

Departamento de Informática

Intelligent retrieval of memories

Knowledge and Information Systems Group



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Degrees:

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Objectives

Today people produce much media content, ranging from still images to home movies. The characteristics of a personal photo collection and the type of end-user poses challenges in the archiving and retrieval that are different from the general-purpose databases. One way of bridging the gap between user and computers is to increase the information shared by both, annotating each picture.

The goal is to develop a system that help users in the archiving and retrieval of their memories (photos), by automating the generation of annotations, aided by a knowledge base (KB).

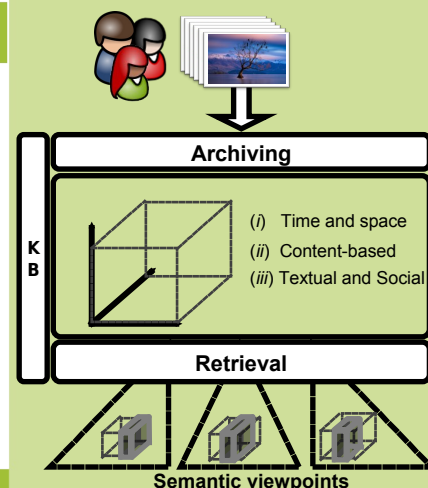
Methodology

We capture ground knowledge that provide an extensive collection of concepts specific for a given culture, on spatio-temporal and social features. We develop a segmentation algorithm that is based on the spatio-temporal information in the metadata of the photos. We then store meaningful descriptors of time and space derided from the metadata. During retrieval, we used the stored descriptors to give relevant photos, taking into account the social and personal information of the user interacting with the system. The result is presented as a summary that supports drill down and drill up in the context information.

Expected Results

The result is a prototype of a system that amplifies every bit of information the user enters:

- The informations is reused and complemented automatically, thus lowering the manual labour needed to annotate.
- The KB stores information about the social aspects of people's life, including the temporal cycles that governs our life
- The KB knowledge is increased with the interaction between the system and the users.
- The retrieval offer hints and summarising capabilities.



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