

T-Rex in the Jungle

GAME DESIGN DOCUMENT 1.0

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1.Introduction:

The game is set in a forest. The main aim of this game is to learn and implement the various features and techniques of the Panda3D game engine. The goal was to make an immersive game. The game includes features like environment, actors, models and artificial intelligence. The game is also intended to give the user a modest glimpse into the Jurassic age. The inclusion of the T-Rex in the game is hence justified. The game has been modelled on the popular children's pass time "hide and seek". The player has to make his way through the terrain looking for his friends and the help using the minimal energy resources.

2.Gaming Experience:

The protagonist of the game that is the player, is the T-Rex. It goes around looking for fellow T-Rexes. There is an energy level which keeps decreasing. You can enhance your energy level by eating chickens. The game ends when the T-Rex runs out of energy and the score of the user is determined by the number of T-Rexes collected. If a high score is achieved in the game it is then documented along with the name of the player.

3.Technical Description:

There is camera which follows the T-Rex. The game is set up in a hilly terrain and the obstacles include giant trees and boulders. The terrain is a collision mesh. The motion of the T-Rex is hindered when it collides with an obstacle like a tree or rocks. This is achieved through a collision detection mechanism. Whenever a collision with a chicken is detected, the energy level increases to the maximum. If a T-Rex runs into another T-Rex, the number of T-Rex to be collected decreases by one and the score increased appropriately. The T-Rex can be manoeuvred using the

arrow keys or 'A','S','W','D'. When the T-Rex runs out of energy, the game ends. The high score is displayed, then the player is asked if he would like to play the game again. This has been implemented using a simple dialog box. The player can quit the game any time, using the "Esc" key. The "flock" behaviour is implemented through a flock of geese. The world is 3D map which is the outdoor environment, that is the forest.

Characters of the Game:

1. T-Rex
2. Chickens
3. Geese(cameo)
4. Environment

The chickens and the fellow T-Rexes are placed at random throughout the terrain using the "randomint" function. A swamp also gets created at random, the player can get lost in it and their line of sight can be eclipsed. The high score is stored in a .txt file called stats.txt.

4. Game Play:

The counter(energy level) basically counts down to zero from 100 and once it reaches zero, the game ends. The counter is reset to 100 everytime the T-rex eats a chicken. The high score counts the total no. of fellow T-rexes collected by the player(total 10).