

EC-301 Computer Graphics

Lecture Slides- Wk2:

- Overview of Graphics Systems

Overview of Graphics Systems

- **Video Display Devices**

refresh cathode-ray tubes; raster-scan displays; random scan displays; color CRT monitors; flat-panel displays; 3D viewing devices; stereoscopic & virtual-reality systems

- **Raster Scan Systems**

video controller; raster-scan display processor (aka graphics controller)

□ Video Display Devices

Refresh Cathode-Ray Tubes:

- Video monitors, primary output devices, are based on CRT design or solid-state technologies
- Spots of light produced on phosphor-coated screen by directing electron beams
- CRT vs. refresh CRT
- Magnetic Deflection CRTs vs. Electrostatic Deflection CRTs
- Phosphor colors and *persistence*, CRT's *resolution* and *high-definition* systems

Cathode-Ray Tube

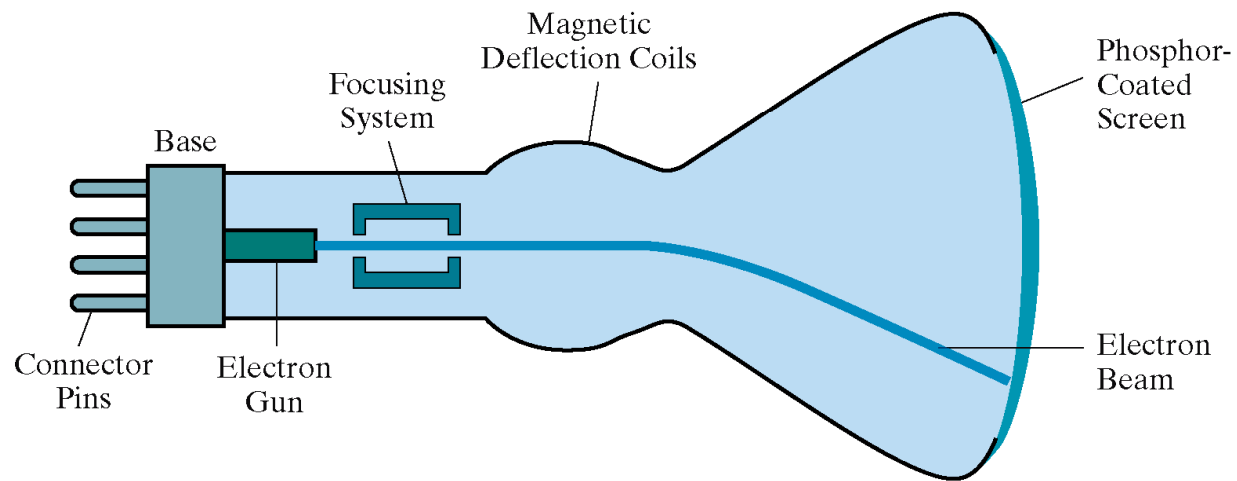
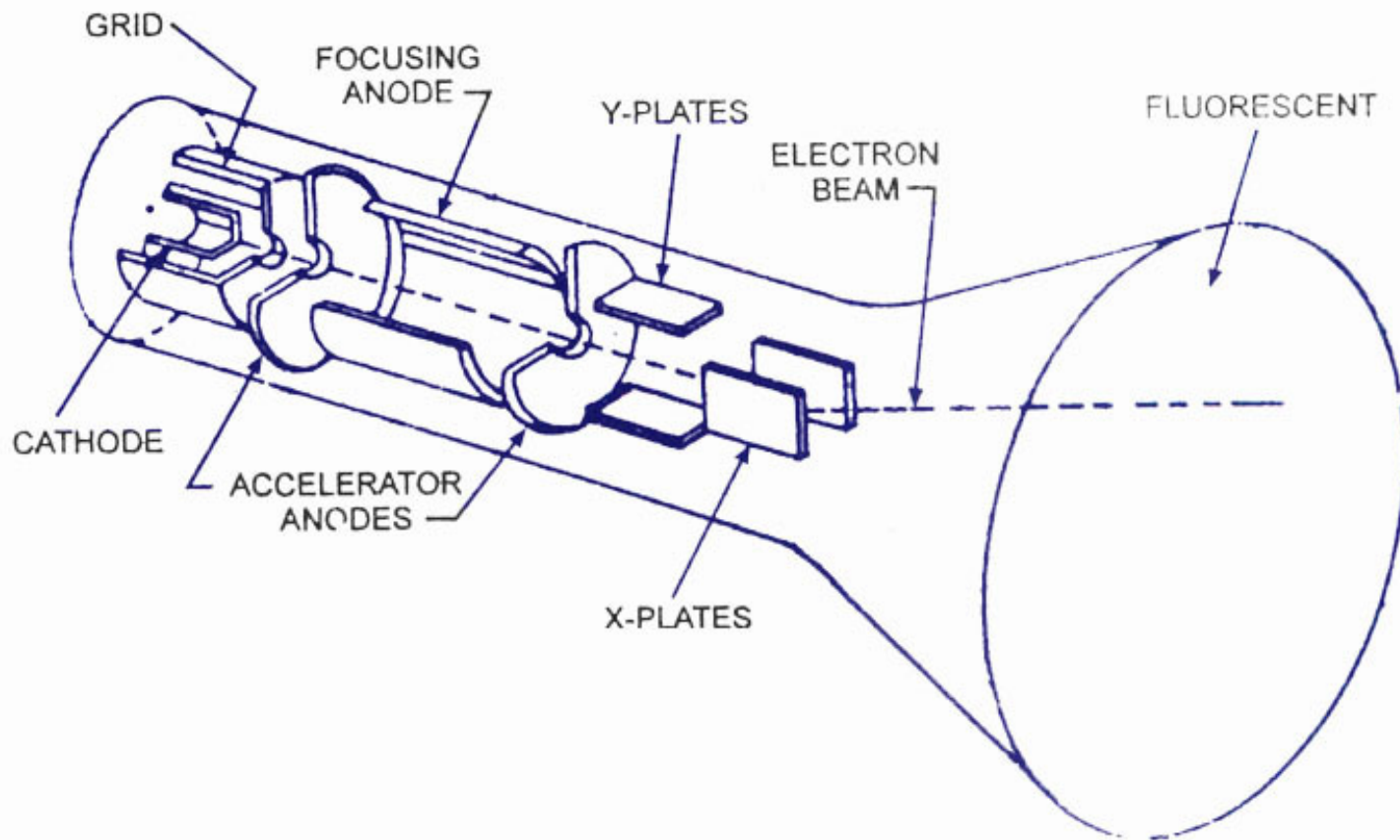


