

Automatic detection of salient objects and spatial relations in videos for a video database system

Tarkan Sevilmiş, Muhammet Baştan, Uğur Güdükbay, Özgür Ulusoy*

Department of Computer Engineering, Bilkent University, Bilkent, 06800 Ankara, Turkey

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Abstract

Multimedia databases have gained popularity due to rapidly growing quantities of multimedia data and the need to perform efficient indexing, retrieval and analysis of this data. One downside of multimedia databases is the necessity to process the data for feature extraction and labeling prior to storage and querying. Huge amount of data makes it impossible to complete this task manually. We propose a tool for the automatic detection and tracking of salient objects, and derivation of spatio-temporal relations between them in video. Our system aims to reduce the work for manual selection and labeling of objects significantly by detecting and tracking the salient objects, and hence, requiring to enter the label for each object only once within each shot instead of specifying the labels for each object in every frame they appear. This is also required as a first step in a fully-automatic video database management system in which the labeling should also be done automatically. The proposed framework covers a scalable architecture for video processing and stages of shot boundary detection, salient object detection and tracking, and knowledge-base construction for effective spatio-temporal object querying.

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Keywords: Multimedia databases; Salient object detection and tracking; Camera focus estimation; Object labeling; Knowledge-base construction; Spatio-temporal queries

1. Introduction

The rapid increase in the amount of multimedia data has resulted in the development of various technologies for handling large volumes of data. These technologies concentrate on efficient compression and storage of the multimedia data. One of the particularly interesting storage systems is the “multimedia database”, which stores multimedia content that can be queried by various features [1]. Some examples of prototype multimedia database systems include QBIC [2], VisualSeek [3], and VideoQ [4]. If the media is video, the queried features are spatial, spatio-temporal, semantic, motion (e.g., object trajectories) and

object features (e.g., color, shape, texture) [5]. Before retrieval, the videos need to be processed to extract the features that can be queried. Since the first appearance of multimedia databases, research on efficient means of feature extraction has become popular. To this end, some manual, semi-automatic and automatic tools have been developed [3,4,6–8].

This paper proposes a framework for automatic salient object extraction. The framework is used to detect and track salient objects in a given video automatically and construct a list of spatio-temporal features for our video database system, *BSVideo* [9]. This process aims to reduce the huge amount of time and effort required for manual selection and labeling of objects for video indexing.

We first use a color histogram-based shot boundary detector to find the shot boundaries. Then, each video is processed on a shot basis following the common practice: salient objects within each shot are detected and tracked. At the end of processing each shot, tracked objects satisfying

* Corresponding author. Tel.: +90 312 260 15 77; fax: +90 312 266 40 47.

E-mail addresses: sevilmis@cs.bilkent.edu.tr (T. Sevilmiş), bastan@cs.bilkent.edu.tr (M. Baştan), godukbay@cs.bilkent.edu.tr (U. Güdükbay), ulusoy@cs.bilkent.edu.tr (Özgür Ulusoy).

Automatic Detection Of Salient Objects And Spatial

Daniela Niemeyer



Automatic Detection Of Salient Objects And Spatial:

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Electronics, Communications and Networks IV Amir Hussain, Mirjana Ivanovic, 2015-07-01 The 4th International Conference on Electronic Communications and Networks CECNet2014 inherits the fruitfulness of the past three conferences and lays a foundation for the forthcoming next year in Shanghai CECNet2014 was hosted by Hubei University of Science and Technology China with the main objective of providing a comprehensive global forum for experts and participants from academia to exchange ideas and presenting results of ongoing research in the most state of the art areas of Consumer Electronics Technology Communication Engineering and Technology Wireless Communications Engineering and Technology and Computer Engineering and Technology In this event 13 famous scholars and Engineers have delivered the keynote speeches on their latest research including Prof Vijaykrishnan Narayanan a Fellow of the Institute of Electrical and Electronics Engineers Prof Han Chieh Chao the Director of the Computer Center for Ministry of Education Taiwan from September 2008 to July 2010 Prof Borko Furht the founder of the Journal of Multimedia Tools and Applications Prof Kevin Deng who served as Acting Director of Hong Kong APAS R D Center in 2010 and Prof Minho Jo the Professor of Department of Computer and Information Science Korea University

ACM SIGIR Conference on Research and Development in Information Retrieval International Conference on Research and Development in Information Retrieval. 27, 2004, Sheffield, 2004

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[Modeling and Using Context](#) Anind Dey, 2005-06-24 This book constitutes the refereed proceedings of the 5th International and Interdisciplinary Conference on Modeling and Using Context CONTEXT 2005 held in Paris France in July 2005 The 42 revised full papers presented were carefully reviewed and selected from a total of 120 submissions The papers presented deal with the interdisciplinary topic of modeling and using context from various points of view ranging through cognitive science formal logic artificial intelligence computational intelligence philosophical and psychological aspects and information processing Highly general philosophical and theoretical issues are complemented by specific applications in various fields

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Multimedia Computing and Networking,1998

1997 IEEE International Conference on Intelligent Processing Systems,1997

Design and Management of Multimedia Information Systems Syed Mahbubur Rahman,Mahbubur Rahman Syed,2001 Multimedia technology has the potential to transform end user computing from interactive text and graphics models into something more compatible with the digital and electronic world of the 21st century This work aims to help technology professionals gain an understanding and perspective on areas related to multimedia computing and communication while addressing the major issues and challenges in the design and management of multimedia information systems Topics covered include the development of multimedia systems and applications use of multimedia standards temporal issues legal issues media content management and multimedia document retrieval issues

Modeling and Using Context,2005

Multimedia Computing and Networking 1999 Kevin Jeffay,Timothy Roscoe,IS & T--the Society for Imaging Science and Technology,ACM Special Interest Group on Multimedia,Society of Photo-optical Instrumentation Engineers,1998 This collection of papers from the IS T SPIE Electronic Imaging Symposium includes articles on a variety of relevant issues and topics

Optical Engineering,2001 Publishes papers reporting on research and development in optical science and engineering and the practical applications of known optical science engineering and technology

1999 International Conference on Image Processing : Proceedings,1999

The Quarterly Journal of Experimental Psychology,1999

IEEE International Conference on Multimedia Computing and Systems IEEE Computer Society. Technical Committee on Multimedia Computing,1998 This collection of papers examines the field of computer graphics It covers topics such as supporting adaptation in transport protocols multimedia storage servers network and operating system support for multimedia content based retrieval and audio video compression and security

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