



## Projet FP7 – KHRESMOI

Nom du projet	Knowledge Helper for Medical and Other Information users – KHRESMOI
Call	ICT-2009-4.3
Type de projet	Collaborative project
Rôle de la HES-SO	Coordinateur
Chercheur impliqué	Henning Müller (HES-SO Valais Wallis)
Participants	Haute Ecole Spécialisée de Suisse occidentale (Switzerland) – coordinateur; Univerzita Karlova V Praze (Czech Republic); Information Retrieval Facility Society (Austria); Health On The Net Fondation (Switzerland); Ontotext Ad (Bulgaria); Gesellschaft der Ärzte in Wien (Austria); Medizinische Universitaet Wien (Austria); Universitaet Duisburg-Essen (Germany); Evaluations and Language Resources Distribution Agency Sa (France); Atos Origin Sociedad Anonima Espanola (Spain); Dublin City University (Ireland); University of Sheffield (United Kingdom).
Budget global	10.82 millions euro / financement UE : 8.04 millions euro
Durée	48 mois, début le 1.9.2010
Résumé	<p>In KHRESMOI, we will build a multi-lingual multi-modal search and access system for biomedical information and documents. This will be achieved by:</p> <ul style="list-style-type: none"><li>• Effective automated information extraction from biomedical documents, including improvement using crowd sourcing and active learning, and automated estimation of the level of trust and target user expertise</li><li>• Automated analysis and indexing for medical images in 2D (X-Rays), 3D (MRI, CT), and 4D (fMRI)</li><li>• Linking information extracted from unstructured or semi-structured biomedical texts and images to structured information in knowledge bases</li><li>• Support of cross-language search, including multi-lingual queries, and returning machine-translated pertinent excerpts</li><li>• Adaptive user interfaces to assist in formulating queries and display search results via ergonomic and interactive visualizations</li></ul>

The research will flow into several open source components, which will be integrated into an innovative open architecture for robust and scalable biomedical information search.

The system will be evaluated in use cases by three well-defined user groups:

1. Members of the general public want access to reliable and understandable medical information in their own language
2. Clinicians and general practitioners need accurate answers rapidly a search on PubMed requires on average 30 minutes, while clinicians typically have 5 minutes available. Furthermore, over 40% of searches fail to provide relevant information
3. Radiologists are drowning in images at larger hospitals over 100GB (over 100000 images) are produced per day

Representative groups of end users are available for sizable evaluations, accessed through a medical search engine with 11000 queries per day, a professional association of 2700 medical doctors, and two radiology departments with 175 radiologists.

KHRESMOI is directed at Objective ICT-2009.4.3: Intelligent Information Management. It will focus on target outcome (a) capturing tractable information.

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<http://www.khresmoi.eu>