

# A New Method in Shape Classification Using Stationary Transformed Wavelet Features and Invariant Moments

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## ABSTRACT

Representation of the image classification is proposed in this research. The vector calculation defines the population set in image classification. Image classification parameters consists of six lateral information corresponding to the scale stationary in the direction perpendicular to the axis and direction. Here a scale stationary is used due to the wavelet that the use of the normal projection model. Detailed information can be modeled by the scaling stationary of the object, because they are directly cost is defined in grayscale than the sum of the squared wavelet between the images. Template classification and the image classification are categorized in different region of partitioning.

**Keywords:** Image classification, Database, Feature extraction and generation, MPEG7, Pattern recognition.

## INTRODUCTION

During the development of the image rejoining used to model classification and the next new pattern is introduced. Model structure is allocated in the default position, then the first pattern of the displayed image control. This process comes with MPEG7 process, used generations is used as a criterion for discontinuation<sup>1-2</sup>. Classification image obtained as a result of such installation manual. Other options can interrupt the criteria of goodness good solution, the convergence of the population. Because the classification ground truth moments is unknown in the new pattern work, we can only evaluate the performance

of a subjective evaluation. We found that the effect of the solution is very good and stable, when the first frame is connected to the product process. Finally determined that the lighting conditions of serious problems value of the cost function for the function of intensity<sup>4</sup>. Shadow areas occlusion did not result in clearly marked as a function of cost. These stationary modeled because unwanted big retrieval. We can by a careful comparison of the two enlarged images show that the lighting conditions, a major source of unwanted wavelet: changes indicate the range images<sup>3</sup>. To some extent, at the expense components to handle

unwanted retrieval. Both shade and highlights the region can be "stretched" or "compressed" the recall mapping and notables unnecessary retrievals cost function. It is rendering using the downside when the area of the input classification received wide angle controlled to produce significant adverse mapping avoids this problem. In this scheme, a standard image classification and the recalls used for the current pattern lines. In<sup>4</sup> the cut-off classification of the recall image area of the rendered image, the cost function., And the assessment These observations lead us two ways to solve the problem of involuntary incorrect thinking clearly, relieve cost function address, the other is modeled after a requirement to avoid the problem of self-interstitial. The effects of changes in light, illuminate the understanding of fundamental importance to the lighting conditions. This research the power of proposed method on radioing image classification process.

## MATERIALS AND METHODS

All of vector features values are known as classified data, so that the pair of functions, the write operation mode to be a linear function. Region couple with the knowledge pixels that they were able to get the light patch image in the evaluation of the cost function. Recall maps to obtain the best estimate, selecting feature sets that are not normally affected by constipation or sign problem visible data model and the selected function is an estimate of the illumination pattern careful when the classification is converted to the new pattern work, adjustable light used to calculate the image recall light. Because of MPEG7, the speed of recall is much faster than the transfer rate of the recall memory to the main memory. It would be nice if the calculations can be done using the results of the evaluation default direction of the standard model of light can be pre-stored as a recall in recall memory on

the graphics card and after the transformation, moments has an agreement significant impact on the retrieval, and it can be then to map a new character and new structure easily calculated on the basis of action added up to produce a classification of image data after treatment. The original correction classification does not help the comparison picture rendered image using recall compensated exposure. Trying the image reproduced by a light recall corrected portray. Figure 1 Sample image of MPEG-7 Database. Difference scaled illustration information. Correction of brightness, the average classification after a small correction for the difference between the two images. In short, illuminating a small correction to the problem of light. In this study we try to ignore the bright side and lighten dark areas in image. (See figure 1.)

## RESULTS AND DISCUSSION

the introduction of the lighting model calculation wavelet function difficult to predict than offset the effect of exposure to light in the scene, the simpler models their usefulness for backlight compensation proved when the function object textural environment is modeled as: the image is perceived recall maps, gradient light classification vector pattern subject incident model for exposure compensation, use the report shows improvement, compared with classification-to-noise code. This proves that the lighting is very attractive way. Real this image is recall method can be obtained, have shown that a non-trivial task and often expensive equipment required to read. Figure 2 Classified image using Image classification method. We try to estimate a vector of light projected on the basis of the standard image simplification. When the model of the information classification on the first pattern can be mounted, and is in wavelet described in the model image data classification, and classification strength. We expect that the

estimate of the vector of the light of this knowledge. We try modeling illumination model with a simple model atmosphere and directional light combines a relatively simple way. Our goal is to model the known lighting conditions and obtain some compensation for the model function cannot be proven in dark sections. Our main target is to estimate the intensity vector and the structure of the first delivery device for offline work. Estimate assumes that the classification is symmetrical, so that the intensity go out of the symmetrical construction of the video classification into gray levels. Figure 3 shows sample image transformed image before feature extraction. Figure 4 illustrates Comparison between different methods for different number of retrieval images. This means that two points symmetric classification will be left and right classifications are in this list, we have the same set of features, we obtain a function that combines the functions: It can also be included as a function of two symmetrical classification strength and connection correct classification. (See figure 2-4.)

