

CAS 741: Problem Statement

Game Physics

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Table 1: Revision History

Date	Developer(s)	Change
September 14, 2018	Oluwaseun Owojaiye	Initial draft
September 14, 2018	Oluwaseun Owojaiye	Added problem description

Some aspects of physics are very useful in video game development and most of the popular games on the market today would never be successful without a good physics engine. Game physics libraries are used to simulate physical phenomena in objects e.g collision between two objects in a game. It can be an arduous task in game development to create a game physics library from scratch, and if not included in game products, might result in sub-standard video games. If there are more affordable/free open source game physics library on the market, game developers would be able to include them in their products, producing high quality video games. Chipmunk2D (<https://chipmunk-physics.net/>) is an example of a physics library widely used in 2D physics games, similar to this project.

The purpose of this software is to create a fast, easy to use and portable game physics library for simulation of 2D rigid bodies. This library will be used to simulate how two-dimensional rigid bodies interact with one another when they are acted upon by a force as well as predict the time history of each objects' position and orientation.