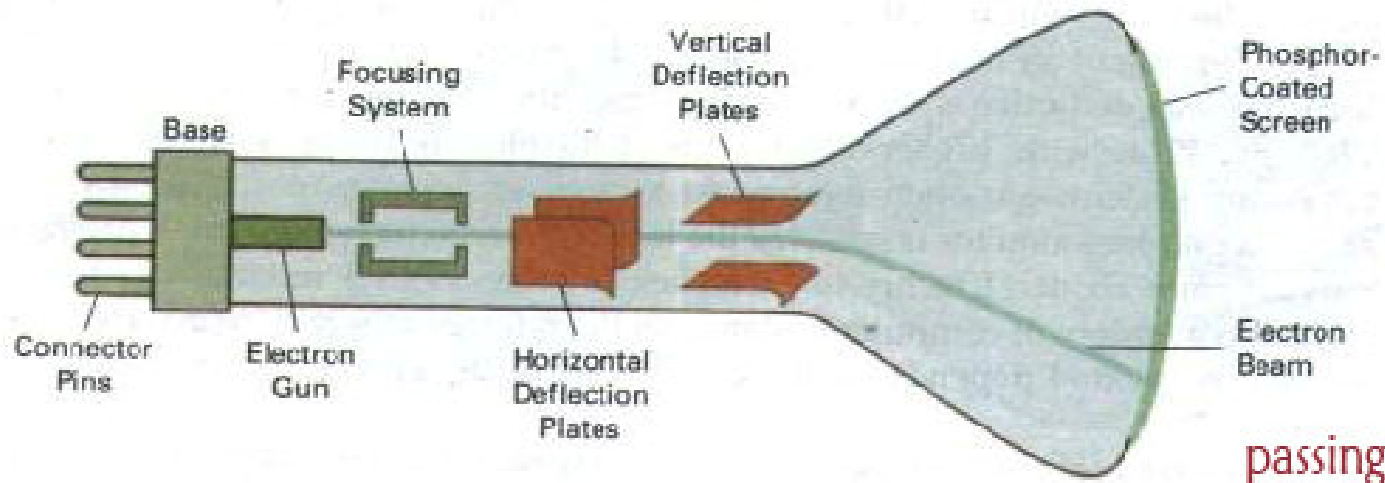
Figure 2-2
Basic design of a magnetic-deflection CRT.
(H&B Book, 3rd Ed)

Cathode-Ray Tube



Cathode Ray Tube
(www.circuitstoday.com)

Cathode-Ray Tube



Electrostatic deflection of the electron beam in a CRT

Suggested Reading:

Ch 2— Computer Graphics with OpenGL, 3rd Ed,
Donald Hearn & M. Pauline Baker, Prentice Hall, 2004.

Next Week:

Overview of Graphics Systems (Cont.)
OpenGL: Basic Syntax, Libraries etc