

SEARCHING SPEECH KEYWORDS FROM VIDEO

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SEARCHING SPEECH KEYWORDS FROM VIDEO

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By

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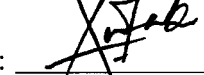
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ABSTRACT

Video contains various types of data that can be extracted using various techniques and tools. The extracted data can be used in developing video retrieving and indexing systems. Video's speech is rich with information and can be used by students as a supporting tool in learning process. Video is divided into many parts depending on their content. Searching for the part of interest may require manual searching through the entire video which may be time consuming. Therefore, this study focuses on investigating the existing approaches of searching and retrieving videos and to develop a method to make video content more easily searchable. A web-application prototype was developed using Java and JSP for searching the video speech using keywords. Finally, the users' satisfaction of the developed prototype was measured using IBM CSUQ questionnaire.

DEDICATION

I humbly thank Allah Almighty, the Merciful and the Beneficent, who gave me health, thoughts and co-operative people to enable me achieve this goal.

I wish to dedicate this work to Holy Prophet Muhammad (Peace be upon him) and his companions who laid the foundations of Modern civilization and paved the way for social, moral, political, economical, cultural and physical revolution.

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Moustafa A. M. Daloull

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LIST OF ACRONYMS

CC	Closed Caption
VCBR	Video Content-Based Retrieval
PDA	Personal Digital Assistant
MIT	Massachusetts Institute of Technology
WMV	Windows Media Video File
MOV	QuickTime Movie
AVI	Video Interleave File
FLV	Flash Video File
GNU	General Public License
UML	Unified Modeling Language
OCR	Optical Character Recognition
RTSP	Real-Time Transport Streaming Protocol
HTTP	Hypertext Transfer Protocol
ZCR	Zero Crossing Rate
GIFT	GNU Image-Finding Tool
IR	Information Retrieval
XML	Extensible Markup Language
RR	Round-Robin
RSV	Ranking Status Value
CSUQ	Computer System Usability Questionnaire
JSP	Java Server Pages
HTML	Hypertext Markup Language
J2SDK	Java 2 Software Development Kit
URL	Uniform Resource Locator
UUM	Univesiti Utara Malaysia

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CHAPTER ONE

INTRODUCTION

1.1 Background

The rapid growth in technology especially in multimedia technologies has led to huge archive of multimedia data in a lot of different areas and applications. Generally, there are four different types of multimedia information, which are video, images, audio and text (Masihi & Charkari, 2005). Furthermore, the multimedia information is much more attractive to browse than plain-text especially videos (Liu & Kender, 2004). So, some of the internet users like to watch videos to get new knowledge. Thus, they are focusing more on their content rather than what the video looks like (Dongsong & Nunamaker, 2004; Jiang & Elmagarmid, 1998).

Online video libraries have become a huge resource for education. This is due to the popularity of video editing software which makes video editing easier. In addition, the advancement of video distributing makes online video widespread because there is also low-cost or free online storage space for hosting video such as *SchoolTube* (www.schooltube.com), *TeaHerTube* (www.teachertube.com), and *YouTube* (www.youtube.com). Furthermore, the current streaming media technology allows watching the video while it is downloading (Zhenxiang & Qingsen, 2010).

The contents of
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