

Universiti Teknologi MARA

Image Segmentation For Songket Motif

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ABSTRACT

Songket, a handwoven traditional Malay fabric, is a Malay word which means to bring out or to pull a thread from a background cloth or to weave using gold and silver thread. These motifs depict the journey and the history of the Malay people in creating their cultural identity. Songket motifs covers plant, life and symbol cosmos pattern. Plant motifs usually were flowers, fruits, leaves and also trees. Cosmos motif produced was centered to stars, sunlight, mountain, and wave. Seventy percent of motifs were inspired by plant. This research will cover on partitioning twenty collection of songket pattern into a number of songket motifs. This paper will cover on comparison of three algorithms of image segmentation, determining which algorithm is more accurate in order to extract songket motifs and a prototype of image segmentation tool using the accurate algorithm determined. After process of comparing the three methods of image segmentation; region growing, edge detection and watershed segmentation, most appropriate method has been chosen and implemented it in prototype module. Region growing has produced the best output which makes it as the method chosen to be applied in the segmentation tool. The result produced the tool is measured through the calculation of percentage of correct motif segmented. The percentage of correct motif segmented in with the tool is eighty one percent.

Keywords: Image Segmentation, Songket, Songket Patterns, Songket Motifs, Canny Edge Detection, Watershed, Edge Based Region Growing.

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