

Contributing Partner: ICCS-NTUA (Muscle Participant No 23), TSI- TUC, (Muscle Participant no.24), AUTH (Muscle Participant no. 16)

Title: Software from Showcase: “Movie Summarization and Skimming Demonstrator”

Type: source code/ software library

Author(s) /Developer(s):

ICCS-NTUA: P. Maragos, K. Rapantzikos, G. Evangelopoulos, I. Avrithis, N. Zlatintsi

TSI-TUC: A. Potamianos, E. Petrakis, M. Perakakis, M. Toutoudakis

AUTH: C. Kotropoulos, P. Antonopoulos, V. Moschou, N. Nikolaidis, I. Pitas



Overview

The Showcase software has been developed in collaboration between ICCS-NTUA, TSI-TUC, and AUTH. It is an implementation of a saliency-based movie summarizer in terms of dynamic skims and static key-frames. Summarization is based on extracted audio, visual and integrated audiovisual saliency (importance or user attention) curves from the corresponding audio and visual information streams.

Summarization of a given video input refers to forming:

- A shorter in duration video based on user-defined skimming percentages. The shorter video is descriptive and informative, with smooth scene transitions.
- A set of key-frames representing a static storyboard, i.e. the audiovisually important frames in the video sequence.

The software package consists of two self-contained parts:

- AudioVisual Saliency Curves (AVsal) & movie key-frame selection tool.
- Movie summarization algorithm and summary player.

The two software components are documented in detail in following contributions.

For the needs of the summarization demo, an annotated movie database has been developed as an Audiovisual Saliency specific version (release 1.0) of the [MUSCLE MOVIE DATABASE](#),

distributed freely via a dedicated website. It consists of movie clips with rich annotation in Anvil for audio, visual and audiovisual saliency detection.

Contact Person(s) / Download Details

Contact: P.Maragos, A. Potamianos

emails : maragos@cs.ntua.gr, potam@telecom.tuc.gr

Software webpage: <http://cvsp.cs.ntua.gr/software/movieSUM/>

Database webpage: http://poseidon.csd.auth.gr/EN/MUSCLE_moviedb

Related Publications

This software is related to the following publications:

1. G. Evangelopoulos, K. Rapantzikos, P. Maragos, Y. Avrithis and A. Potamianos, “Audio-visual attention modeling and salient event detection”, in *Multimodal Processing and Interaction: Audio, Video, Text*, edited by P. Maragos, A. Potamianos, and P. Gros, Springer, 2008.
2. K. Rapantzikos, G. Evangelopoulos, P. Maragos and Y. Avrithis., “An audiovisual saliency model for movie summarization”, IEEE Intl’ Workshop on Multimedia Signal Processing (MMSP-07), Chania, Greece, 2007.
3. G. Evangelopoulos, K. Rapantzikos, A. Potamianos, P. Maragos, A. Zlatintsi, Y. Avrithis Movie summarization based on audio-visual saliency detection, *IEEE Intl’ Conf. on Image Proc. (ICIP-08)*, San Diego, 2008.