

*ECR Scientific Programme Department
European Society of Radiology - ESR*

Presentation Details

Presentation Time: talk: **6 minutes + 2 minutes discussion**

Presentation Title: User centered evaluation of the KHRESMOI image search system for radiologists

Presentation Number: B-1037

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Disclosure Block: **M. Holzer:** None. **D. Markonis:** None. **H. Müller:** None. **R. Donner:** None. **G. Langs:** None.

Topic: Computer Applications

Session Number: SS 1805

Session Title: Data sharing and content-based data retrieval

Session Date/Time: Sunday Mar 8 2015, 10:30 - 12:00

Room: Z

Note: All accepted scientific paper abstracts have been proof-read and edited if necessary by Springer Copyediting Scientific Publishing Services.

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Below is a view of your accepted abstract:

Purpose: The KHRESMOI Project has developed two prototype search engines allowing radiologists to search indexed medical knowledge bases using text and image queries, and to find clinically relevant related cases in a hospital PACS based on a query region of interest (ROI) marked in a query case (e.g. a lung CT). We evaluated the search engines regarding their information value, accuracy, and usability by radiologists.

Methods and Materials: The systems were evaluated by 26 radiologists from 4 countries following a specific user-test session design: 1. Introduction to KHRESMOI and short demonstration of the Prototypes; 2. Demographic survey; 3. Tutorial tasks and free use; 4. Guided user tests through defined search scenarios, 5. Survey on the satisfaction with the tools and functionalities. The satisfaction of the users was rated on the Likert Scale of 1 to 5 (where a value of 5 is the best).

Results: The success rate of completing the scenarios is 95% for the Professional and 86% for the Radiology prototype. For the Radiology system the query using a ROI returned results in 4.8 seconds and detailed full volume visualizations of a result was available after 15 seconds. For both systems the response speed was rated with 5 and the result quality with 4. The usability of the systems was rated at 4.25 for the Professional and 4.5 for the Radiologist prototype.

Conclusion: The response of the radiologists indicates that the provided search tools would be beneficial for academic work, research work and during clinical routine.

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Questions?

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