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High Dimensional Content-Based Retrivel of Reflection

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Abstract: High dimensional data is extra complicated in image based retrieval so the content-based visual information retrieval is used to solve the image retrieval in large database. In proceeding the image is given in the search content it does not retrieves the related images the new format shape similarity measurement and PSNR value is used to access the prominent content in large dataset effectively.

Key words: Multimedia databases, shape similarity measurement, image retrieval, PSNR clustering, India

INTRODUCTION

High dimensional data obtain from art, medication, entertainment and education makes use of waste amount of illustration data is used. Study on image retrieval has grown-up exponentially, mostly in the last years, it emerge that <40% were anxious with real-world systems (Del Bimbo, 1999). Various arrangements of contents and their achievable images have been tried, it is increasingly evident that a system cannot accommodate to the needs of a wide-ranging database (Del Bimbo and Pala, 1997). So, it is more relevant to build image retrieval systems that are particular to field and then the selection of suitable features for CBIR and explanation systems remain largely informal. Premature techniques of image retrieval were based on the physical textual explanation of images, a bulky and also often a biased job effective mechanism is needed for image retrieval Images are representing in much applications, image means high dimensional features (Gudivada and Raghavan, 1995). In that description-based or text-based image retrieval is effectively accesses the relevant images. Content based image retrieval is effective in low dimensional data (De Marsicoi *et al*., 1997). The content based image retrieval is not perfect due to high dimension because of higher computational time and futile indexing. So, the latest technique is needed for clustering and indexing the high dimensional data. The peak signal noise ratio value is used for clustering the data and shaped based indexing is used for valuable access in high dimensional data PSNR value is used to access the prominent content. Peak signal noise is clustering based upon basic colors that are RGB and also it avoid the identical images. PSNR value calculate the mean square error value for each images if the mean square error value is reduced to be zero then it identified the identical image, PSNR value calculates the RGB values in that calculation which color factor should be high that color is taken and shape indexing is used to access the data effectively (Del Bimbo, 1999). Shape is one of the most important inferior stage in image characteristic is recently appear in content based image retrieval, shape is mainly used for visual object detection and categorization, shape representation is importantly needed for object detection and categorization, in prior shape representation based on edge direction is not supportive to access the similar content effectively and also expensive to access the similar content. Shapes are classified many category in that three category is explained that are counter based, region based and integrated based (Caputo and Dorko, 2002). Region Based Method is used to capture the inner features of the images and the Counter Based Method capture only the boundary features and disregard the inner content (Gudivada and Raghavan, 1995). The integrated region is combines the Region Based Method and Counter Based Method (Huang and Jean, 1994). In this study, Content Based Method is mainly focused for shapes and also, extended this method on PSNR value for effectiveness and efficiency in retrieval.

MATERIALS AND METHODS

Search is main process in data mining. Searching the data given in the text it retrieves the related image but instead of uploading the image and given to the search content it does not retrieves the prominent content. Content-based retrieval utilize an image character like color, texture, shape which are coordinated with feature vector of the images in record. The new technique is implemented to overcome the problem is peak signal noise

Color	R	G	B	Color	R	G	B
	0	0	0		146	109	0
	0	182	0		146	182	170
	0	255	170		182	0	0
	36	73	0		182	73	170
	36	146	170		182	182	0
	36	255	0		182	255	170
	73	36	170		219	73	0
	73	146	0		219	146	170
	73	219	170		219	255	0
	109	36	0		255	36	170
	109	109	170		255	146	0
	109	219	0		255	255	255
	146	0	170				

Fig. 1: Colour table

ratio clustering and shape based indexing is used. PSNR value is used for clustering the data based on RGB values. Fundamental RGB colors contain $(256)^3$ different colors, it calculate the value based on three color that are RGB (Saykol *et al*., 2002). The color formed based on the RGB color values combination of RGB values it produce the color and cluster the image database based on the color. The small number of color is classified based on RGB value that are visualized by human, color table is shown in Fig. 1.

