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KHRESMOI

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Dissemination and training report for year 2

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Executive Summary

This deliverable reports, in Part I, on the dissemination and training activities in Khresmoi year 2 (September 2011 – August 2012). In Part II, a plan for the dissemination and training activities for the remaining two years, with an emphasis on year 3, is presented. The activities are grouped according to the target groups: scientific community, medical community, business community and general public.

The second year of Khresmoi has been focussed on the development of the core technology of Khresmoi and on creating a relatively stable integrated prototype for the end of year 2. This focus on the technology is demonstrated by the increase in the number of publications and especially presentations to the scientific community with respect to year 1.

To avoid the creation of what could be construed as hype without concrete results, dissemination to the medical and business communities has remained low-key, as these groups are particularly sensitive to such hype and could lose faith in the project if concrete results are not available. Dissemination to these communities is planned to become a focus in year 3, when the Khresmoi prototype is available and a number of events aimed at these communities have already been planned. Nevertheless, the number of presentations to the business and medical communities have increased significantly in year 2 compared to year 1. Khresmoi results were also presented at a booth at the IMAGINE exhibit of the European Congress on Radiology (ECR), the largest radiology congress in Europe that gathered over 20,000 participants.

Much of the dissemination to the medical community and general public in year 2 has had the aim of recruiting people to test the Khresmoi prototype in the user-centred evaluations in year 3.

The Khresmoi website (<http://khresmoi.eu>) continues to be the central source of information to people external to the project, while the Khresmoi Wiki serves this purpose internally. Two major updates of the website have been carried out in year 2. The first is the automatic generation of the list of Khresmoi publications through a link to the Bibsonomy citation management site. The second is the clear targeting of information on Khresmoi results to the four dissemination target groups listed above, where a visitor to the website can easily select their target group on the entry page of the website. The LinkedIn Khresmoi group continues to be active, having grown to 94 members.

Training activities have been strong in year 2, with a summer school organised (Summer School on Image Processing in Vienna, Austria in July 2012), contributions to two further summer schools, and three tutorials organised.

A number of high impact dissemination activities are planned for year 3, aimed at the business and medical communities, including:

- Demonstration of the Khresmoi prototype at the Health 2.0 Europe Conference in Berlin in November 2012
- Booth shared with other EU projects at the CeBIT 2013 in Hannover, Germany in March 2013
- Booth at the European Conference on Radiology in Vienna in March 2013

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1 Introduction

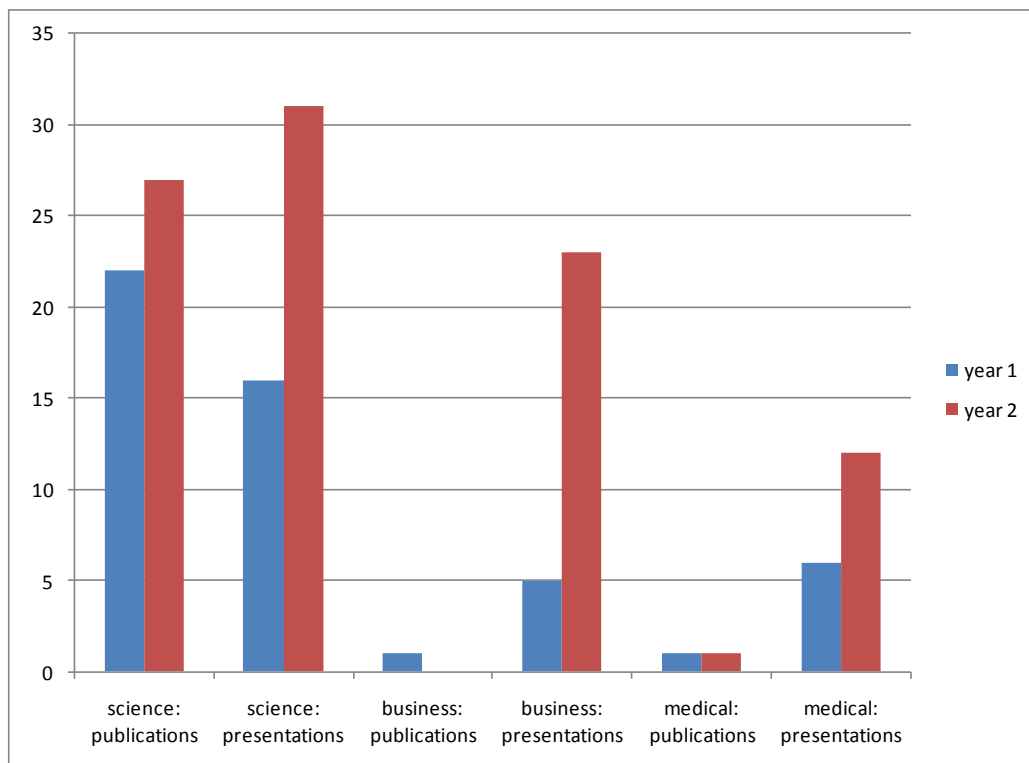
This deliverable reports, in Part I, on the dissemination and training activities in Khresmoi year 2 (September 2011 – August 2012). In Part II, a plan for the dissemination and training activities for the remaining two years, with a focus on year 3, is presented. The activities are grouped according to the four target groups for Khresmoi dissemination, listed along with reminders of their definitions below:

- **Scientific community:** research scientists mainly working in the scientific areas covered by the Khresmoi project;
- **Medical community:** medical practitioners, including radiologists, working in medical and health care;
- **Business community:** companies of all sizes working mainly in the IT and medical IT domains;
- **General public:** all end users of search engines, particularly medical and health search engines.

If a publication or activity is aimed at more than one target group, it is placed in the section corresponding to the main target group. Additional sections on the online presence and training activities are included.

The following graph shows a comparison between year 1 and year 2 of the project on the number of publications and presentations aimed at the scientific, business and medical communities:

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The second year of Khresmoi has been focussed on the development of the core technology of Khresmoi and on creating a relatively stable integrated prototype for the end of year 2. This focus on the technology is demonstrated by the increase in the number of publications and especially presentations to the scientific community with respect to year 1. It is expected that this increase will continue, as the list of submitted scientific papers currently contains 11 journal and conference papers, for which publication would be expected in year 3.

To avoid the creation of what could be construed as hype without concrete results, dissemination to the medical and business communities has remained low-key, as these groups are particularly sensitive to such hype and could lose faith in the project if concrete results are not available. Dissemination to these communities is planned to become a focus in year 3, when the Khresmoi prototype is available and a number of events aimed at these communities have already been planned. Nevertheless, the number of presentations to the business and medical communities have increased significantly in year 2 compared to year 1.

The majority of the dissemination to the general public has been aimed at attracting participation in the user-centred evaluation planned for year 3. Much dissemination to the medical community has likewise been aimed at attracting physicians to participate in the user-centred evaluations.

In order to ensure effective dissemination of information toward the target communities, the following partners were given the responsibility for the dissemination to each of the target groups during year 2:

- Scientific Community – TUW
- Business Community – ATOS
- Medical Community – MUW for radiologists and GAW for physicians
- General Public – ELDA

These partners ensure that full advantage is taken of opportunities for dissemination toward these communities, and coordinate larger dissemination pushes toward these communities.

