

# Multimedia Mining: The Text Is Not Enough.

Marcin Detyniecki

CNRS Laboratoire d'Informatique de Paris 6  
8, rue du Capitaine Scott - 75015 Paris, France

**Abstract.** Most of us would agree with the facts that language is the basis of human communication and reasoning and that text is the most tangible and direct representation of it. Following this observation, we could say that text is the best mean to attain the human knowledge. Unfortunately, this limited point of view omits all other forms of expression as for instance music, painting, dance (i.e. multimedia information). And, it has been argued that such forms of expression are “more direct” (see innate or even intimate) ways of communication. In fact, a painting can just in a blink, not only impart a lot of information, but also deeply touch us. And this experience can even be absolutely implicit and particularly difficult to explain. Multimedia is rich and direct.

For these reasons we are witnessing, in the digital world, an extreme grow of such a data. Concurrently this form of data is difficult to handle and to automatically interpret. Here, we grasp a new challenge with promising perspectives. And a lot of the work has already been done, in machine learning, signal processing, computer vision, artificial intelligence and other related domains.

As a result, we can define Multimedia Mining as the discovery by computer of new, previously unknown knowledge, by automatically extracting information from different multimedia resources. In this quest, we can profit from the recent experiences of a closely related domain, known as “text mining”, which uses text as its basis. But, we should in no way mix-up these approaches.

In this paper, we will revisit all the steps of a knowledge discovery process and we will discuss the characteristics of the multimedia problem and its fundamental differences with the text approach.

## References

- DETYNIECKI, M. (2003): Discovering Rules using Fuzzy Decision Trees for better Visual Indexing based on Colors. *Proceedings of the Multimedia Data Mining Workshop of the ACM SIGKDD International Conference on Knowledge Discovery and Data Mining KDD'2003*, Washington, DC, USA, 45–50.
- NÜRNBERGER, A. and DETYNIECKI, M. (2004): Adaptive Multimedia Retrieval: From Data to User Interaction. In: B. Gabrys, K. Leiviska, and J. Strackeljan, (Eds.): *Do smart adaptive systems exist - Best practice for selection and combination of intelligent methods*. Springer Series on Studies in Fuzziness and Soft Computing.

## Keywords

MULTIMEDIA, DATA MINING, INFORMATION RETRIEVAL