

**Creative Computing II**  
**Multimedia Information Retrieval Systems**  
**26th January 2010**

This lab sheet surveys existing Information Retrieval systems available for multimedia resources on the Web.

1. This part is about the Porter Stemmer.
  - (a) Find and download an implementation of the Porter Stemmer from the Internet. Note carefully the licencing terms under which the implementation is offered; if the terms under which you can use and modify the code are too restrictive, do not use it (and try to find another implementation).
  - (b) Compile and run the implementation. Try stemming various words, to understand better what the system does.
  - (c) Unless the implementation is already suitable, convert it so that it is usable from within *Processing*.
2. This part is about surveying, classifying and categorizing existing systems for multimedia information retrieval on the Web. Your task is to identify resources which allow users to retrieve multimedia content and metadata.
  - (a) Try to find systems for retrieval of
    - text;
    - images;
    - symbolic music;
    - videos;
    - musical audio;
    - films;
    - television programmes;
    - web pages;
    - scientific papers;
    - web pages which no longer exist;
    - published books.
  - (b) Categorize them as to whether they allow query by
    - content;
    - metadata;
    - name;
    - reference;
    - other identifying information.
  - (c) For each system, determine

- whether the item retrieved is the multimedia content itself or metadata about the content.
  - whether items that the system retrieves are ‘exact’ matches or over some scale of ‘similarity’
  - whether there exists an ‘API’ giving programmatic access to the retrieval system (rather than a simple web form), and if so whether that API has any functionality that is not available to users of the web form.
- (d) Which of the systems that you have enumerated in part 2a do you think work well, and which do not? Comment and explain. How would you improve on the ones which do not work well?

Other resources:

- van Rijsbergen, C. J., S. E. Robertson and M. F. Porter, *New models in probabilistic information retrieval* (1980).
- Porter, M. F. *An algorithm for suffix stripping*. Program **14**(3) 130–137