Universität Basel

Publication

An interactive paper and digital pen interface for query-by-sketch image retrieval

A major challenge when dealing with large collections of digital images is to find relevant objects, especially when no metadata on the objects is available. Content-based image retrieval (CBIR) addresses this problem but usually lacks query images that are good enough to express the user's information need. Therefore, in Query-by-Sketch, CBIR has been considered with user provided sketches as query objects { but so far, this has suered from the limitations of existing user interfaces. In this paper, we present a novel useră interface for query by sketch that exploits emergent interactive paper and digital pen technology. Users can draw sketches on paper in a user-friendly way. Search can be started interactively from the paper front-end, due to a streaming interface from the digital pen to the underlying CBIR system. We present the implementation of the interactive paper/digital pen interface on top of QbS, our system for CBIR using sketches, and we present in detail the evaluation of the system on the basis of the MIRFLICKR-25000 image collection.