



Report to EFMI Council

For the period August 2005 to September 2006

To be presented at 56th EFMI Council Meeting, Maastricht, 26 August 2006

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Current objectives

- ❑ **A. RID-MIP** – to establish a reference image database for medical image processing R&D groups (RID-MIP) within the EFMI member countries.
- ❑ **B. EIPG-IS** – to establish a Web-based Information System (IS) about European Image Processing Groups (EIPG) and their current activities.
- ❑ **C. Website** – to create and maintain a Working Group Website providing public information and (in a protected sub-area) WG-internal documents and work plans.
- ❑ **D. Workshops** – to organize workshops dedicated to the WG topics at the MIE conferences and other events.
- ❑ **E. Cooperation** – to build and maintain close relationship with persons, groups, organisations and standardisation bodies working on the MIP field and medical domains involved.

Recent activities

- ❑ **Ad A:** The intense discussions with the NIH and with imaging and pharmaceutical industry about the potentials of validation platforms including image databases and strategies for their implementation have been continued during the last year. The NIH now, after large investment and several years of consensus process started to release lung CT datasets. The US experience shows the tremendous efforts needed to create reference image data. Substantial resources are mandatory, and the most promising way to go is Public Private Partnership (PPP). In our recent workshops at CARS (Computer Assisted Radiology and Surgery) 2005 in Berlin and MIE 2005 in Geneva also showed very clearly that there is little chance to create completely new organizational structures for the validation tasks, alone. Appropriate associations representing industries and academia, as well as the European Commission will be the target of promotion and acquisition activities.
- ❑ **Ad B:** The implementation of a first EIPG-IS version with students at Kaunas University, Lithuania, as decided 2004 at a WG chair meeting in Munich, is still pending due to difficulties with resources at Kaunas University.
- ❑ **Ad C:** The Working Group Website www.efmi-wg-mip.net provides comprehensive information and numerous documents (reports, presentations) to the public. On the website's internal area the Reference Image Database Work Prototype RID-WP is accessible for all working group members. Basic information about the working group (mission, members, etc) is maintained on the EFMI website www.efmi.org.
- ❑ **Ad D:** The 5th WG workshop has taken place at MIE 2005 in Geneva on August 30 on the topic *Managing Medical Image Data*, unfortunately with less than ten participants, only. The planned tutorial on the topic *DICOM, the IHE Initiative and the Role of Reference Image Databases and Knowledge-based Applications* had to be cancelled due to very few (and too late) registrations. The 6th WG workshop with presentations from different European countries, as



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well as a telepresentation by a colleague from the NIH in US, was held at Tromsø Telemedicine Conference TTeC 2006 on June 12 on the topic *Validation of Image Processing Systems* with around fifteen participants. A smaller group met afterwards and continued the discussion, which was finally summarized in a Memorandum. The presentations and the memorandum are available on the WG Website.

- ❑ **Ad E:** Cooperation with CARS and with reference image database initiatives in the USA has been continued, as well as the contacts to industries. The CARS has launched a new scientific journal which will give a good platform for dissemination of related WG publications. In March 2006, the working group has supported the 14th CATAI Winter Course including the 19th Image Analysis Course of the University of La Laguna, Tenerife, Spain, with a lecture on the standards DICOM and JPEG 2000 held by the WG chair.

Future activities

- ❑ **WG meetings.** The next WG meeting will take place on Monday, 28 August, at MIE 2006 in Maastricht.
- ❑ **Workshops.** The next workshop is currently under discussion. It will either be held at Medinfo 2007 in Brisbane or as a dedicated 2 days work meeting in Munich or Tromsø.
- ❑ **Validation platform initiative.** It is planned to approach, together with industries, the European Commission, in order to discuss how the initiative can be embedded into the 7th Framework Programme.

Publications

- ❑ Horsch A, Blank R, Eigenmann D: The EFMI reference image database initiative: Concept, state and related work. Procs CARS 2005, International Congress Series 1281: 447-452
- ❑ Schmidt A: Managing Medical Image Data in a Pharmaceutical Company. MIE 2005 Workshop.
- ❑ Lehmann T: Automatic Classification and Content-Based Retrieval of Medical Images. MIE 2005 Workshop.
- ❑ Müller H: Analysis of the Use of Medical Images. MIE 2005 Workshop.
- ❑ Horsch A: Standard DICOM and JPEG 2000. XIV CATAI Winter Course, University of La Laguna, Tenerife, March 2006.

Development

- ❑ There are at the moment 44 persons in the list of members and interested persons of the working group, working in industry and academia. They come from various different countries: Austria, Cyprus, Denmark, Finland, France, Germany, Lithuania, Netherlands, Poland, Spain, Switzerland, USA, UK.

Conclusion

The activities of the working group have attracted new people, especially the successful workshop in at CARS conference in Berlin is to be considered a milestone. A major outcome of this year was to put the continuing efforts with respect to the reference database issue on a broader fundament, including the consideration of validation tools and standards together with the reference image data, as well as to



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extend the range of addressees (including pharmaceutical industry). Recognizing the grand complexity of the task, the working group concluded that both bottom-up activities (to announce tasks on basis of existing datasets) and top-down activities (to identify and collaborate with key organizations) shall be followed in the next years.

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