

CIS 636 Interactive Computer Graphics

CIS 736 Computer Graphics

Spring 2011

Lab 1b of 7

Basic 3-D Animation using Adobe Flash and ActionScript

Fri 11 Feb 2011 & Thu 17 Feb 2011

Part 1b due: Wed 23 Feb 2011 (before midnight)

The purpose of this lab exercise is to illustrate the fixed-function graphics pipeline we just went over in lecture, and motivate the theory behind culling and texture mapping with a practical application. This lab will introduce the ActionScript platform and 3-D rendering and animation functions in Adobe Flash 10 and above, and show you an alternate implementation of simple rotation-based animation in the style of the original NeHe tutorials.

This lab assignment is worth a total of 10 points (1%).

Upload an electronic copy of the assignment in PDF form (converted from your word processor, or scanned) to your K-State Online (KSOL) drop box before the due date and time.

References

MacCauley tutorials: <http://www.senocular.com/flash/tutorials/>

ActionScript 3 in Creative Suite (v3): <http://www.senocular.com/flash/tutorials/as3withflashcs3/>

Today's exercise:

- <http://www.senocular.com/flash/source/?entry=774> - documentation
- <http://www.senocular.com/flash/files/3Dspinningearth.as> - source code
- <http://bit.ly/eKxDVD> - ActionScript compiler and Flex v4 IDE
- <http://bit.ly/eezATL> - DataBison tutorial on command-line Flash compiler setup
- <http://en.wikipedia.org/wiki/File:World98.svg> – world map with transparent water

Rotoscoping (glowing lightsabres) - <http://www.senocular.com/flash/source/?entry=756>

Particle fountain: <http://www.senocular.com/flash/source/?entry=763>

1. **(60%) Preparation.** Download the 3Dspinningearth.as file from Senocular.com and install the Flex v4 IDE in order to compile it. Do so and set up the command-line compiler, and test it on 3Dspinningearth.as to get 3Dspinningearth.swf. (Turn in your own compiled version, not the one that is available for download at Senocular.com.)
2. **(40%) Modification of bitmap.** Download one of the world map .png files (500px or 1000px are recommended) from the Wikipedia archive of blank maps (http://en.wikipedia.org/wiki/Wikipedia:Blank_maps) and use it in your Flash application. Turn in the compiled file (e.g., SWF) and a screenshot, lab1b-2.jpg.

A look ahead to MP4: Watch OpenGL Tutorial 3 of 3.

Class Participation (required):

Follow up on the term project topic you posted by Fri 18 Feb 2011 by scheduling an interview during the instructor's office hours.