

TPA 2: Use of spatio-temporal features for matching (non-restrictive) video shots

August 21, 2012

Problem Statement: This project is aiming at matching video shots on the basis of spatio-temporal features. We are primarily looking at developing a system where given a query video shot, similar video shots are to be retrieved from a gallery of video shots, based on the spatio-temporal features (STV, VOB).

Input:

- A query video shot.

Expected Output:

- Set of video shots similar to the query video shots.

Hint for excellence: *Special Credit will be given if the designed system could capture videos with both static and dynamic camera movement.*

References

- Arslan Basharat, Yun Zhai, Mubarak Shah: Content based video matching using spatiotemporal volumes. Computer Vision and Image Understanding 110(3): 360-377 (2008)
- A. Dyana and S. Das, MST-CSS (Multi-Spectro-Temporal Curvature Scale Space), a novel spatio-temporal representation for content-based video retrieval, in IEEE TCSVT, 2010, 1080-1094.
- H. ping Gao and Z. qiao Yang, Content based video retrieval using spatiotemporal salient objects, in IPTC, 2010.
- W. Ren, S. Singh, M. Singh, and Y. S. Zhu. 2009. State-of-the-art on spatio-temporal information-based video retrieval. Pattern Recogn. 42, 2 (February 2009), 267-282