VIZA 615 – Computer Animation, Spring 2012
Final Project
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TEXAS A&M
U N I V E R S I T Y
DEPARTMENT OF VISUALIZATION

Overview of Projects in General

Each project is designed to move your learning experience and skill level forward. Failure to complete or sufficiently explore components of one project will lead to increased difficulty on the succeeding project. Each project is composed of three parts: analysis, interpretation, and demonstration.

Project Description

Demonstrate a solution to a biomechanical motion representation problem that is uncommon among quadrupeds using 3D computer graphics animation techniques. The solution should include biologically correct form, motion, skin movement, and behavior for the animal depicted. Examples include, but are not limited to: deformations representing muscle and bone behavior during movement; procedural gait generation or gait change control systems; complex behavior animation incorporating a series of actions and responses to an environment; control systems for blending dynamics with key-frame animation; a seamless switching mechanism between separate control hierarchies.

The project will be presented and critiqued in class including participation by the instructor and other class members.

Technical Specifications

The presentation may either be in the form of rendered movies illustrating the results of the project or through a screen capture of demonstration of the technique developed. The size of the presented media must be no smaller than 720 pixels by 486 pixels. The aspect ratio must be between 1.33 and 1.85.

Project Goals

- Define the form, motion, and control issues that contribute to successful representation of believable representation of animals.
- Distinguish between elements of higher versus lower importance in their contributions to animation, control, and/or deformation systems.
- Differentiate between situations more suited to manual control versus procedural or automated solutions.
- Plan an approach to solving an animal motion representation problem through computer graphics techniques.
- Estimate and manage time and computing resources relative to the stated goals within the given timeframe.
- Implement a solution to a biomechanical problem through the use of computer graphics techniques.
- Evaluate and critique your own work and the work of others.

How Success is Measured

The final project is an opportunity to pull together the work accomplished during the semester, add a distinguishing element that makes the project unique, and complete a work that is suitable for presentation to external audiences.

A grade will be determined based upon the following factors:

- The technical difficulty of the solution.
- The suitability of the solution to the problem.
- The visual appeal of the presented work.
- Presentation skills include verbal delivery and adherence to technical specifications.