Progressive Multimedia Collection Structuring via Scene Linking

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Abstract : In order to facilitate information seeking in large collections of multimedia documents with long and progressive content (such as broadcast news or TV series), one can extract the semantic links that exist between semantically coherent parts of documents, i.e., scenes. The links can then create a coherent collection of scenes from which it is easier to perform content analysis, topic extraction, or information retrieval. In this paper, we focus on TV series structuring and propose two approaches for scene linking at different levels of granularity (episode and season): a fuzzy online clustering technique and a graph-based community detection algorithm. When evaluated on the two first seasons of the TV series Game of Thrones, we found that the fuzzy online clustering approach performed better compared to graph-based community detection at the episode level, while graph-based approaches show better performance at the season level.