

ABSTRACT

Batik as a tangible manifestation of fine art with a historical background and a strong cultural element in the development of Indonesian culture is the basis of the nation's identity to this day. concerning the diversity of Indonesian culture. The effort that can be done in maintaining batik preservation is by creating a new pattern on batik, one of which uses coral reef motifs. The application of coral reefs as a new pattern in batik is a method used to combine computer technology with art.

In this study, the development of *Nemanzophyllia turbida* coral motifs on web-based batik applications. Using the L-Systems method. The application is expected to make it easier to find or create some new batik motifs, so that the sustainability of batik art and culture will continue to evolve and vary. The purpose of this study is the implementation of the L-Systems method in making modules for the application of developing web-based batik motifs.

From the results of testing carried out on alpha testing, the shape of the coral motif can be changed according to the input value in the variables available in the application interface. The next test, namely beta testing found the similarity of coral motifs with native coral around 63%, and the feasibility of coral shape as the main motive of about 75% obtained from respondents. Whereas the quantitative test shows that the angular value of the coral affected the length of the average distance between the lines on the coral. It can be concluded that the quantitative test gets linear results if there is a change in the angle value of the body.

Keywords: L-system, *Nemanzophyllia turbida*, Web Application