

ECE/CS 412

Introduction to Computer Graphics

Class 11

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Advanced Graphics Lab



Announcements

- Mid-term exam one week from today (closed book, note, will cover everything from the first half of the semester)



Last time

- 2-D and 3-D transformations



Today

- View and projection transformations

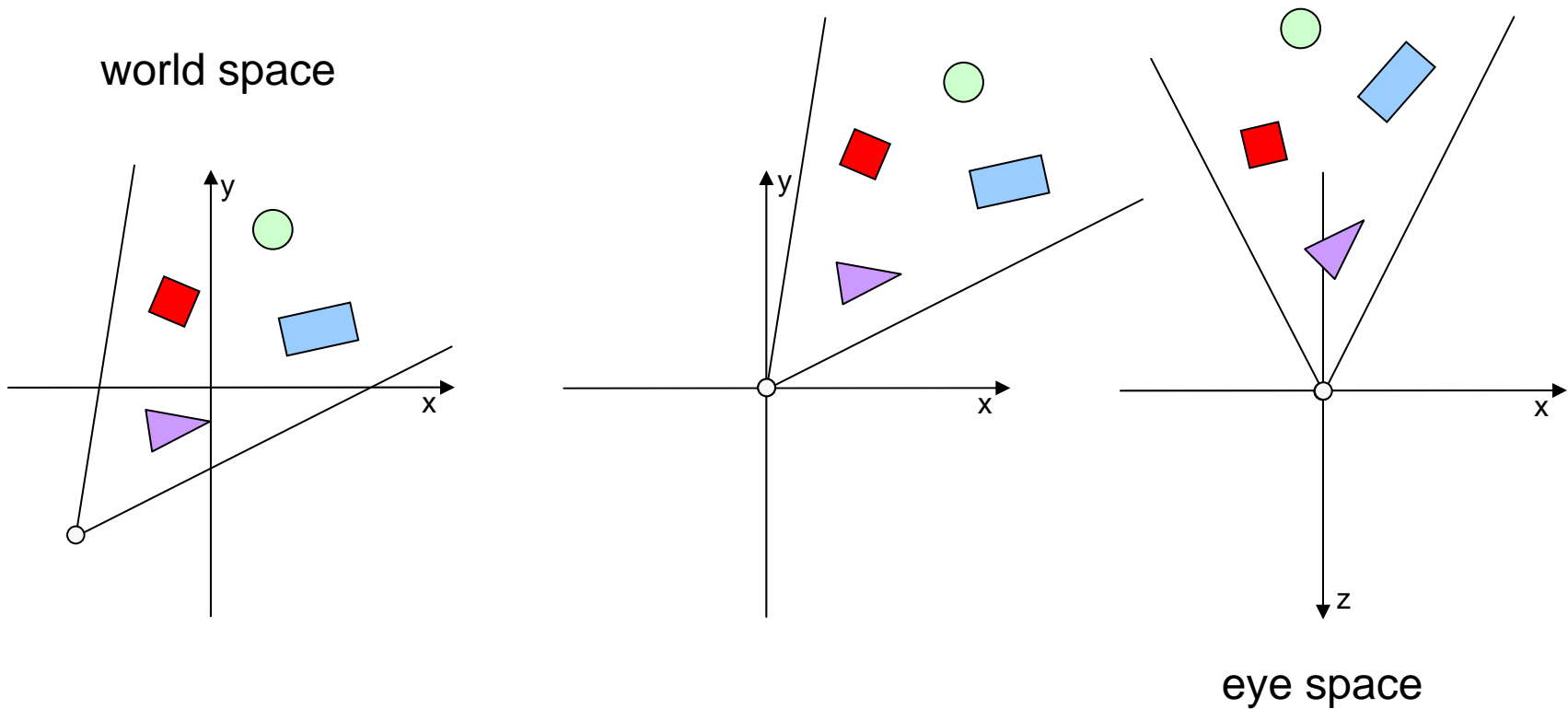


First normal transformation

- Derivation

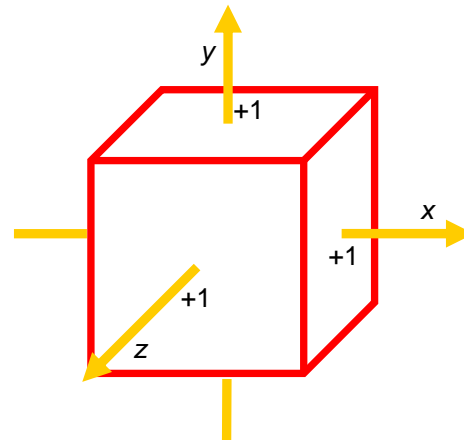


We have now moved to eye space



Projection transformation

- Mapping a volume in eye space to the *canonical view volume*, defined by the axis-aligned cube with sides at ± 1



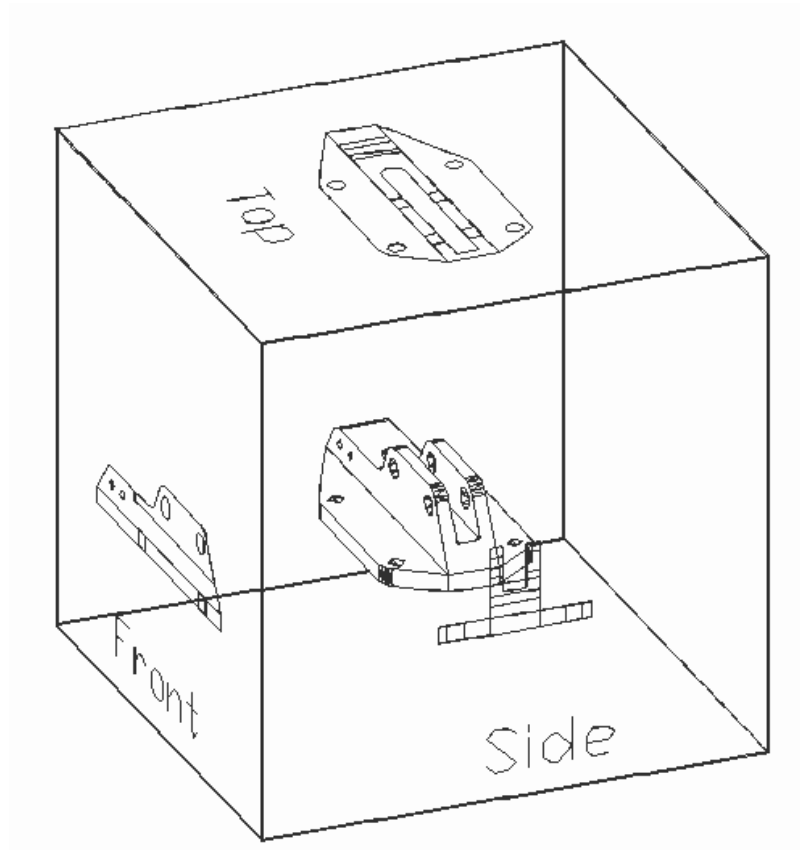
canonical view volume

Projections

- There are two main kinds of projective transformations:
 - Orthographic
 - Perspective

Orthographic projection

- Often used in CAD



Orthographic projection

- Derivation of orthographic projection matrix