13. Finding the most interesting fragments in a tv-broadcast

We have developed SocialZap, a multimedia search engine that finds the most interesting fragments ('zap points') in a television broadcast, based on microblog posts like tweets and socially tagged photos.
The main novelty of SocialZap is the fully-automatic transfer of the learned viewer's interest from textual posts to the visual channel. There is no need for any manual effort in the process.
Once SocialZap finds the zap points, users can easily browse through a television broadcast and directly watch the interesting fragments. Thus, SocialZap adds social experience to watching television.

ICT science question

What happens where in digital video? The fundamental problem in video retrieval is that computers can − at present − only extract low-level features from a video signal, whereas humans interpret the data in a high-level conceptual way. It's a grand scientific challenge to bridge this so called 'semantic gap'. In particular we consider here the synchronization of audio and text signals when they refer to one and the same event.

Application

The questions we pose here are highly relevant in a world in which visual communication is ever more important.
Existing web services like UitzendingGemist allow viewers to watch missed television broadcast on the web. However, a system that directly suggests the most interesting fragments to watch, based on social media, is non-existing. The particular challenge we face is the temporal mismatch between the moment that the user tweets about a concept and the moment at which it appears in the television broadcast. The tweet-time can radically differ from the appearance-time as viewers

either anticipate appearances or continue to tweet about topics that have previously appeared. In our SocialZap demo, we analyze data from social media to suggest interesting concepts (zap points) in television broadcast. SocialZap uses textual information from Twitter posts related to a television broadcast of interest, which provide a rich source of information of what viewers find interesting.

Alternative Application

Video is everywhere and increasing, too much to watch all.
Our technology might be used in the digital humanities or by intelligence and security services.

Nice to know

SocialZap provides the only service in the world that automatically links social multimedia noteworthiness to television content.

SocialZap has won the US-run NIST TRECVID video search engine benchmark in 2013 and 2014.

The things people say about TV are interesting and valuable: SocialZap allows that value to be exploited by the viewers of catch up TV, by linking micro-blog posts directly to interesting moments.

Both social media and TV are important sources of entertainment and information, but they live in separate worlds. SocialZap brings them together to enhance the appeal and usefulness of catch-up TV.

With catch-up TV we never miss anything on TV. SocialZap is the first to take it one step further, by offering users particularly noteworthy time points, reducing the time needed to catch up.

Computer vision has matured to the degree that it is useful in consumer applications. In SocialZap, new algorithms provide jump-in points to viewers by exploiting information from social media.

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COMMIT/ project
SEALINCMedia Socially-enriched access to linked cultural media

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