LBMV Project Proposal

Extraction of Interesting Video Fragments from Soccer Matches

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We would like to be able to extract video fragments of interest from soccer matches. In order to do that we train a classifier based on a number of publicly available soccer matches and gameplay labels that are taken from corresponding online match-commentaries.

While the question of what is “interesting” in a video sequence is hard to quantify, we can use the rules and structure of soccer to define different moments of the game as interesting. The examples are goals, shots, substitutions, and penalties.

To create our training dataset we will establish correspondences between soccer video matches and its available second-by-second online commentary to extract short video sequences. These sequences will be labeled by a descriptor of the gameplay of that moment.

One challenge is to find a set of features specific to soccer that can successfully classify video sequences despite great visual similarity. For example low-level features such as pixel colour can do little to distinguish between interesting and uninteresting video sequences. However, total motion in a sequence may give a better indication of when a video segment is interesting.

The second challenge is to gather the database. We need the precision of a second for gameplay labelling, but not so many online commentaries provide that. Therefore, the task is to collect publicly available videos of good quality and extract corresponding second-precision labels from commentaries.

The input of the application would be a 90-minutes video of a match. On the output we want to be able to provide a set of short video fragments that would summarize the interesting moments of the match.