Assignment 0: Animation Framework

Assignment #0

- Goal:
  - Create the framework and testbed for the animation techniques to be explored during the semester.
  - In short:
    - The basics for creating an animation

Assignment #0

- Use the toolkit / API of your choice:
- Real-time
  - Unity3D
  - Unreal Engine
  - OpenGL
  - WebGL
  - Three.js
  - others

Assignment #0

- Assignment:
  - Animate a simple object (I.e. cube or teapot) using a mathematical expression to describe motion.
  - 20 second animation
    - X position = 5t (t is time in sec)
    - Y position = 5t (t is time in sec)
    - Z position = constant
    - Rotation around Y axis = 18t (t is time in sec) – in degrees
    - Rotation around X and Z axis = 0.

Assignment #0

- Camera
  - Place camera for a “straight-on” view of object
  - Camera position / lookat to remain static.
  - Assure that object does not go outside of view window.

Note on real time animation

- t represents actual time NOT number of display loops generated.
- For real time applications
  - Simulate a constant frame rate
  - Calculate time past since last “update” to determine t.

Questions?

Assignments

- Grading
  - Each assignment is worth 15 points:
    - 3 points – for something that compiles
    - 9 points – for something that runs incorrectly
    - 15 points – for something that runs correctly

    - No bonus for this assignment.

Assignment #0

- Important to get this one right
  - It will be the basis for the remaining assignments!

Submission

- Web page / blog
  - Please set up a Web page or blog where you will post video results of your assignments.
- Submission
  - Email to me indicating URL of web site / blog
  - “video snapshot” posted on blog.

Video capture software

- http://video-capture-software-review.toptenreviews.com/
- Mac:
  - Snapz Pro X
  - http://www.ambrosiasw.com/utilities/snapzprox/
  - $69
- Windows:
  - Fraps
  - http://www.fraps.com/
  - $37
- Windows / Mac
  - SnagIt
  - http://www.techsmith.com/snagit.html
  - $49

Due dates

- Due
  - Monday, September 18th – 11:59pm
- Submission
  - Email with blog URL
  - Video on blog
    - 20 second video showing object moving across the screen.

Questions?

- Next time:
  - Positions, Orientation and Quaternions…(oh my).
  - Particularly…rotation

- Remember,
  - “weekly activity” due on Wednesday