

Real World Modelling 2011-2012

Problem 5

Problem Overview

Produce a professional demo showing the full range of your physics and simulation skills.

Using OGRE and either Box 2D or Havok, design and implement a playable puzzle game. You can make it 2D (objects' movement and rotation confined to a plane) or 3D (involves significant movements and rotation in all 3 dimensions). Note that it will be much more difficult to obtain a high grade with a 2D project.

Deliverable I: Game Design (5%)

Design Due 9am, Tuesday 21st February 2012.

Design a third person puzzle game in which the character can move around and interact with objects and the environment. These objects are used to solve puzzles necessary to arrive at an exit.

Write a description for the five types of objects you are going to use in your game. Note that to do well in this project, you should choose some objects that demonstrate interesting physics (e.g. destructible objects, a portal gun, a spring based contraption, etc.) One game which you might draw inspiration from is Limbo, which has many excellent ideas for objects and puzzles. See <http://limbogame.org/> for more, and you can also find a complete walkthrough of the game on youtube.

Use a storyboard to sketch out the level design detailing the puzzles that must be solved to complete the level.

Your design will be pitched to the course lecturers on Tuesday and you will be given feedback on it.

Deliverable II: Action Plan (10%)

Draft Uploaded by 1pm, Tuesday 28th February 2012.

Github account setup by 1pm, Tuesday 28th February 2012.

- User stories divided into subtasks estimated in hours
- Conditions of satisfaction for stories
- Should follow the template:
User story|Subtask|Status|Initial estimate|Time spent|Time remaining|Proposed
Deadline| Date Completed
- Burndown chart

User stories can omit that “as a player I want...” and “so that” phrases.

Example:

User story: Player can swing on a rope.

Conditions of satisfaction:

- Rope swings realistically
- Player can grab the rope
- Player can miss the rope if grabs it too early/late
- When player lets go of rope his trajectory is physically realistic

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User stories and tasks must be prioritised (use Google Docs drag and drop) and kept upto date.

Fill in your name and github username [here](#).

Deliverable III: The Build (40%)

Midpoint assessment: 9am, **Friday 30th March 2012**.

Final assessment: 9am, **Tuesday 22nd May 2012**

The latest build needs to be committed to github after each session (you can use svn or git).

Deliverable IV: Demo Video (5%)

Build Due: 5pm, **Monday 21st May 2012**

Deliverable V: Journal (40%)

Initial journal entry due: 12pm, **Tuesday 28th February 2012**.

Due: 9am, **Friday 18th May 2012**

The journal should be accessible on Google Docs. At the end of each week snapshot of action plan, burndown, and latest github commits.

Follow the guidelines at:

<http://glasnost.itcarlow.ie/~obroind/RWM/Guides/Your%20RWM%20Journal.pdf>

Assessment

Assessment will take process and product into account (evidence of regular, frequent sessions will have a significant bearing on your final grade).