Shape-based indexing is used to avoid the irrelevant image database. Counter-Based Method is used for indexing the data for reduces the unrelated image in high-dimensional data (Huang and Jean, 1994). Counter-Based Method captures the boundary features it does not consider about the inner feature. The image is given in searched content; Counter-Based Method is indexing the data based on shapes (Huang *et al*., 1999). The Counter-Based Method captures the boundary shapes means it captures the outer layer of the image based on the outer layer it index the image data. The Fig. 2 shows shape look-up table it shows the basic boundary shapes of images (Ogle and Stonebraker, 1995). The indexing the images based on the shape given in the searched content for example the hexagon shape image is given in the searched content the Counter-Based Method capture the outer layer of the image and index the images based on that confine so, it reduce the inappropriate images in high dimensional data and PSNR cluster the data it reduces the contrast images in the image database so the indexing and

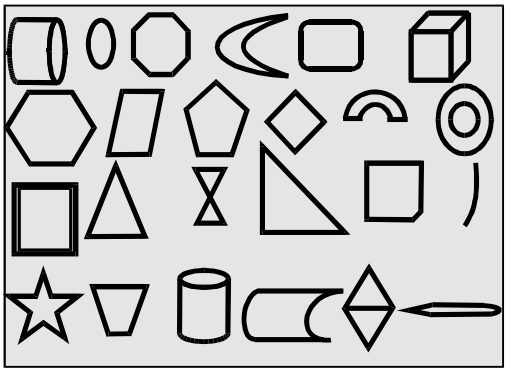

Fig. 2: Shape look-up table

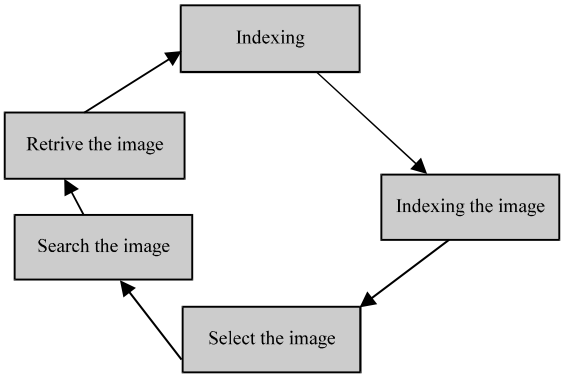

Fig. 3: System diagram

clustering is effective and efficient in high dimensional records (Jain and Vailaya, 1996). K-NN is a searching procedure used to access nearest content. For accessing nearest images, time is reduced and the system performance is effective and efficient.

This is a general diagram of the system design in that the indexing process is completed based on shapes and clustering based on colors so it retrieves the images extremely well (Fig. 3).

RESULTS AND DISCUSSION

Real-data sets are gathering and extensive assessment is conducted for study the performance of shape based indexing and PSNR based clustering. Examine is conducted on the image dataset, datasets ranges from 1-1000. Each group of dataset consists of 100 images. The performance is measured based on how effectively the similarity content are retrieve based on the search content and also it measures how reduction occurs in the dissimilarity of retrieved image in high-dimensional spaces. Figure 4 shows that the similarity is increased and dissimilarity is reduced.

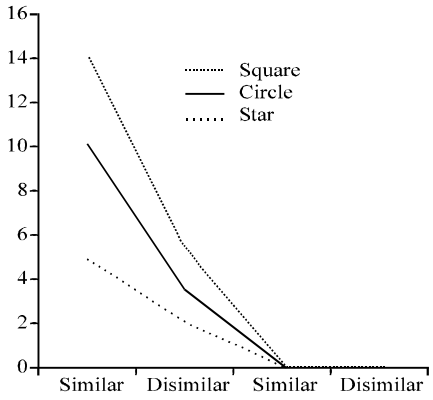

Fig. 4: Similar and dissimilar content

CONCLUSION

High-dimensional records the CBIR is not work properly so the counter based shape and PSNR value is used to avoid the inefficient retrieval in larger database by using shape based retrieval is used to overcome the inappropriate images and effective access the PSNR value is used in high dimensional records.

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