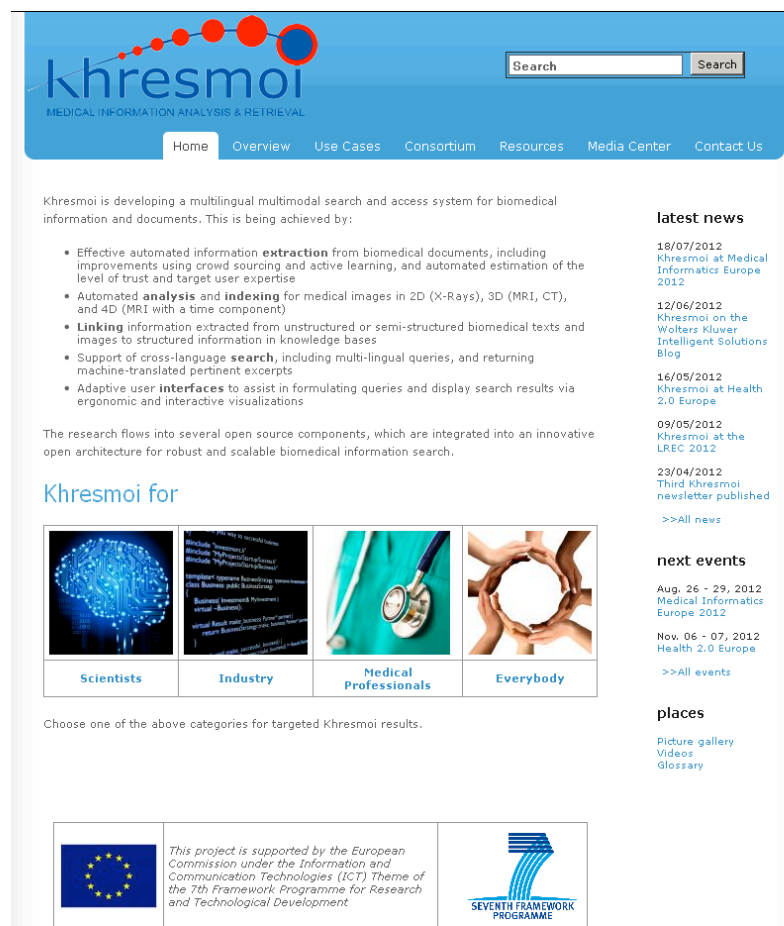
I. Dissemination in Year 2

2 Online Presence

The Khresmoi website (<http://khresmoi.eu>) continues to be the central source of information to people external to the project, while the Khresmoi Wiki serves this purpose internally.

In order to better administrate the Khresmoi publications, these are now all placed on the Bibsonomy citation management website (<http://www.bibsonomy.org/>) with the tag *khresmoi-project*. The Khresmoi website publications page generates the list of publications at display time by querying Bibsonomy with this tag (<http://khresmoi.eu/resources/publications/>).

In order to cater to the increasing dissemination toward the business and medical communities from year 3 onwards, the website has been redesigned. On the entry page to the website (shown below), four large images invite the visitor to select the target group that they feel part of (corresponding to the dissemination target groups listed in Section 1). This redesign went online in the last week of August 2012.




Selection of an image takes the visitor to a page on which the Khresmoi results (including deliverables, demonstrations and software) that should be most useful for their group are presented. This should allow visitors to rapidly navigate to the information on the website most useful to them. The following image shows the information page for the scientist group:

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Khresmoi for Scientists

This page provides links to information of interest to scientists, both computer scientists and scientists from other disciplines, who may wish to use the results to assist in their work.



General Information

- Read the [information folders and newsletters](#).
- Join the discussion on the [Khresmoi LinkedIn Group](#).
- Follow [Khresmoi on Twitter](#).

Software

Khresmoi is producing software for text analysis, semantic search, medical image analysis and search, search interfaces, machine translation and knowledge bases. See the [software page](#) for links to this software, and links to Khresmoi Deliverables giving technical details of its use in Khresmoi.

Medical Image Analysis Algorithms

Khresmoi is developing image analysis algorithms for use on 2D and 3D radiology data. See more information in [Deliverable 2.2](#).

Information Extraction and Search

Techniques are being developed for information extraction ([Deliverable 1.2](#)), also considering the multilingual aspects ([Deliverable 4.1.2](#)). An annotation pipelines with cycles of manual correction and subsequent learning from the corrections is being developed.

Machine Translation

Techniques for machine translation focussed on the medical domain are being developed ([Deliverable 4.2](#))

Domain Analyses

Analyses of the use of search for medical information for the following end users were done:

- Radiologists ([Deliverable 9.1](#))
- Medical professionals in general ([Deliverable 8.1.2](#))
- Members of the general public ([Deliverable 8.1.1](#))

Further analysis of the results for the medical professional and general public groups led to a specification based on their requirements ([Deliverable 8.2](#)).

Evaluation Methodology

An integrated evaluation strategy for all Khresmoi components is being developed. This strategy should allow an overview of the interaction of all components in the full prototype.

overview

Scientists
Industry
Medical Professional
Everybody

latest news

18/07/2012
Khresmoi at Medical Informatics Europe 2012

12/06/2012
Khresmoi on the Wolters Kluwer Intelligent Solutions Blog

16/05/2012
Khresmoi at Health 2.0 Europe

09/05/2012
Khresmoi at the LREC 2012

23/04/2012
Third Khresmoi newsletter published

[>>All news](#)

next events

Aug. 26 - 29, 2012
Medical Informatics Europe 2012

Nov. 06 - 07, 2012
Health 2.0 Europe

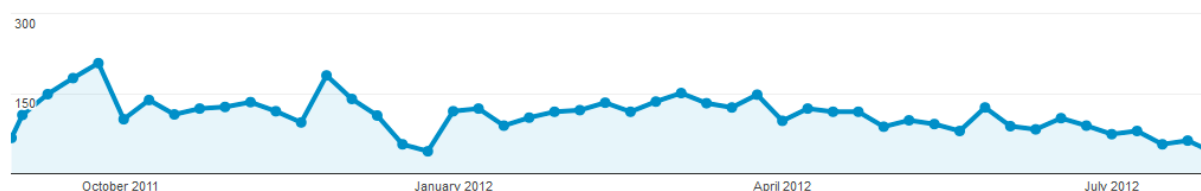
[>>All events](#)

places

[Picture gallery](#)
[Videos](#)
[Glossary](#)

We present here the Khresmoi website access statistics for the period from the 1st of September 2011 to the 31st of July 2012, obtained from Google Analytics.

The following plot shows the number of visits per week over this time period:

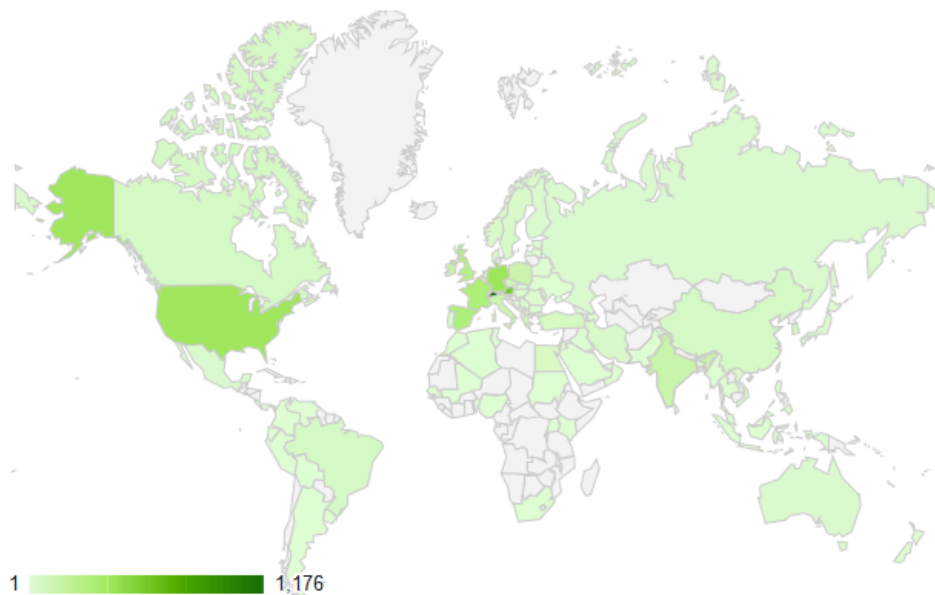


In total, 3192 unique visitors visited the site 5410 times. 56.5% of the visitors were visiting the site for the first time, while 43.5% were returning visitors.

