# Workshop on Tagging, Mining and Retrieval of Human Related Activity Information

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## ABSTRACT

Inexpensive and user friendly cameras, microphones, and other devices such as digital pens are making it increasingly easy to capture, store and process large amounts of data over a variety of media. Even though the barriers for data acquisition have been lowered, making use of these data remains challenging. The focus of the present workshop is on issues related to theory, methods and techniques for facilitating the organization, retrieval and reuse of multimodal information. The emphasis is on organization and retrieval of information related to human activity, i.e. that is generated and consumed by individuals and groups as they go about their work, learning and leisure.

## Categories and Subject Descriptors

H.3.1 [**Information Storage and Retrieval**]: Content Analysis and Indexing – *abstracting methods, indexing method, linguistic processing.* H.3.3 [**Information Storage and Retrieval**]: Information Search and Retrieval. H.5.1 [**Information Interfaces and Presentation**]: Multimedia Information Systems – *evaluation/methodology.* H.5.3 [**Information Interfaces and Presentation**]: User Interfaces – *graphical user interfaces, natural language, theory and methods..*

## General Terms

Design, Experimentation, Human Factors, Theory.

## Keywords

Multimodal; multimedia; tagging; mining; browsing.

## 1. INTRODUCTION

Inexpensive and user friendly cameras, microphones, and other devices such as digital pens are making it increasingly easy to capture, store and process large amounts of data over a variety of media.

This opportunity has been embraced by a large number of people, and resulted in the availability of high volumes of digital photos, videos, audio recordings. Additional opportunities present themselves for capture of even richer data, for example during lectures, meetings, or informal gatherings.

Even though the barriers for data acquisition have been lowered, making use of these data remains challenging. Effective use presupposes a large investment in manual organization, e.g. by careful, labor-intensive labeling of data, manual clustering (e.g. via foldering), or manual extraction and transcription of important information.

As a result of the difficulties involved in finding and reusing information, particularly as the volume grows, large amounts of collected data remains unused and inaccessible. Because of that, the collection efforts tend to be abandoned, or not even implemented, given the low immediate payoff and the high cost of organization. More importantly, information that could lead to enhanced performance during learning or work situations remain untapped.

The focus of the present workshop is therefore on issues related to theory, methods and techniques for facilitating the organization, retrieval and reuse of multimodal information. The emphasis is on organization and retrieval of information related to human activity, i.e. that is generated and consumed by individuals and groups as they go about their work, learning and leisure.

## 2. Topics of Interest

Submissions of position papers as well as technical contributions are invited, in areas related to: User interface design and evaluation; Tagging, mining and retrieval techniques; Applications of multimodal retrieval, and Cognitive foundations of organization and search of multimodal materials.

Topics of interest include, but are not limited to:

- Collaborative multimodal elicitation of tags; social tagging and social use of multimodal materials;
- Automated and semi-automated techniques for tag extraction;
- Cross-modal, cross-media annotation; non-textual tags;
- Tangible/non-conventional interfaces for organizing, annotating and retrieving multimodal materials; gestural interfaces;
- Detection an extraction/mining of complex, multi-faceted items such as action items, decisions from multimodal streams;
- Interfaces for retrieval; non-textual retrieval techniques: appearance-based, phonetic, digital ink-based search; relevance feedback;
- Automated organization of multimodal materials to facilitate retrieval; presentation issues; summarization;
- Context and content-sensitive tagging and retrieval; sensor-, temporal-, and semantic-based tagging and retrieval;
- Multi-document annotation; emergent annotation and retrieval processes;
- Human issues related to the organization and retrieval of multimodal materials; linguistic and cognitive aspects of multimodal tagging and retrieval;
- Multimodal approaches to retrieval of non-conventional data such as music;
- Collection and analysis infrastructures; collection methodologies; interfaces for analysts;

- Applications in science, education, entertainment; industrial applications.

## 3. Organization

### 3.1 Workshop Organizers

- Paulo Barthelmess, Adapx, Inc

- Ed Kasier, Adapx, Inc

### 3.2 Program Committee

- Alberto del Bimbo, U of Firenze

- Trevor Darrell, MIT

- Sadaoki Furui , Tokyo Institute of Technology

- Jyri Huopaniemi, Nokia Research

- Alejandro Jaimes, IDIAP

- Michael Johnston, ATT

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- Massimo Zancanaro, FBK- IRST

- Lei Zhang, MS Research China