

ABSTRACT

Currently, technological developments continue to increase, such as animation technology both 1D, 2D and 3D. In ancient times the making of animation was still done in a simple and conventional way by moving a number of images, paintings or photos alternately quickly. After the computer graphics era like now, the process of making animation is no longer a complicated problem. An animator can animate frames that he designed himself with animated software like Blender.

In this final project, a study will be conducted that will use a method, namely Finite Element Method with implementation in the Blender application software. This method is used to design objects by dividing an object to be analyzed, into several parts. These parts are called elements that each one element with another element is connected with a nodal (node). Then a mathematical equation was built which became the representation of the object.

With the results of experiments and testing of two-dimensional equations with the Finite Element Method, making objects in bow and arrow animations in the form of pendulum and handles on the bow and string or bowstring turned out to be able to be transformed into elements and stains with the Finite Element Method which was then finalized. thus producing directional lines which will be formed into boundaries and used as animations for bow and string in the Blender application.

Key word: Development of animation, Finite Element Method, Recurve Bow, Bow and String Animation