

ABSTRACT

Games can be divided based on the dimensions, ie the 2-dimensional and 3 dimensional game. 2 dimensional game only have 2 sizes, ie length and width, while the three-dimensional game has added size is high, like the real world. Until now the game market is still dominated by two-dimensional form of the game due to hardware limitations.

One method that can manipulate two-dimensional game to be as if the game 3-dimensional, or can be referred to as a semi-3D games are the ray-casting. This method changes a two-dimensional map (like the maze) to be as if the three dimensions. Ray-casting can be used to create a 3 dimensional game that simulates a real-time with the light reflected from an object toward the eye of the observer that is implemented into two dimensions.

By using variables obtained from the 2-dimensional map, this method makes some other new variables are apparent which will provide three-dimensional attributes of objects that will be builded. The amount of light that is made will affect the outcome of the resulting 3-dimensional image and its performance.

Keywords: ray-casting, game, 2 dimensional, 3 dimensional, maze, real time.