MANY – Medical image retrieval in mANY dimensions

Development of the current content–based medical image retrieval approaches from two dimensions to three and more dimensions.

Realization

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Informations

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Keywords

- Medical image retrieval
- N-dimensional texture characterization
- Web interfaces

Our competencies

Texture analysis, medical decision support, multidimensional data

Valorization

Publications, tools for decision support in hospitals

Partnership

- University Hospitals of and University Geneva

Funding

Fonds national suisse (FNS)

Calendar

09/2010 – 08/2012

The MANY project will enlarge the current content–based **medical image retrieval** approaches from two dimensions to three and more dimensions. The datasets contain several challenges that need to be overcome such as the shear amount of data to be treated and the relatively small part of the data that actually contains relevant information in large medical imaging data sets.

MANY **combines knowledge** of clinical partners in the emergency radiology with the process knowledge of the medical informatics service, the imaging experience of the CIBM and the image retrieval knowledge of the medGIFT research group.

The cornerstone of MANY is to use **N-dimensional texture characterization** of biomedical tissue to assess content-based inter-case distance for find cases similar to a patient under observation.
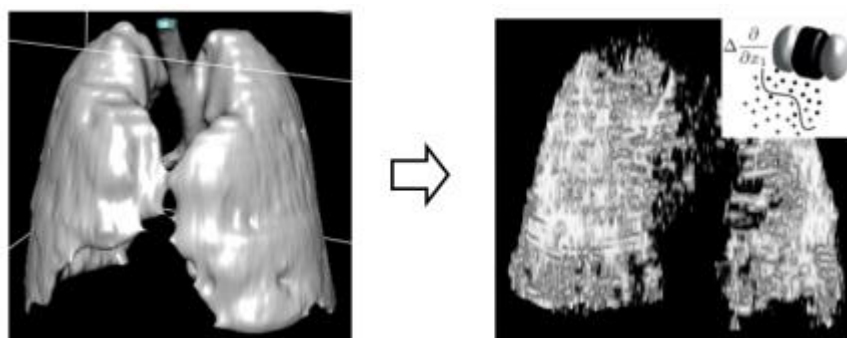
Use of 3D texture analysis to characterize biomedical tissue.

Other contributions of this project include the development of a **browser–based user interface** for multi–dimensional data visualization to support the retrieval process of visually similar cases and the interaction with the user. Such web interfaces will make the software available for a larger number of users via the Internet.