

ABSTRACT

Computer graphics can do many things, including modeling simulation and visualization of an object. Problem modeling is a representation of how people describe or explain an object, system, or a concept, which is usually manifested by simplification or idealization. This can be represented by physical models, the model image or mathematical formulas. Visualization can also be done to facilitate the delivery of a material in a formal classroom or school.

Solar system is a set of celestial bodies bound by gravitational forces. The movement of celestial bodies like the sun, stars, planets and the other will be more easily understood if taught through visualization movement through computer animation. This visualization shows the solar system planetary motion, or we can call it a revolution, that is, when the planets move around the sun, and remain in orbit each using OpenGL API to represent the solar system as a visual. OpenGL support this modeling capability as OpenGL has additional features to better produce something more realistic OpenGL allows us to create a graph that can be run on any operating system only minor adjustments.

The aim of this project is to create an interactive solar system simulator that allows the creation of arbitrary dynamic systems. A survey of other work in the field is carried out and a requirements list is formulated. Novel aspects of the program's design and implementation are described. A tour of the finished program is presented, along with the results of testing and an analysis of the same. In the conclusion, proposals for improving the program are outlined.