Poster presentation

Marrying streaming media and asynchronous communication

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This poster demonstrates a system that integrates streaming media into an online collaboration platform in an innovative way. The system presented facilitates in-depth interaction between users and streamed content and fosters a more collaborative approach to engage with streaming media. Currently, there is no solution that combines streaming media technologies with asynchronous collaboration: There already exists, a selection of software that deals with streaming media, web conferencing and online education and most Learning Management Systems (LMS) support applications to deliver streaming media. However, what is missing is the link from streaming technologies into an online environment to allow for personalisation and connection of asynchronous communication directly to specific parts of a streamed video- or audio-clip. The system presented in this poster aims at exactly this shortcoming. It consists of two main components: 1) a smart tool to stream videoconferences seamlessly integrated into 2) a collaborative learning environment.

The streaming component acts as an additional endpoint in a videoconference. In order to create and record streaming content, the system captures video, audio and data from any H.323 (IP) video conferencing equipment. One goal of the system is to make streaming media accessible on any browser with any media player at optimal quality for any connection speed. Thus, this system is able to record to any Windows Media®, QuickTime® or RealMedia® format as well as the raw video conference stream. This allows seamless streaming to any media player in its native format, in real time or on demand. Recording does not only happen in multiple formats, but also simultaneously at multiple speeds less or equal to the speed of the conference. Another focus of this system is on active engagement of participants. Apart from the usual chat option it also offers polls and brainstorming features. On demand view in multiple formats, can be set up within minutes after it has finished.

The streamed on demand playback can include slides, an indexed table of contents and transcripts of the live chat that took place during a conference. The slider and the table of contents are synchronised so that clicking on an item in the table of contents or moving the slider makes the video and slides jump to the corresponding position.

The collaboration system, includes functionalities similar to an LMS as there are discussion forum, chat, content upload features. Furthermore, it offers the possibility of setting up individual workbooks, peer reviews, brainstorms, wikis etc. Additionally, this system allows integrating any type of streaming media and links it to an asynchronous discussion. This prototype enables users to post a message linked to a specific position in a video clip. Clicking on a link in a message makes the video and slides synchronise with the requested clip position without leaving the discussion thread A bookmark function called enables users to bookmark particular positions of a clip. When accessing a bookmark later, the video, slides and table of contents synchronise with the corresponding position.

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