The average number of pages/visit was 3.24. This is generally enough to get a basic overview of Khresmoi. The “guided visits” for the different target groups now available on the website should increase the number of pages per visit by listing pertinent pages for each group. This redesign is also planned to address the current situation in which 56% of visitors only view a single page on the site.

The map shows the sources of the visits:

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Visits came from 96 countries/territories with the highest number from Switzerland and Austria, the two countries with the most participants in Khresmoi, followed by Germany and the USA.

The number of visits for pages that had over 100 visits are shown below:

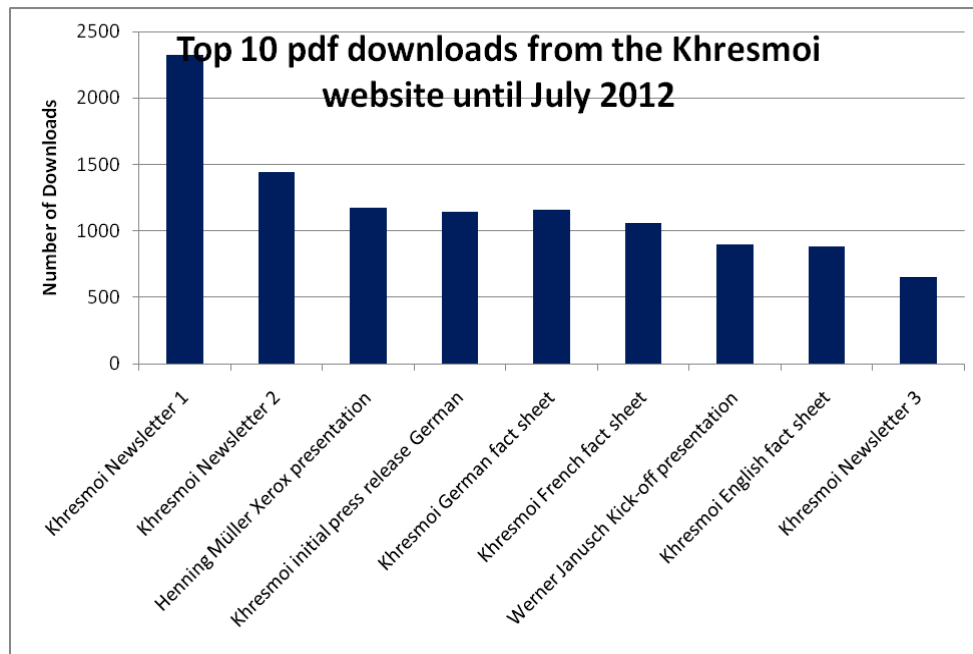
Page	Pageviews	↓
1. /	4,318	
2. /resources/	1,121	
3. /MedSearch/faces/ImageSearch.jsp	1,078	
4. /consortium/	969	
5. /overview/	954	
6. /use-cases/	788	
7. /MedSearch/faces/Search.jsp	770	
8. /resources/publications/	758	
9. /media-center/	579	
10. /resources/deliverables/	399	
11. /contact-us/	347	
12. /resources/presentations/	231	
13. /medsearchmobile/	225	
14. /MedSearch/faces/Search.jsp?query=test&x=0&y=0	182	
15. /MedSearch/faces/SearchMimir.jsp	175	
16. /gallery	164	
17. /events/summer-school-on-image-processing-2012/	158	
18. /news/medsearch-demo-available/	140	
19. /resources/kick-off-meeting-documentation/	122	

The entry page received the most visits, with the resources page ranked second. The image search demo MedSearch received a large number of visits, so we can expect a good number of visitors when the first Khresmoi prototype is released during year 3 of the project. Other central information pages

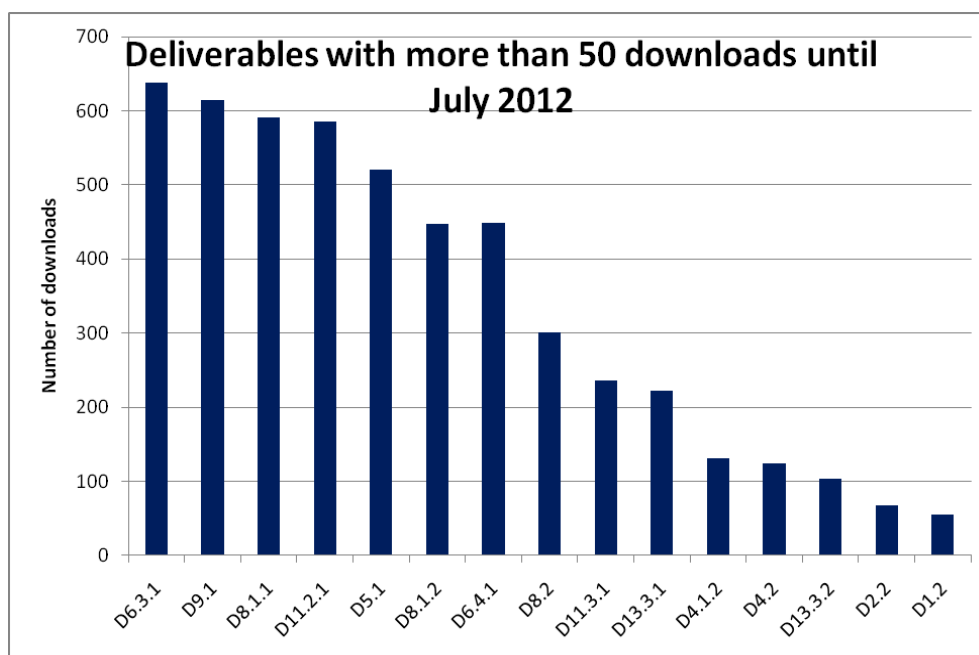
D11.3.2 Dissemination and training report for year 2

such as the overview, use case description, list of publications, media center and deliverables pages are also ranked highly.

Many pdf documents are available on the Khresmoi website, including all public deliverables. The following plot shows the total number of downloads in the period from project begin to the end of July 2012 for the ten pdf documents with the highest total number of downloads:



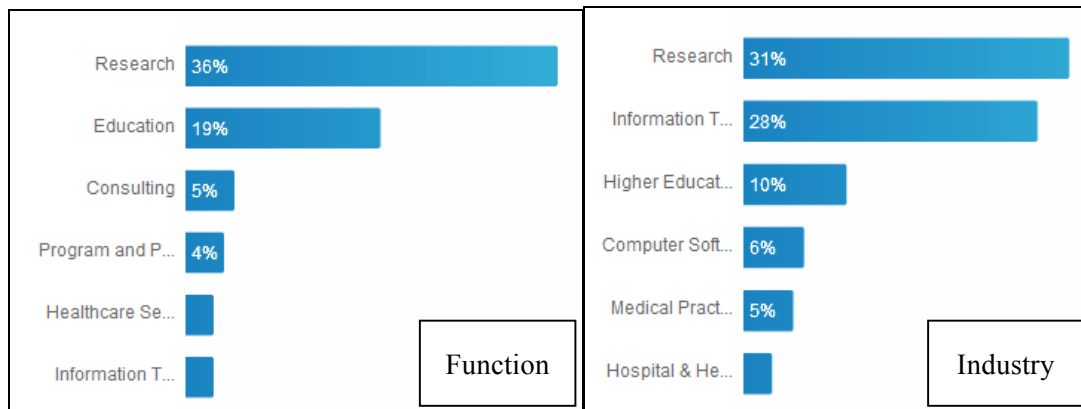
The deliverable with the highest total number of downloads is D6.3.1, ranked at position 11 by total number of downloads in the timeframe given above. The next plot shows the total number of downloads for the deliverables that have been downloaded more than 50 times since the beginning of the project to the end of July 2012:



The Khresmoi web page continues to be well ranked by Google. On google.com it is ranked first for the query “medical information analysis” and fourth for the query “medical information retrieval”.

