

A Framework for Evaluating Visual Query Modality

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Abstract

Research within the field of Content Based Image Retrieval (CBIR) have shown that it is possible to perform image retrieval tasks based on visual queries and feature based similarity searches. However, the techniques for indexing and retrieving images are still not capable of retrieving higher levels of semantic content. Nevertheless, the expressive power of visual queries in terms of describing visual content might provide end users with a powerful tool for multimedia retrieval. This becomes increasingly interesting considering with the recent advances in community based indexing techniques, such as the *ESP game* (von Ahn and Dabbish 2004) and the *Peekabom* system (von Ahn, Ruoran and Blum 2006).

CBIR systems are primarily based on computing the similarity between a query image and images in a collection. However, preliminary studies (Hove 2007) have shown that users express visual queries in a simple and iconic manner. In order to fully understand the way visual queries are expressed a framework for analysing visual query images have been developed.

The framework is based on the work on image modality presented by (Kress and van Leeuwen 2006), and focuses on four major modality markers: Use of colour, use of contextualization, degree of abstraction and use of perspective. The framework combines subjective evaluation of the modality markers with a set of modality criteria, which might or might not be fulfilled for a given image.

The framework has been used to classify 222 visual queries tasks from 21 participants,

References

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