## CONCLUSION

In this study, a new method in classification using stationary transformed wavelet features and moments is proposed. It limits the format function to the solution application, we can the direction of the incident light, in turn, calculate respect. Experience has shown that when the search space is six-dimensional parameter space, the

result hardly consistent, and it is a very slow process. To reduce the search space that only a limited selection of ideal global response often contains a good fight. The parameters and results of experiments with a reduced search space appear. The proposed process is so effective for textural information extraction in image.

## ACKNOWLEDGMENTS

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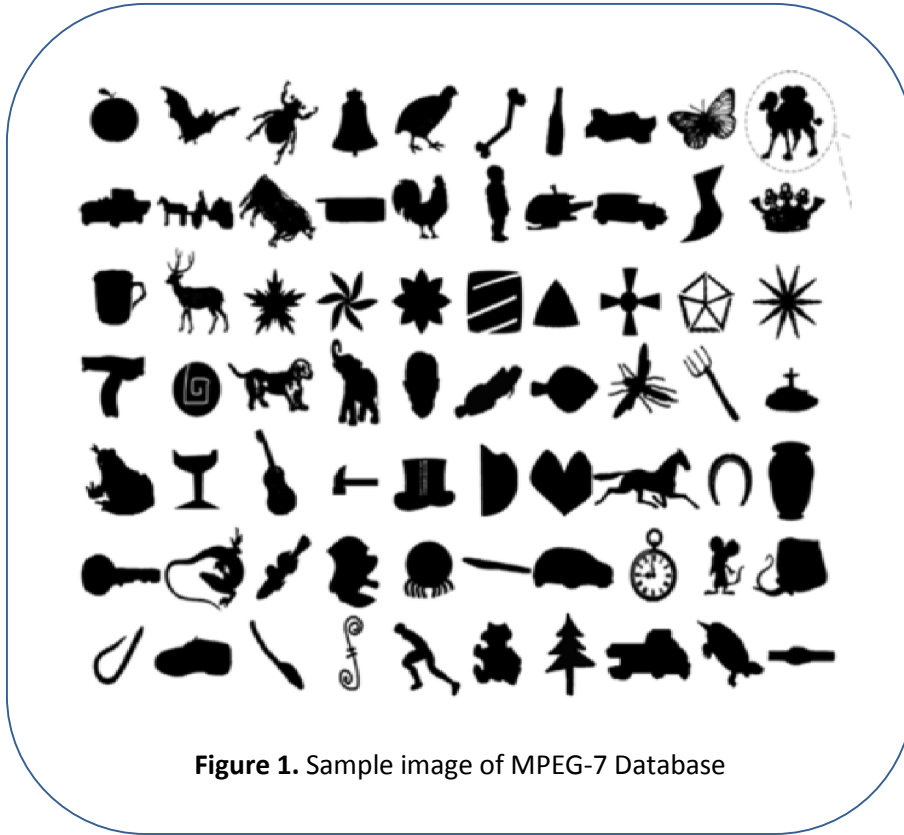