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The LinkedIn Khresmoi group continues to be active, having grown to 94 members, including many members external to the Khresmoi project. Below are distributions of the functions of the members of the group (left) as well as the industry that they are in (right):



3 Scientific Dissemination

3.1 Publications

3.1.1 Journal articles

- Depeursinge, Adrien and Duc, Samuel and Eggel, Ivan and Müller, Henning. Mobile Medical Visual Information Retrieval. In IEEE Transactions on Information Technology in BioMedicine, Jan;16(1):53-61, Year 2012.
- Depeursinge, Adrien and Vargas, Alejandro and Gaillard, Frédéric and Platon, Alexandra and Geissbuhler, Antoine and Poletti, Pierre-Alexandre and Müller, Henning. Case-based lung image categorization and retrieval for interstitial lung diseases: clinical workflows. In International Journal of Computer Assisted Radiology and Surgery, Jan;7(1):97–110, Year 2012.
- Depeursinge, Adrien and Vargas, Alejandro and Platon, Alexandra and Geissbuhler, Antoine and Poletti, Pierre-Alexandre and Müller, Henning. Building a Reference Multimedia Database for Interstitial Lung Diseases. In Computerized Medical Imaging and Graphics, Volume 36, Issue 3, April 2012, Pages 227–238, Year 2011.
- Kriewel, Sascha. Interaktives Retrieval und situationsabhängige Vorschläge. In Datenbank-Spektrum, (11) 3: 173–181, Year 2011.
- Markonis, Dimitris and Holzer, Markus and Dungs, Sebastian and Vargas, Alejandro and Langs, Georg and Kriewel, Sascha and Müller, Henning. A survey on visual information search behavior and requirements of radiologists, accepted in Methods of Information in Medicine, Year 2012.
- Gurulingappa, H. and Rajput, A. M. and Roberts, A. and Fluck, J. and Hofmann-Apitius, M. and Toldo, L. Development of a Benchmark Corpus to Support the Automatic Extraction of Drug-related Adverse Effects from Medical Case Reports. In Journal of Biomedical Informatics, Year 2012.
- Depeursinge, Adrien and Van de Ville, Dimitri and Platon, Alexandra and Geissbuhler, Antoine and Poletti, Pierre-Alexandre and Müller, Henning. Near-Affine-Invariant Texture

Learning for Lung Tissue Analysis Using Isotropic Wavelet Frames, IEEE Trans Inf Technol Biomed. Jul;16(4):665–675 Year 2012.

3.1.2 Conference and workshop articles

- Niraj Aswani, Thomas Beckers, Erich Birngruber, Célia Boyer, Andreas Burner, Jakub Bystroň, Khalid Choukri, Sarah Cruchet, Hamish Cunningham, Jan Dždek, Ljiljana Dolamic, René Donner, Sebastian Dungs, Ivan Eggel, Antonio Foncubierta, Norbert Fuhr, Adam Funk, Alba García Seco de Herrera, Arnaud Gaudinat, Georgi Georgiev, Julien Gobeill, Lorraine Goeuriot, Paz Gomez, Mark Greenwood, Manfred Gschwandtner, Allan Hanbury, Jan Hajič, Jaroslava Hlaváčová, Markus Holzer, Gareth Jones, Blanca Jordan, Matthias Jordan, Klemens Kaderk, Franz Kainberger, Liadh Kelly, Sascha Kriewel, Marlene Kritz, Georg Langs, Nolan Lawson, Dimitrios Markonis, Iván Martinez, Vassil Momtchev, Alexandre Masselot, Hélène Mazo, Henning Müller, Pavel Pecina, Konstantin Pentchev, Deyan Peychev, Natalia Pletneva, Diana Pottecher, Angus Roberts, Patrick Ruch, Matthias Samwald, Priscille Schneller, Veronika Stefanov, Miguel Angel Tinte, Zdeňka Urešová, Alejandro Vargas and Dina Vishnyakova, Khresmoi – multimodal multilingual medical information search, MIE 2012 Village of the Future.
- Beckers, Thomas and Dungs, Sebastian and Fuhr, Norbert and Jordan, Matthias and Kriewel, Sascha, ezDL: An Interactive Search and Evaluation System, in: Proceedings of the SIGIR 2012 Workshop on Open Source Information Retrieval, page 9-16, August 2012
- Tsikrika, Theodora and Müller, Henning and Kahn Jr., Charles E., Log Analysis to Understand Medical Professionals' Image Searching Behaviour, in: Proceedings of the 24th European Medical Informatics Conference (MIE2012), Pisa, Italy, 2012
- Samwald, Matthias and Kritz, Marlene and Gschwandtner, Manfred and Hanbury, Allan, A curated index of high-quality web resources for medical practitioners, MIE 2012 poster.
- Pletneva, Natalia and Vargas, Alejandro and Kalogianni, Kostantina and Boyer, Celia, Online health information search: what struggles and empowers the users? Results of an online survey, Oral presentation at MIE2012
- Cruchet, Sarah and van der Plas, Lonneke and Boyer, Célia, Trustworthiness and Relevance in Web-Based Clinical Question Answering, Oral presentation at MIE2012
- Ali, Sharib and Foncubierta-Rodríguez, Antonio and Depeursinge, Adrien and Meriaudeau, Fabrice and Ratib, Osman and Müller, Henning. Synchronized slice viewing of similar image series. SPIE Medical Imaging: Advanced PACS-based Imaging Informatics and Therapeutic Applications. Year 2012.
- Foncubierta-Rodríguez, Antonio and Depeursinge, Adrien and Gui, Laura and Müller, Henning. Three dimensional multi-scale visual words for texture-based cerebellum segmentation. Medical Imaging 2012: Image Processing. (8314) 1: 83142Z, SPIE, Year 2012.
- Goeuriot, Lorraine and Hanbury, Allan and Jones, Gareth J. F. and Kelly, Liadh and Kriewel, Sascha and Rodriguez, Ivan Martinez and Müller, Henning and Tinte, Miguel A. Supporting Collaborative Improvement of Resources in the Khresmoi Health Information System. Proceedings of the workshop on Collaborative Resource Development and Delivery (CRDD) at LREC. Year 2012.
- Markonis, Dimitrios and García Seco de Herrera, Alba and Eggel, Ivan and Müller, Henning. Multi-scale visual words for hierarchical medical image categorization. SPIE Medical Imaging 2012: Image Processing. Year 2012.

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- Markonis, Dimitrios and García Seco de Herrera, Alba and Eggel, Ivan and Müller, Henning. Multi-scale visual words for hierarchical medical image categorization. SPIE Medical Imaging 2012: Image Processing. Year 2012.
- Müller, Henning and Kalpathy-Cramer, Jayashree and Demner-Fushman, Dina and Antani, Sameer. Creating a classification of image types in the medical literature for visual categorization. SPIE medical imaging. Year 2012.
- Depeursinge, Adrien and Greenspan, Hayit and Syeda-Mahmood, Tanveer and Müller, Henning. Overview of the second workshop on medical content-based retrieval for clinical decision support. Proceedings of the MICCAI workshop on medical content-based retrieval for clinical decision support (MCBR-CDS). (7075) 1-11, Springer Lecture Notes in Computer Science, Year 2011.
- Donner, René and Haas, Sebastian and Burner, Andreas and Holzer, Markus and Bischof, Horst and Langs, Georg. Evaluation of Fast 2D and 3D Medical Image Retrieval Approaches based on Image Miniatures. Proc. MICCAI 2011 Workshop on Medical Content-based Retrieval for Clinical Decision Support. Year 2011.
- Greenwood, Mark A. and Tablan, Valentin and Maynard, Diana. GATE Mimir: Answering Questions Google Can't. Proceedings of the 10th International Semantic Web Conference (ISWC2011). Year 2011.
- Haas, Sebastian and Donner, René and Burner, Andreas and Holzer, Markus and Langs, Georg. SuperPixel-based Interest Points for Effective Bags of Visual Words Medical Image Retrieval. Proc. MICCAI 2011 Workshop on Medical Content-based Retrieval for Clinical Decision Support. Year 2011.
- Hanbury, Allan and Müller, Henning. KHRESMOI: Towards multilingual Health Information for Doctors and Patients. Proc. 2nd SA Telemedicine and eHealth conference. Year 2011.
- Depeursinge, Adrien and Foncubierta-Rodríguez, Antonio and Van De Ville, Dimitri and Müller, Henning. Lung Texture Classification Using Locally-Oriented Riesz Components. Medical Image Computing and Computer-Assisted Intervention – MICCAI 2011. editor(s) Fichtinger, Gabor and Martel, Anne and Peters, Terry. Lecture Notes in Computer Science, 231-238, Springer Berlin / Heidelberg, Year 2011.
- Depeursinge, Adrien and Müller, Henning. Signals, Sensors and Imaging Informatics. In Yearbook of Medical Informatics, International Medical Informatics Association, Year 2011.
- Markonis, Dimitrios and Eggel, Ivan and de Herrera, Alba Garcia Seco and Müller, Henning. The medGIFT Group in ImageCLEFmed 2011. CLEF (Notebook Papers/Labs/Workshop). Year 2011.

