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Adaptive Multimedia Retrieval

Identifying, Summarizing,
and Recommending
Image and Music

6th International Workshop, AMR 2008
Berlin, Germany, June 26-27, 2008
Revised Selected Papers

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Preface

This book is a selection of the revised contributions that were initially submitted to the International Workshop on Adaptive Multimedia Retrieval (AMR 2008). The workshop was organized at the Fraunhofer Institute for Telecommunications HHI, Berlin, Germany, during June 26–27, 2008.

The goal of the AMR workshops is to intensify the exchange of ideas between different research communities, to provide an overview of current activities in this area and to point out connections between the diverse researches communities, in particular the ones focussing on multimedia retrieval and artificial intelligence. In this spirit, the first three events were collocated with Artificial Intelligence conferences: in 2003 as a workshop of the 26th German Conference on Artificial Intelligence (KI 2003); in 2004 as part of the 16th European Conference on Artificial Intelligence (ECAI 2004) and in 2005 as part of the 19th International Joint Conference on Artificial Intelligence (IJCAI 05). Because of its success, in 2006 the University of Geneva, Switzerland organized the workshop for the first time as a standalone event. The motivation of the participants led us to continue this path, and thus AMR 2007 and AMR 2008 were again organized as independent events at the Laboratoire d'Informatique de Paris VI in France and at the Fraunhofer Institute for Telecommunications, Heinrich Hertz Institute (HHI) in Berlin, respectively.

The workshop in 2008 revealed four main subtopics: summarization, identification and recommendation. These challenges addressed image, Web and music data, the latter being a strong and new push in the AMR series. Therefore, in this edition, adaptive retrieval—the core subject—was tackled from quite different and innovative perspectives.

In order to address the problem of information overflow, the research community proposes to summarize the available information, by structuring or extracting relevant data. The reduction can take several forms and granularities, for instance in the case of audio data the extraction of relevant musical thumbnails is an important topic, while in the visual domain the summarization of large image sets is the challenge. In both cases the aim is to discard the irrelevant while covering most of the available information.

When addressing adaptation the user remains in the center of attention and recommendation is the current trend. The discussions are centered around the question of what is the object to be recommended and what are its specific properties. In the case of music or images the objects tend to be the entire document and recommendation is usually based on user preferences. While in the case of Web applications, keywords were the target and semantic analysis the core approach.

A key challenge always addressed at AMR is how to tackle the semantic gap. Media-specific identification techniques were proposed and we witness two

general trends: tagging and tracking. The first tackles the problem of labelling general multimedia objects and the second explores the idea of recognizing almost exact copies, as for instance the picture of a painting in a museum.

We believe that the above trends are representative and thus this book provides a good and conclusive overview of the current research in this area.

Finally, we would like to thank all members of the Program Committee for supporting us in the reviewing process, the workshop participants for their willingness to revise and extend their papers for this book, the sponsor for their financial support and Alfred Hofmann from Springer for his support in the publishing process.

November 2009

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Table of Contents

Invited Contribution

- The Future of Audio Reproduction: Technology – Formats – Applications 1
Matthias Geier, Sascha Spors, and Stefan Weinzierl

User-Adaptive Web Retrieval

- Using Thematic Ontologies for User- and Group-Based Adaptive Personalization in Web Searching 18
Alexandros Paramythis, Florian König, Christian Schwendtner, and Lex van Velsen
- A Poset Based Approach for Condition Weighting 28
David Zellhöfer and Ingo Schmitt

User-Adaptive Music Retrieval

- Adaptive User Modeling for Content-Based Music Retrieval 40
Kay Wolter, Christoph Bastuck, and Daniel Gärtner
- Towards User-Adaptive Structuring and Organization of Music Collections 53
Sebastian Stober and Andreas Nürnberger

Music Tracking and Thumbnailing

- An Approach to Automatically Tracking Music Preference on Mobile Players 66
Tim Pohle, Klaus Seyerlehner, and Gerhard Widmer
- Music Thumbnailing Incorporating Harmony- and Rhythm Structure . . . 78
Björn Schuller, Florian Dibiasi, Florian Eyben, and Gerhard Rigoll

Symbolic Music Retrieval

- Automatic Reduction of MIDI Files Preserving Relevant Musical Content 89
Søren Tjagvad Madsen, Rainer Typke, and Gerhard Widmer

Automatic Synchronization between Audio and Partial Music Score
Representation 100
Antonello D’Aguanno and Giancarlo Vercellesi

Tagging and Structuring Image Collections

Automatic Image Tagging Using Community-Driven Online Image
Databases 112
*Marius Renn, Joost van Beusekom, Daniel Keysers, and
Thomas M. Breuel*

Geo-temporal Structuring of a Personal Image Database with
Two-Level Variational-Bayes Mixture Estimation 127
*Pierrick Bruneau, Antoine Pigeau, Marc Gelgon, and
Fabien Picarougne*

Unsupervised Clustering in Personal Photo Collections 140
Edoardo Ardizzone, Marco La Cascia, and Filippo Vella

Systems for Still and Motion Images

Towards a Fully MPEG-21 Compliant Adaptation Engine:
Complementary Description Tools and Architectural Models 155
Fernando López, José M. Martínez, and Narciso García

Mobile Museum Guide Based on Fast SIFT Recognition 170
Boris Ruf, Effrosyni Kokiopoulou, and Marcin Detyniecki

Author Index 185