

CONTENTS

CHAPTER 1- INTRODUCTION

1.1 Problem Definition	3
1.2 Objectives	3

CHAPTER 2- BACKGROUND

2.1 Image Content Descriptors	4
2.1.1 Color Model	4
2.1.2 Color Feature Extraction	5
2.1.2.1 Color Quantization	6
2.1.2.2 Color Histogram	6
2.1.2.3 Color Moment	7
2.1.2.3 Color Coherence Vector	8
2.1.2.4 Color Correlogram	8
2.1.2.5 Invariant Color Histogram	8
2.1.2.6 Dominant Color	9
2.1.3 Texture Feature Extraction	9
2.1.3.1 Tamura Features	9
2.1.3.2 World Features	11
2.1.3.3 Gabor Transform	11
2.1.3.4 Wavelet Transform Features	12
2.1.4 Shape Features	13

2.2 Distance Measures	13
2.2.1 Euclidean Distance	13
2.2.2 Mahalanobis Distance	13
2.2.3 Histogram Intersection Distance	13
2.2.4 Canberra Distance	14
2.3 Combining the Features	14
CHAPTER 3 - REVIEW OF RELATED WORKS	15-17
CHAPTER 4 - METHODOLOGY	18-19
CHAPTER 5 - EXPERIMENTS AND RESULTS	20-28
CHAPTER 6 CONCLUSION AND FUTURE WORK	29
REFERENCE	30-32

List of Tables

Table No.	Particulars	Page No.
5.1	Precision of retrieval for top 10 images using CHW, CMW, CHS, CMR, CMS, CHW+CMR, CHW +CMS and CHS+CMS	22
5.2	Average retrieval using features for CHW ,CMS and (CHW+CMS)	22
5.3	Average retrieval using features for CHS, CMS and (CHS+CMS)	23
5.4	Average retrieval using features , the proposed method (CMS +CHS) and S.M Singh and K. Hemchandran's method based on combination of color moments (image divided horizontally into three equal non overlapping regions) and gabor texture	23
5.5	Average Precision of retrieval for top 10 images. CHW, CMW, CHS, CMR, CMS, CHW+CMR, CHW +CMS and CHS+CMS	23

List of Figures

Figure No.	Particulars	Page No.
1.1	Block Diagram of CBIR	3
2.1	Example of two different images having same histogram	7
4.1	Different image regions: (a) Whole image (b) Image divided horizontally into three equal regions (c) Image divided into three regions consisting of two homocentric progressive square and the image as a whole	18
5.1	Sample of WANG Image	23
5.2	Different image retrieval results for the same query image:	24
5.2: (a)	query image	24
5.2: (b)	result based on (CHW)	24
5.2: (c)	result based on (CMW)	25
5.2: (d)	result based on (CHS)	25
5.2: (e)	result based on (CMR)	26
5.2: (f)	result based on (CMS)	26
5.2: (g)	result based on CHW+CMR i.e. S. M. Singh and K. Hemchandran's method	27
5.2: (h)	result based on CHW+CMS	27
5.2: (i)	result based on CHS+CMS.	28