

The aim of this work was to design and implement an architecture for image retrieval based on hand drawn sketches. A descriptor is used to classify a monochrome user-drawn sketch as well as color images in the database. It is based on a descriptor proposed for MPEG-7, a so-called Edge histogram descriptor. Using [6] as reference, the algorithm was implemented, evaluated and improvements were proposed. Because sketch quality is an important factor in the overall search quality, several ways to decrease this dependence were proposed. These are search grid shifting, empty cell detection and very similar cell detection. A method for finding images containing trees and other natural objects using noisy cells was proposed. Experimental part of this work deals with determining the influence of various parameters on the precision of search results. The results obtained demonstrate that the system provides an intuitive way to search an image database.