ABSTRACT

Folding paper is one interesting activity for children. They can make something they want out of a sheet of paper. Many kinds of ways were done to learn folding paper such as: animations, diagrams and tutorials. Using animation and diagrams, children will be guided step by step to fold the paper but no correction is available. Children depend on teacher to correct error in folding paper. Therefore a technology was needed to help learn folding the paper. Technology that can be used to solve the problem is Augmented Reality.

Augmented Reality Technology can combine virtual object and reality moreover natural interaction between these objects is possible. For the moment Augmented Reality only display 3D object above a marker. An evaluation system that provide user about the correctness of the folding is needed. Therefore it is required to combine Augmented Reality with fuzzy logic to measure the fuzzyness of the correctness of the folding.

This research on Augmented Reality Origami implement Augmented Reality based on fuzzy. Children will fold a paper and put it on a black square frame. Camera capture the marker. The system calculate the error. Error is the difference between the user fold and the correct fold pattern. Fuzzy launch next animation based on the error level. Experiment result shows that an error level under 29% was considered that the folding was correct. Lower error level might be achieved by using binary image.

KeyWord: Origami, Augmented Reality, logika fuzzy