

ITEC @ Google Zürich!

As a result to an invitation from Markus Clermont (a former assistant from Klagenfurt University) Laszlo Böszörményi held his talk „Let's make the movie a direct-access medium“ at Google Zürich in February 2010.

Abstract

Current tools for video consumption strongly resemble the video recorders of the 1960's, and in some aspects even the perforated celluloid tapes of the Lumière brothers from 1895. People were at that time so fascinated with moving pictures that on the early posters for movie performances we cannot find a title, author or the like – it was sufficient to know that it moves. However, whereas the change in the tools is far from being that radical, usage scenarios and requirements have changed drastically. Instead of the long spaghetti of images, the modern video is morphing into a non-sequential, direct access media. One could say: it is time to switch from the tape to the disk paradigm. Instead of restricting the user to the role of passive viewer of long, sequential movies the viewer should become the active composer of vivid video presentations serving his/her intentions – whether for fun or for professional use.

The talk introduces a small cluster of research projects on the topic of non-sequential video.

A Video Notation (ViNo) is presented, for expressing recursive sequential and parallel compositions of video units. Quality-of-Service (QoS) constraints can be added to the compositions, which can be evaluated off-line or during execution. Thus, with a few lines of ViNo code, we can predict resp. compute important measures (e.g. duration, start-up delay etc.) of operations such as download, streaming and play-out in a complex network. ViNo makes the “video network” in a sense programmable and computable.

The main elements of a Self-Organizing Multimedia Architecture (SOMA) are introduced. Based on local decisions, some desirable global features emerge. Peers and proxies form flocks, based on common interest and resources. Video units are placed and replicated near to their potential users. Resource management is controlled by popularity of units and intention of users.

An interactive tool (the Video Explorer) is presented, providing a combination of search, retrieval and browsing. The Video Explorer looks at the first sight like a traditional video player, but offers easy-to-learn, powerful tools for vide exploration.