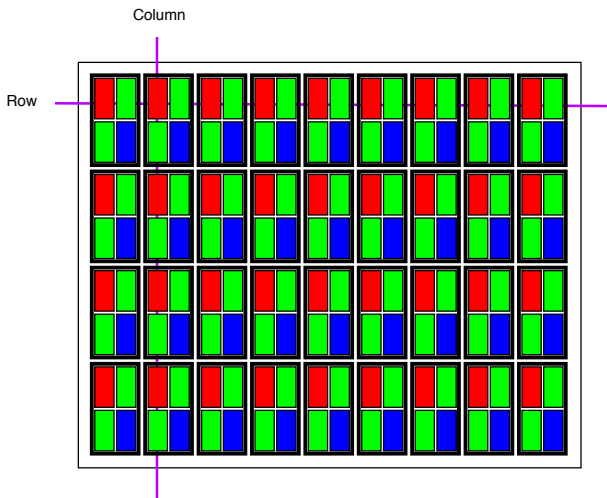
Laser Printer



Ink Jet Printer



LCD



General Raster Display

