



# ImageCLEF 2004



## Caption and/or Content-Based Cross Language Image Retrieval

### First Announcement and Call for Participation

#### Ad hoc bilingual retrieval task<sup>1</sup>

**Goal:** given a multilingual statement describing a user need, find as many relevant images as possible from the image collection. At its simplest this is a bilingual query translation task from the source language to English aimed at encouraging participation from newcomers to CLIR and CLEF.

**Image analysis:** not required

**Queries:** 50 short texts in Dutch, Italian, Spanish, French, German, Chinese (plus an example image) to represent a range of CL and image search requests. We plan to expand the query languages to Japanese, Danish, Swedish and Russian.

**Collection:** ~30,000 historic photographs with British English semi-structured captions.



**Challenges:** short multilingual queries, short caption texts (~50 words), semi-structured captions in British English, images and captions of varying quality and content.

**Aims:** to compare methods of query translation, query expansion, use of text and content-based methods separately or combined, retrieval models, indexing methods.

#### Interactive task (tentative)<sup>3</sup>

**Goal:** to investigate how native speakers of languages other than English interact with a CL image retrieval system in two scenarios: (1) an ad hoc retrieval task, and (2) a known item search.

**Image analysis:** not required

**Collection:** as used in the ad hoc retrieval task.

**Aims:** to investigate areas such as: browsing support, automatic and interactive query expansion, relevance feedback, query formulation using both image and text, presentation of search results (e.g. image only or image and caption, clustering images, categorising results), and failure support.

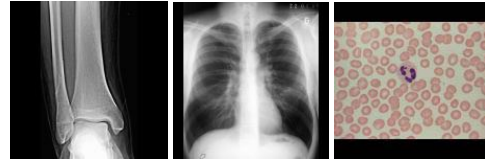


#### Medical retrieval task<sup>2</sup>

**Goal:** given example medical image(s) from a case, find similar cases which contain both case notes and images. This task simulates a medical practitioner needing to find cases similar to the one already being worked on which is important for case-based reasoning or evidence-based medicine.

**Image analysis:** required for an initial retrieval.

**Queries:** 25 example images from the document collection.



**Collection:** ~9,000 anonymised medical images covering more than 2000 cases from the University Hospitals Geneva (<http://www.casimage.com>). The case notes are of varying quality in French and English encoded in XML.

**Challenges:** combining text and content-based methods after an initial visual search, domain-specific medical terminology, notes of varying quality in mixed target languages, a high cost involved in returning wrong images.

**Aims:** to compare methods of content-based retrieval systems, to investigate how case notes can be exploited after an initial visual search, to compare translation methods, retrieval model, indexing methods and query expansion.

#### Schedule for CLEF 2004

Registration opens	15 January 2004
Data release	from February 2004
Topics release	from 15 March 2004
Runs submitted	15 May 2004
Release of results	from 15 July 2004
Workshop papers deadline	15 August 2004
Workshop	15-16 September 2004

#### Organisers

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## Why cross language image retrieval?

Retrieval from an image collection offers distinct characteristics from one in which the document to be retrieved is natural language text. For example, the way in which a query is formulated, the method used for retrieval (e.g. based on low-level features derived from an image, or based on associated textual information such as a caption), the types of query, how relevance is assessed, the involvement of the user during the search process, and fundamental cognitive differences between the interpretation of visual versus textual media. Within CLEF, the problem is further complicated by user queries being expressed in a language different to that of the document collection. This requires crossing the language barrier by translating the collection, the queries, or both into the same language. As multimedia collections grow and more organisations become responsible for managing large image repositories, the instigation of ImageCLEF addresses an important problem that is not dealt with by existing CLEF and iCLEF tasks.

## Our aims

We envisage ImageCLEF will appeal to both commercial and academic research communities including: CLIR, image retrieval, and user interaction. The main aims of the ImageCLEF campaign are:

- (1) to promote and initiate international research for cross language image retrieval,
- (2) to further our understanding of the relationships between multilingual texts and images for IR,
- (3) to create useful resources for CL image retrieval to scientific communities in the whole.

## What we have achieved so far

The ImageCLEF campaign began as a pilot experiment in 2003. We ran an ad hoc retrieval task to simulate the situation in which users express their search request in natural language, but require visual documents in return. A test collection has been built comprising 30,000 historic photographs and captions from St Andrews University Library (<http://www-library.st-andrews.ac.uk/>), fifty example queries to test a range of cross language and image retrieval search requests, and four sets of relevance judgments. In 2003 participants entered ImageCLEF exhibiting a range of text-based retrieval and query enhancement methods including thesaurus-based query expansion and transliteration. Entrants demonstrated cross language image retrieval could achieve retrieval between 50% and 75% monolingual for queries in Dutch, Italian, Spanish, German, French and Chinese.

## Retrieval tasks in ImageCLEF 2004

At ImageCLEF 2004 we will be running ad hoc bilingual retrieval as an entry level task for newcomers to CLIR and CLEF, but we are pleased to announce a new medical retrieval task, and a tentative interactive CL image retrieval task. Participants can enter as many tasks as they want and are free to use any methods they want, although we could encourage interest from participants combining both CL and image-based techniques. Please note that **image analysis is not required for all tasks**.

## I'm interested so how do I register?

You can register for ImageCLEF 2004 by contacting Carol Peters ([carol.peters@isti.cnr.it](mailto:carol.peters@isti.cnr.it)), the main coordinator for CLEF. For more specific information about any aspect of ImageCLEF or the tasks, please contact Paul Clough ([p.d.clough@sheffield.ac.uk](mailto:p.d.clough@sheffield.ac.uk)).

## For more information ...

The ImageCLEF 2004 website (<http://ir.shef.ac.uk/imageclef2004/index.html>) will be the main source of information about the tasks and through which the data, guidelines, resources and further information will be published. We also have an ImageCLEF mailing list ([imageclef@sheffield.ac.uk](mailto:imageclef@sheffield.ac.uk)) through which we update participants with track information. Contact Paul Clough to be added to this list. More information about CLEF can be found at: <http://www.clef-campaign.org>