3.1.3 Special Issue

The special issue in Methods of Information in Medicine (edited by Henning Müller, Allan Hanbury and Najeeb Al Shorbaji) received 10 submissions, of which 5 passed the review process. It is expected that the special issue will be published before the end of 2012.

3.2 Presentations

Khresmoi is again very visible at the Medical Informatics Europe Conference (MIE) held in Pisa, Italy from August 26th to August 29th 2012, with the following activities:

- Booth at the MIE Village of the Future

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- Presentation at the MIE Village of the Future session on “People and Expectations” (TUW)
- Tutorial on *Searching Text and Images in the Medical Domain* (TUW, HES-SO)
- Oral presentation on *Online health information search: what struggles and empowers the users? Results of an online survey* (HON)
- Oral presentation on *Trustworthiness and Relevance in Web-Based Clinical Question Answering* (HON)
- Poster presentation on *A curated index of high-quality web resources for medical practitioners* (TUW)

Further presentations about topics related to Khresmoi are given below:

- 16.8.2012 A Cloud-based Approach for Evaluation on Private Data, presented at the SIGIR Workshop on Community IR Evaluations using Private Data, Portland, Oregon, USA (TUW)
- 11.7.2012 Demonstration of Khresmoi for knowledge technology group at GESIS Institute (UDE)
- 28.6.2012 Participation in panel on access to scientific data at the CBMI conference, Annecy, France (HES-SO)
- 22.6.2012 Khresmoi mentioned in invited talk at the main session, META-FORUM, Brussels (ATOS)
- 21.6.-22.6.2012 Poster at the “mini-expo” at the META-FORUM conference in Brussels, demo of translation system (CUNI)
- 18.06.2012 - 22.06.2012 GATE annual training week, demos of Mimir and Khresmoi to various people (USFD)
- 27.5.2012 Presentation of a paper on *Supporting Collaborative Improvement of Resources in the Khresmoi Health Information System* at the LREC workshop on Collaborative Resource Development and Delivery (DCU)
- 23-25.5.2012 LREC Conference, Khresmoi booth at the EU Projects Village, Istanbul (TUW, DCU, CUNI, ELDA). At the booth, Khresmoi was presented to his Excellency Deputy Minister Prof. Dr. Davut Kavranoglu, Ministry of Science, Industry and Technology of Turkey
- 19.5.2012 Think Tank at the World Wide Web conference on benchmarking and industry interest in it, Lyon, France (HES-SO)
- 21.3.2011 Presentation of the Khresmoi project at the LOD2 project consortium meeting (TUW)
- 02.2012 SPIE Medical Imaging 2012, San Diego, CA, USA, presentations on the following topics (HES-SO):
 - *Creating a classification of image types in the medical literature for visual categorization*
 - *Synchronized slice viewing of similar image series*
 - *Multi-Scale Visual Words for Hierarchical Medical Image Categorisation*
 - *Three dimensional multi-scale visual words for texture-based cerebellum segmentation* (Poster)
- 26.01.2012 Presentation including Khresmoi to meeting with Universities of Leeds and York (USFD)

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- 24.11.2011 Presentation on Khresmoi and experience in FP7 at the University of Bern (HES-SO)
- 24.11.2011 Presentation including Khresmoi at Internet Memory in Paris (USFD)
- 16.11.2011 CNGL Localisation Innovation Showcase, <http://www.cngl.ie/localisationinnovationshowcase.html>, Poster (DCU)
- 05.10.2011 Presentation at eHealth Informatics meeting, (USFD)
- 18-22.09.2011 MICCAI 2011, Toronto, Canada, Presentation of papers at the conference and workshops (HES-SO, MUW):
 - *Evaluation of Fast 2D and 3D Medical Image Retrieval Approaches based on Image Miniatures*
 - *SuperPixel-based Interest Points for Effective Bags of Visual Words Medical Image Retrieval*
 - *Lung Texture Classification Using Locally-Oriented Riesz Components. Medical Image Computing and Computer-Assisted Intervention*
- 3-4.10.2011 Statements at the iHealth Workshop in Brussels, Belgium (TUW, HES-SO)
- 14.09.2011 African Telemedicine Conference, Cape Town, South Africa, Presentation on Khresmoi (TUW)
- 6.9.2011 Invited talk on visual and textual image retrieval at the Spanish Natural Language Processing Conference in La Huelva, Spain (HES-SO)

3.3 Workshops

- 15-18.12.2011 NIPS Workshop, <http://www.nips.cc>, Chairing workshop on Machine Learning in Neuroimaging (MUW)
- 18-22.09.2011 MICCAI 2011, Toronto, Canada, Organization of a workshop on content-based medical image retrieval (HES-SO)
- 19-22.11.2011 ImageCLEF workshop, Amsterdam, The Netherlands (HES-SO).

4 Dissemination to the Business Community

4.1 Presentations

- 16.07.2012 Presentation of a Khresmoi at CITTI in Chengdu, China, a potential commercial partner (Henning Müller)
- 12.07.2012 Demo of Mimir to British Library staff in London (USFD)
- 10.07.2012 Khresmoi discussions with UK marketing manager, Lighthouse IP Group (USFD)
- 05.07.2012 Demo of Mimir to British Library staff in Sheffield (USFD)
- 02.07.2012 and 04.07.2012 discussions of creating visualisations on top of Mimir with WebLyzard (USFD)
- 26.06.2012 Telephone discussions of Mimir use with ISO (USFD)

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- 14.06.2012 Telecon discussions with UK Health Protection Agency and UK Food and Environment Research Agency (USFD)
- 4.6.2012 Presentation on Khresmoi to Wolters Kluwer staff internationally by telco (TUW)
- 23.05-24.05.2012 Poster entitled “How do non-physicians search for health information online?” presented at Doctors2.0&You conference in Paris (HON)
- 16.05.2012 Demo Mimir and discuss Khresmoi with UK Health Protection Agency in Sheffield (USFD)
- 10.04.2012 Second meeting with the Atos Research & Innovation department with the Business Development Director (ATOS)
- 23.03.2012 Presentation including Khresmoi to collaborators at South London and Maudsley Hospital, London (USFD)
- 15.03.2012 Discussions and Mimir demo with Hanzo Archives, London (USFD)
- 12.03.2012 Presentation to the Health Division at Corporation director (ATOS)
- 18.01.2012 Presentation including Khresmoi to Royal Brompton Hospital staff in Sheffield (USFD)
- 18-19.01.2012 Discussions and Mimir demo with UK Government National Archives, London (USFD)
- 16.01.2012 First Meeting with the Atos Research & Innovation department with the Business Development Director (ATOS)
- 28.12.2011 Conference call with MedTing Business Development people (ATOS)
- 21.12.2011 Presentation and show demos to ATOS Spain Innovation Director (ATOS)
- 07.12.2011 Presentation of Khresmoi work to eClinicalWorks in Sheffield (USFD)
- 6.12.2011 Santé et Mobilité - Apple, Restricted event, Presentation (HON)
- 09.11.2011 Discussions including Khresmoi with WebChartMD telecon (USFD)
- 27-28.10.2011 Health 2.0 Berlin, slides with the key findings of non-physician and physician surveys (HON)