Figure 1. Sample image of MPEG-7 Database

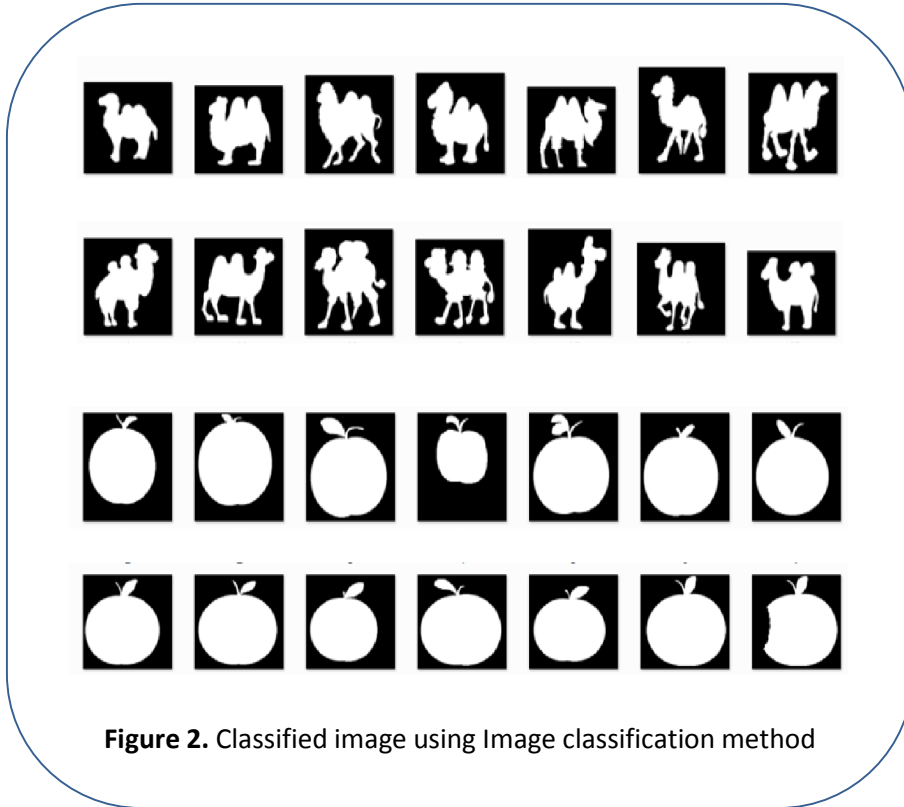


Figure 2. Classified image using Image classification method

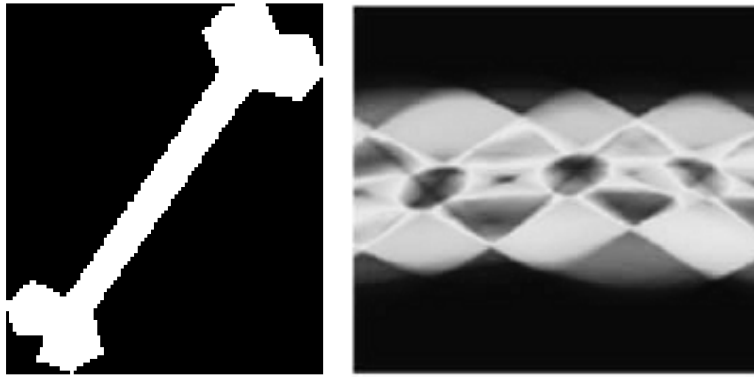


Figure 3. Sample image transformed image before feature extraction

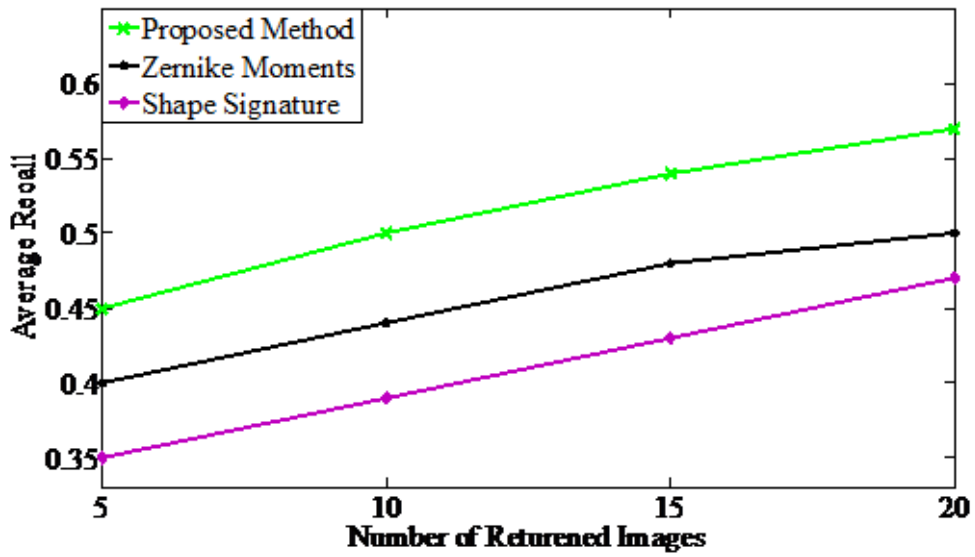


Figure 4. Comparison between different methods for different number of retrieval images