ABSTRACT

3D GAME DEVELOPMENT APLICATION

EIJI : THE LOST CANVAS

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Movement of the characters in a game very closely related to artificial intelligence that makes the character as if alive. It is very influential in making the game as the search for the closest route to an end. If at the time doing a pencarain and found a barrier, it would require a method to detect collisions between objects that do not break the existing object.

In search of a route in the game, it takes an algorithm that supports. A* algorithm implementation in Eiji : The Lost Canvas was made according to A* procedure to get the best step from the start point position. A* would minimize the total trajectory cost dan give the best solution in optimal time. Without a good collision detecting system, 3D based game would seem imperfect and also unrealistic. This collision detecting system was designed using volume bounding with Axis Aligned Bounding Box (AABB) and triangle intersection test method using overlap interval which is developed by Tomas Moller.

This application test result shows that, beside acquiring a path to the objective in a route and branch tracking, A* algorithm gives optimal path searching that is the shortest path. If the collison detection wasn't in present, the game character would be able to walk through object and other boundaries.

Keywords: Game, 3D, algorithm, A*, collision detection.