5 Dissemination to the Medical Community

5.1 Publications

- Dimitrios Markonis, Adrien Depeursinge, Ivan Eggel, Antonio Foncubierto-Rodríguez and Henning Müller, Accessing the medical literature with content-based visual retrieval and text retrieval techniques, in: Proceedings of the Radiological Society of North America (RSNA), Chicago, Illinois, US, 2011

5.2 Presentations

- 12.7.2012 Presentation on Khresmoi at Tsinghua University Hospitals, Beijing, China (HES-SO)
- 11.7.2011 Presentation on Khresmoi at Beijing Navy Hospital, Beijing, China (HES-SO)

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- 10.7.2012 presentation on Khresmoi at Beijing Capital Medical University, Beijing China (HES-SO)
- 28.06.2012 Invited talk, KCL British Medical Association meeting, London (USFD)
- 25.06.2012 Demonstrate Mimir over life science data to UK Health Protection Agency (USFD)
- 27.4.2012 American Society of Neuroradiology (ASNR) talk on Machine Learning in Neuroradiology (Atlas building), New York, USA (MUW)
- 06.02.2012 Presentation including Khresmoi to collaborators at Guy's Hospital, London (USFD)
- 06.02.2012 Presentation including Khresmoi to potential users at Royal Brompton Hospital, London (USFD)
- 27.11.2012-02.12.2012 Presentation of a demo and of the following papers (HES-SO):
 - *Using Eye Tracking on a Clinical Viewing Station to Help Investigate Image Search Requirements of Radiologists*
 - *Accessing the medical literature with content-based visual retrieval and text retrieval techniques*
- 17.10.2011 Invited talk, UK National Institute of Health Research workshop Guy's Hospital London - Presentation and discussion of Khresmoi (USFD)
- 09.2011 Invited presentation at the pharmacy summer school on biomedical visual information retrieval in Zermatt, Switzerland (HES-SO)

5.3 Presence of Khresmoi at Symposia

Khresmoi results were presented at a booth at the IMAGINE exhibit of the European Congress on Radiology (ECR), the largest radiology congress in Europe that gathered over 20,000 participants from 102 countries, from March 1st to March 3rd 2012. The demonstrations of fully automatic anatomy identification and pathology retrieval – the building blocks of the search engine – spurred lively discussions about the performance and impact on the clinical radiology workflow. A brief overview article appeared in the daily ECR newspaper. (MUW)

5.4 Other

The Association of Physicians in Vienna (GAW) has started an awareness campaign among its members, particularly with the aim of recruiting members for the user-centered evaluations. This involved the development of a Khresmoi section within the GAW homepage (<http://www.billrothhaus.at>), the development of a Khresmoi-related “question of the week” (e.g. Do you use Pubmed to search for information?), presentation of parts of survey results, the introduction of a social platform to allow discussion amongst physicians, and weekly distribution of Khresmoi Folders during medical seminars and conferences held at the Society.

6 Dissemination to the Public

Heath On the Net has contacted a number of patient organisations, especially with the aim of recruiting people to take part in the user-centred evaluations of the Khresmoi system. In particular,

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Khresmoi has been presented to and discussed with the following organisations: the Diabetes Education Study Group (<http://www.desg.org/>), La Ligue Contre le Cancer in France (<http://www.ligue-cancer.net/>) and the Swiss Patient Organisation (l'Organisation Suisse de Patients, <http://www.spo.ch/>).

The Khresmoi search prototype and image search was presented for the Girls' Day at UDE, an open house style event.

Khresmoi was covered in the following media:

- June 11, 2012: Khresmoi on Wolters Kluwer Solutions Blog: <http://solutions.wolterskluwer.com/blog/2012/06/the-khresmoi-integrated-project-automated-annotation-of-medical-texts/>
- November 2011: EPFL newsletter: http://newsletter.epfl.ch/alliance/newspaper-article?np_id=1122&np_eid=89&catid=22

Printed folders in English, French, German and Spanish with general Khresmoi information were prepared and distributed at many events (for all dissemination target groups).

The third Khresmoi newsletter was released online in April 2012 (<http://khresmoi.eu/assets/Newsletter/newsletter3-khresmoi.pdf>). The 4th newsletter is planned for September 2012.

7 Training

7.1 Tutorials

- 26-29.8.2012 Tutorial on *Searching Text and Images in the Medical Domain* held at the MIE 2012 (TUV, HES-SO)
- 18.06.2012 - 22.06.2012 GATE annual training week (<http://gate.ac.uk/family/training.html>), Sheffield, UK (USFD)
- 1.5.2012 ISBI Tutorial on Machine Learning and Neuroimaging (Atlases, Registration across large groups of patients), Barcelona, Spain (MUW)

7.2 Summer Schools

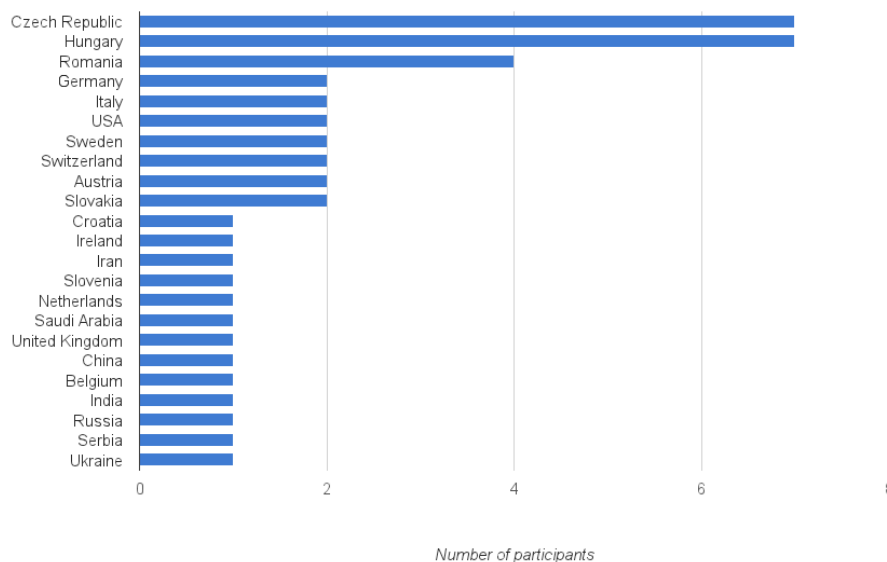
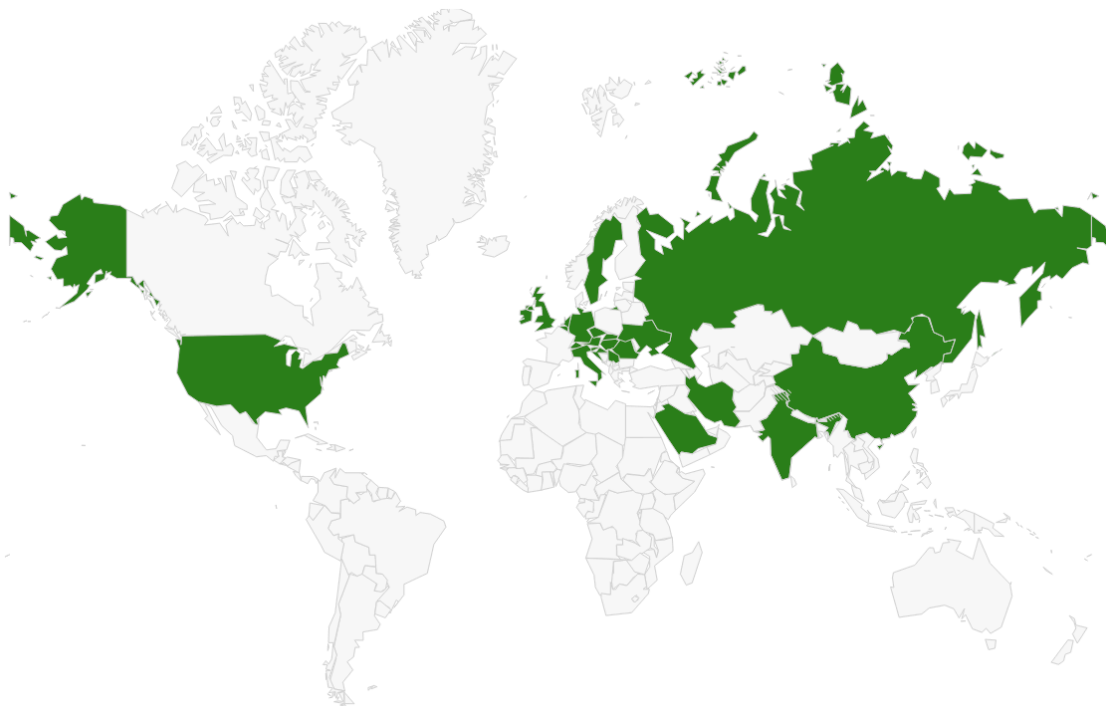
7.2.1 Summer School on Image Processing

