

CHAPTER 1

INTRODUCTION

This chapter consists of subtopics: (1) rationale which identifies the background of study, describes the problem situation, justifies existence using reference, and makes a clinching statement that will relate to background of the research problem; (2) statement of the problem that describes the research to be solved; (3) objective that should be measurable; (4) theoretical framework which describes the theory and concept which are useful in the research; (5) conceptual framework and paradigm of related problem which identify and discuss about variable/schematic diagram; (6) hypotheses that provide the method used to solve the problem based on the theory or empirical evidence.(7) scope and delimitation that indicate the area covered in this research; (8) significance of the study which describes the contribution of study as new knowledge.

1.1. Rationale

Batik is a traditional cloth made by painting motifs by Indonesian's culture nuance on a plain cloth. Batik is one of Indonesian cultural products belonging traditional clothing. The long history of batik is started since before the era of Prince Wijaya (1294 – 1309), the first king of Majapahit Kingdom. In its development, the complexion, style, and color of batik motif are affected by the cultures of Hindu, Islam, Netherland, China, and Japan. Batik has been always used by Indonesian people, from their birth until marriage, even someone who died using batik cloth as a cover. The Batik is designed with philosophy or symbolic meaning. Every region in Indonesia has a characteristic according to the circumstance and character of the man himself.

Until now there are two ways to make batik, stamped batik and handmade batik. Only people who understand and created batik that can distinguish the differences between the kind of batik. Each type of batik has a different type of pattern, there is a repetition of a pattern and a combination of several patterns.

A pattern that is difficult to recognize lay people who do not know about batik. One of two types of batik, handmade batik has the highest price.

1.2. Statement of the Problem

Until now, there is no method that can classify between stamped and handmade was done by researcher.

1.3. Objective

The purpose of this research is to develop a method that can classify between stamped and handmade batik .

1.4. Theoretical framework

There are two main differences between stamped and handmade batik, that is on the repetition of the pattern. In handmade batik, it tends to have no repetition of patterns, even there are repetitions but few and not exactly, different from the stamped batik that has a repetition of the pattern. Based on the results of interviews with one of the batik experts in Indonesia, Mr. Komar, he explained that every minimal stamped batik cloth consists of 8 repetitions in one cloth, and the size of the stamped batik is 18 cm - 28 cm.



Figure 1.1. example of stamp of batik

Based on figure 1.1 above, when the stamp is affixed to a cloth and repeated several times, it will form a repetitive pattern so that it becomes a batik cloth. Some batik fabrics consist of one stamp pattern and a combination of two more stamp patterns.

The following are examples of stamped batik.



Figure 1.2. example of stamped batik

In figure 1.2 above, it can be seen that the repetition of the ornament is in the form of repeated rectangles and other decorations. The following are examples of handmade batik.



Figure 1.3. example of handmade batik

In contrast with Figure 1.2, which has many repetitions of ornaments, in Figure 1.3 above it tends to have not ornamental repeats, although in some images written batik has ornamental repetitions but no more than 4, based on interviewed with Mr. Komar.

1.5. Conceptual Framework/Paradigm

The purpose of this research is to create a prototype system that can classify between handmade and stamped batik. The proposed system scheme contains two main operations. The first is process of searching for repetition of patterns to the determination of the classification of handmade and stamped batik, and second is detecting the number of patterns on batik identified as stamped batik. The method used in the process of searching for pattern repetition is to use cosine similarity and in the process of detecting the number of motifs using the features of distance, angle, and moment image.

1.6. Hypothesis

Repetition of patterns is a parameter to distinguish between handwritten batik and stamped batik, to do scan templating it can look for repetition of patterns and also do clustering based on the results of the scan. Therefore, this study will prove that matched templates and scanned clustering will be able to do batik clustering.

1.7. Scope and Delimitation

In this research, the scope and delimitation of this study are:

- Classify between stamped and handmade batik.
- Motifs type is not limited.
- There are not more than four patterns.

1.8. Sygnificance of the study

This study can help people to make batik detection easier to recognize, and also can reduce mistakes when buying batik, for example, handmade batik is the most expensive batik and is also in great demand but many people do not know how to recognize it. This

system will help people to recognize the type of batik. This thesis will develop a prototype system that can detect kind and many patterns of batik.