Datasheet of the IKTA4/006 project

I. *MEDIP - Platform independent software system for medical image processing*

Project start: January 1, 2002, duration: 35 months.

Amount of support: KHUF 52 000, total project cost: KHUF 87 500.

Project leader: ***Kormos János Dr.***
Debreceni Egyetem TTK Információ Technológia Tanszék
H-4010 Debrecen, Egyetem tér 1.
<***http://kormos@it.math.klte.hu***>, phone: +36 (52) 512-900/2814

Project URL: <***http://it.math.klte.hu/user/kormos***>

II. Consortium members (number of members = **6**, the first member is the project co-ordinator)

no	*name*	*support*	*total cost*
1.	University of Debrecen, Faculty of Science, Dept. of Information Technology	KHUF 16 000	KHUF 26 100
2.	University of Debrecen, PET Center	KHUF 16 000	KHUF 26 000
3.	Mediso Medical Equipment Development and Services Ltd.	KHUF 14 000	KHUF 29 400
4.	University of Debrecen, Department of Orthopedic Surgery	KHUF 2 000	KHUF 2 000
5.	Semmelweis University, Faculty of Health Sciences, Chair of Radiotherapy	KHUF 2 000	KHUF 2 000
6.	Semmelweis University, Faculty of Medicine, Dept. of Radiology and Oncotherapy	KHUF 2 000	KHUF 2 000

III. Public presentations

No presentation is available.

IV. Goals of the project

The aim of the project is to develop a software background for our basic and applied research in the field of medical imaging that can be used in clinical routine, as well. The realisation is based on the experience of information technology and medical imaging research university teams and a company specialised on software and hardware developing for nuclear medicine. The main purpose is the integration of the recent image segmentation, image registration, and image fusion tools as well as the applied computer graphics solutions of GI systems. The multilayered software product consists of three different layers, namely modules for functional tasks of the software, visualisation and graphical user interface.

During the project several test programs and three demonstration software to be created to complete the whole task. The goal of the test programs is to choose the optimal hardware and software environment for the developing phases. Proving the applicability of the complex developing environment, the demonstration programs present solutions for image processing tasks from the fields of orthopaedy, oncology and nuclear medicine. Medical experts are involved into planning and testing the software.

Beside software developing, the project contains several basic research tasks, like composing algorithms for segmentation and geometric modelling. Moreover, the implemented algorithms are optimised, as well. Integrating the research results into the software modules is a very important point during the developer process. These results make it possible to create more effective displaying and interactive programs, which indirectly improve the quality of the diagnostic and therapeutic clinical work.

Involving Ph.D. and undergraduated students, the development of the system can be continued after the project finished, thus the ability of the software libraries and programs can be improved with

respect to the dynamically developing performance of graphic hardware devices. This assures continuos co-operation between a university knowledge base and a technology centre.

V. Project results (in case of finished projects)

The project is not finished.

VI. Data on consortium members (number of members = **6**)

1. ***University of Debrecen, Faculty of Science, Dept. of Information Technology*** (co-ordinator)
   URL: <***http://it.math.klte.hu/users/kormos***>
   Support for the co-ordinator: KHUF 16 000, and its total cost: KHUF 26 100.
   Contract number: .
   Team leader: ***Kormos János Dr.***
   Debreceni Egyetem TTK Információ Technológia Tanszék
   H-4010 Debrecen, Egyetem tér 1.
   <***http://kormos@it.math.klte.hu***>, phone: +36 (52) 512-900/2814

2. ***University of Debrecen, PET Center***
   URL: <***http://www.pet.dote.hu***>
   Support for the consortium member: KHUF 16 000, and its total cost: KHUF 26 000.
   Contract number: .
   Team leader: ***Emri Miklós Dr.***
   Debreceni Egyetem PET Centrum
   H-4026 Debrecen, Bem tér 18/c
   <***http://emri@pet.dote.hu***>, phone: +36 (52) 431-958

3. ***Mediso Medical Equipment Development and Services Ltd.***
   URL: <>
   Support for the consortium member: KHUF 14 000, and its total cost: KHUF 29 400.
   Contract number: .
   Team leader: ***Farkas Attila***
   Mediso Orvosi Berendezés Fejlesztő és Szervíz Kft.
   H-1044 Budapest, Dunasor u. 15.
   <***http://a.farkas@mediso.hu***>, phone: +36 (1) 399-3030

4. ***University of Debrecen, Department of Orthopedic Surgery***
   URL: <>
   Support for the consortium member: KHUF 2 000, and its total cost: KHUF 2 000.
   Contract number: .
   Team leader: ***Csernátony Zoltán***
   Debreceni Egyetem Ortopédiai Klinika
   H-4012 Debrecen, Nagyerdei krt. 98 .
   <***http://csz@jaguar.dote.hu***>, phone: +36 (52) 432-285

5. ***Semmelweis University, Faculty of Health Sciences, Chair of Radiotherapy***

   URL: <***http://www.oncol.hu***>

   Support for the consortium member: KHUF 2 000, and its total cost: KHUF 2 000.
   Contract number: .

   Team leader: ***Ésik Olga Dr.***
   Semmelweis Egyetem Egészségtudományi Kar Sugárterápiás Tanszék
   H-1122 Budapest, Ráth György u 7-9
   <***http://esik@oncol.hu***>, phone: +36 (1) 224-8689

6. ***Semmelweis University, Faculty of Medicine, Dept. of Radiology and Oncotherapy***

   URL: <>

   Support for the consortium member: KHUF 2 000, and its total cost: KHUF 2 000.
   Contract number: .

   Team leader: ***Kári Béla Dr.***
   Semmelweis Egyetem Radiológiai és Onkoterápiás Klinika
   H-1082 Budapest, Üllői út 78/A
   <***http://kari@radi.sote.hu***>, phone: +36 (1) 210-0300/3305