Khresmoi partners TUV and MUW were the main organisers of the Summer School on Image Processing from July 4th to July 13th in Vienna (<http://www.cir.meduniwien.ac.at/ssip2012>). This summer school takes place annually since 1993, and is hence a well established event. Due to its association with a CEEPUS network (Central European Exchange Programme for University Studies, <http://www.ceepus.info>), it is possible to provide financial support for both students and lecturers from Central European countries. The summer school uses the format of lectures in the mornings and practical project work in groups in the afternoons.

In 2012, the theme of the summer school was set to “Medical Image Analysis.” Lectures focussed on this topic, and medical image analysis problems on provided medical image data were set for the practical work for the students. The summer school attracted a record number of 130 applications from potential participants in 2012. After a competitive selection process based on the CVs provided by the

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applicants, 70 participants were accepted to the summer school. Of these, 45 attended the summer school in the end (due to some students being unable to attend due to visa problems, difficulties in raising funds to attend, or deciding to attend a competing summer school after being selected for multiple summer schools). Of the 45 participants, 13 were female (29%). The 45 participants were from the 23 countries highlighted in the map below. The subsequent histogram shows the exact distribution of participants from each country, and is followed by an image of participants and lecturers.





Khresmoi supported the summer school with €5000, which was used for lecture room hire, MATLAB licenses for the computer work, paying travel and accommodation for a number of lecturers, funding a stipend for a student, and funding the final dinner. Beyond the organisational activities, four members of Khresmoi (Georg Langs, René Donner, Henning Müller and Allan Hanbury) held lectures at the summer school.

7.2.2 Summer School on Information Retrieval

HES-SO contributed to the organization of a winter school on information retrieval in Zinal, Switzerland from January 23rd to January 27th organized under the auspices of the PROMISE network of excellence with which Khresmoi has established a strong partnership (<http://www.promise-noe.eu/events/winter-school-2012/>).

7.2.3 Russian Summer School on Information Retrieval

A course on Domain-specific Search was held at this summer school from August 6th to August 10th 2012. This included a lecture on medical IR (TUW, funded by the MUMIA COST Action).

7.3 Inclusion of Khresmoi Material in Lectures

- January 2012 - Part of Lecture on "Information Engineering" (UDE)
- October 2011 - February 2012 - Student Project "[I]Control: Searching with Eye tracking" on using assistive technology to support health information searching of people with disabilities (UDE)
- December 2011 - Part of Lecture Series "Computerunterstützte Diagnose und Therapie" (Computer-assisted diagnosis and therapy), University of Vienna, Austria (MUW)

II. Plan for Dissemination for the Remaining 2 Years

This section presents the dissemination plan for the remaining 2 years of the project, with a focus on year 3 of the project.

8 Online Presence

The new website structure described in Section 2 will allow the number of visitors from each target group (scientific, business, medical and general public) to be roughly estimated, by measuring how often each target group-specific page is visited. These “guided visits” of the site targeted at specific groups should make it easier for website visitors to find relevant information and hence visit more pages and spend a longer time visiting the site.

9 Planned Scientific Dissemination

This section lists the journals and conferences that Khresmoi will aim to publish in, as well as the potential sponsorship of scientific conferences.

9.1 Publications

9.1.1 Journals

Below is a list of journals in which we will aim to publish in the remaining 2 years of the project:

- Methods of Information in Medicine
- Springer Journal Language Resource and Evaluation Journal
- Computerized Medical Imaging and Graphics
- IEEE Transactions on Information Technology in Biomedicine
- IEEE Transactions on Medical Imaging
- International Journal of Medical Informatics
- Journal of the America Medical informatics association
- International Journal of Computer Vision
- Medical Image Analysis
- IEEE Transactions on Pattern Analysis and Machine Intelligence
- Pattern Recognition - Elsevier
- Pattern Recognition Letters
- Computer Vision and Image Understanding
- Image and Vision Computing
- Natural Language Engineering
- Computer Speech and Language
- Journal of Language Resources and Evaluation
- Machine Translation
- Computational Linguistics
- Research on Language and Computation
- Linguistic Issues in Language Technology (LiLT)
- Computational Linguistics

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- Computer Speech and Language
- Journal of Information Retrieval
- Information Processing and Management
- ACM Transactions in Information Systems

9.1.2 Potential special issues

Organising special issues in the journals listed in Section 9.1.1 will be considered where appropriate.

9.1.3 Other

Articles will be contributed to ERCIM News. We will also aim to get an article about Khresmoi into New Scientist.

9.2 Conferences

The following scientific conferences are targeted in Khresmoi (this list is on the Khresmoi wiki and is updated regularly):

Name	Next Event	Recurrence	URL
SPIE Medical Imaging	9-14 Feb 2013	annual	http://spie.org/medical-imaging.xml
WWW	13-17 May 2013	annual	http://www2012.org/
ECIR	24-27 Mar 2013	annual	http://ecir2013.org/
EHealth Vienna	23-24 May 2013	annual	http://www.ehealth20xx.at/eHealth2013/
EAMT	tba for 2013	annual	http://www.eamt.org/
ACL	4-9 Aug 2013	annual	http://acl2013.org/site/
CVPR	23-28 Jun 2013	annual	http://www.pamitc.org/cvpr13/
CoNLL	Tba for 2013	annual	
IPMI	24-28 Jun 2013	biennial	http://www.ipmi-conference.org/
ISMB	21-23 Jul 2013	annual	http://www.iscb.org/about-ismb/
SIGIR	28 Jul -1 Aug 2013	annual	http://sigir2013.ie/
MIE	tba for 2013	annual	

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CLEF	17-20 Sep 2012	annual	http://clef2012.org/
MICCAI	1-5 Oct 2012	annual	http://www.miccai.org/UpcomingConferences
AMIA Symposium	3-7 Nov 2012	annual	http://www.amia.org/amia2012
CIKM	29 Oct – 2 Nov 2012	annual	http://www.cikm2012.org/
ICCV	8-15 Dec 2013	biennial	http://www.iccv2013.org/
IJCNLP	15-18 Oct 2013	biennial	http://www.cs.rochester.edu/~tetreaul/conferences.html
NIPS	3-8 Dec 2012	annual	http://nips.cc/ConferenceInformation/future-conferences.php
ECCV	7-13 Oct 2012	biennial	http://eccv2012.unifi.it/
ICPR	11-15 Nov 2012	biennial	http://www.icpr2012.org/
MT Summit	tba for 2013	biennial	http://www.eamt.org/events.php
LREC	tba for 2014	biennial	http://www.lrec-conf.org/
CBMS	tba for 2013	annual	
EACL	tba for 2015	triennial	http://www.eacl.org/
EMNLP	tba for 2013	annual	
Coling	8-15 Dec 2012	biennial	http://www.coling2012-iitb.org/
MedInfo	20-23 Aug 2013	triennial	http://www.medinfo2013.dk/
EACH	4-7 Sep 2012	annual	http://www.each-conference.com/
Medicine 2.0	15-16 Sep 2012	annual	http://www.medicine20congress.com/

9.3 Workshops

The conferences listed in Section 9.2 are also targets for workshop proposals.

9.4 Sponsorship of Scientific Conferences

Sponsorship of the following scientific conferences will be discussed in the Management Committee and decisions made. The best point in the project lifetime to carry out these sponsorships will also be discussed:

- Medical Informatics Europe
- CLEF Conference
- SIGIR
- CIKM
- MICCAI

10 Planned Dissemination to the Business Community

10.1 Publications

We will aim to have articles in the following channels aimed at the business community:

- VITE – IT business network (Austria)
- El Economista (Spain)
- Computerworld (US)
- Computing (UK)
- Tech Week (US)
- Data. Ti (Spain)
- Krankenhaus IT (Germany)
- IDG.es (Spain)
- tuexpertoit.com (Spain)
- is-portal.com (Spain)
- Itespresso.es (Spain)
- ciberp@ís (Spain)
- Le Monde Sections on High-Tech (France)

10.2 Presentations

A demonstration of the Khresmoi prototype has already been accepted at the Health 2.0 Europe from November 6 to November 7 2012 in Berlin, Germany. This will bring the Khresmoi developments to the attention of innovative SMEs working in the health and medical domain.

The following conferences aimed at the business community are targeted in Khresmoi:

Name	Next event	2012/2013/2014 recurring Date	URL
Health 2.0 Europe	6-7 Nov, 2012	annual	http://www.health2con.com/events/conferences/europe-fall-2012/
Pharmaceutical Technology and IT congress	17-18 Sep 2012	annual	http://www.pharmatechnology-summit.com/

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C-SHALS	27 Feb - 1 Mar 2013	annual	http://www.iscb.org/cshals2013
Med-e-Tel	10-12 Apr 2013	annual	http://www.medetel.eu
World of Health IT	tba for 2013	annual	http://www.worldofhealthit.org/docs/20110615_WOHIT_CFP_v2.htm
SemTechBiz conferences	See link	annual	http://semanticweb.com/
Bio-IT World	9-1 April 2013	annual	http://www.bio-itworldexpo.com/
Open World Forum	11-13 Oct 2012	annual	http://www.openworldforum.org/

10.3 Presence of Khresmoi at Conferences, Symposia and Trade Fairs

Khresmoi plans to exhibit at the CeBIT in Hannover, Germany. In year 3 (March 2013), Khresmoi will be sharing a 15m² stand with the following EU projects from the Data Value Chain unit: X-LIKE, RENDER, PlanetData, PROMISE and TransLectures.

A full Khresmoi stand is planned at the CeBIT for year 4.

11 Planned Dissemination to the Medical Community

11.1 Publications

We will aim to have articles in the following channels aimed at the medical community:

- Le Quotidien du Médecin (France)
- Medizin&Technik (Germany)
- Ärzte Zeitung (Germany)
- Österreichische Ärztezeitung (Austria)
- doktor in wien (Austria)
- Ärztemagazin (Austria)
- Medical Tribune (Austria)
- Irish Medical Times (Ireland)
- e-health-suisse.ch (Switzerland)
- Diario Médico (Spain)
- Hospital Digital (Spain)
- Ingeniería Hospitalaria (Spain)
- Sanitaria 2000 (Spain)

11.2 Presence of Khresmoi at Medical Symposia

Exhibits of Khresmoi results at the RSNA and ECR have already begun, and will also take place at the RSNA 2012 and ECR 2013. For the other symposia, Khresmoi will exhibit towards the end of the project when the prototypes will be in a more mature form.

Khresmoi aims to have a stand at the following medical symposia.

Name	Next Event	2012/2013/2014 recurring Date	URL
ECR (European Congress of Radiology)	7-11 March 2013	annual	http://www.myesr.org/
ESSR (European Society of Musculoskeletal Radiology)	13-15 June 2013	annual	http://www.essr.org/cms/website.php?id=/en/index/congress_2013.htm
Medica	14-17 Nov 2012, 20-23 Nov 2013	annual	http://www.medica.de
RSNA (Radiological Society of North America)	25-30 Nov 2012	annual	http://www.rsna.org/Annual_Meeting.aspx

12 Planned Dissemination to the Public

12.1 Press Releases

Below is a list of dissemination channels for press releases:

Europe:

- Cordis Wire
- Europe's information Society
- EURsearch

International:

- ACM Tech News
- India PR Wire

Austria:

- APA (payable service)

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- Die Presse
- Der Standard
- ORF - TV
- ORF - Radio

Czech Republic:

- Charles University has a journal ("Forum", and "iForum" for the online version)

France:

- General media (AFP, Le Monde, Les echos, Le Figaro, etc.)

Germany:

- Open PR German
- Press Relations (payable service)
- IDW Online (Pressedienst)
- University Newsletter
- Westfalenpost

Ireland:

- Irish Times
- Irish Independent

Spain:

- Expansión
- Cinco Días
- Negocio & Estilo de Vida
- El País
- ABC
- El Mundo
- Público
- La Vanguardia
- El Periódico de Catalunya
- La Razón
- EFE
- Europa Press
- elconfidencial.com
- lainformacion.com
- Zum (El Periódico)
- Discovery dsalud
- Noticias Médicas
- Eureka (El Mundo)
- ABC Salud (ABC)
- Salud&Bienestar (El País)
- A tu salud (La Razón)
- Salud & Vida (La Vanguardia)

Switzerland:

- NZZ
- Le temps
- Walliser Bote
- EU Research Newsletter
- Le Nouvelliste
- Le Temps
- Radio Suisse

UK:

- Open PR English

12.2 Other

Newsletters twice a year will be continued.

13 Planned Training

13.1 Tutorials

The conferences listed in Section 9.2 are also targets for submitting tutorial proposals aimed at researchers.

Khresmoi will again sponsor the GATE Training Week in 2013 and beyond.

13.2 Summer/Winter Schools

Khresmoi will continue to support the Summer School on Image Processing.

Further Summer Schools that Khresmoi partners will consider hosting are:

- ESSLLI (European Summer School for Logic, Language and Information)
- ESSIR (European Summer School on Information Retrieval)

13.3 Training Sessions for End Users

Such training sessions will be held in year 4 once the Khresmoi prototypes are mature. They will be synchronised with the presentations of Khresmoi at medical symposia, as listed in Section 11.2. A detailed plan will be drawn up in year 3 once the prototypes are more mature and the medical symposium exhibition plan is drawn up.

14 Conclusion

The Khresmoi output aimed at the research community has increased, mirroring the focus of Khresmoi in year 2 on research and technical development and integration of components into the Khresmoi prototype.

Training activities have been strong in year 2, with a summer school organised, contributions to two further summer schools, and three tutorials organised.

According to the dissemination plan, the focus on the business and medical communities will increase in year 3, once the Khresmoi prototype is available. This is to avoid the potentially damaging activity of selling hype to these communities before concrete results are available. Nevertheless, the number of presentations aimed at these communities has already increased in year 2.

Much of the dissemination to the medical community and general public in year 2 has had the aim of recruiting people to test the Khresmoi prototype in the user-centred evaluations in year 3.

The Khresmoi website has been updated to provide targeted information to the four dissemination target groups.

A number of high impact dissemination activities are planned for year 3, aimed at the business and medical communities, including:

- Demonstration of the Khresmoi prototype at the Health 2.0 Europe Conference in Berlin in November 2012
- Booth shared with other EU projects at the CeBIT 2013 in Hannover, Germany in March 2013
- Booth at the European Conference on Radiology (ECR) in Vienna in March 2013