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An Initiative to Build a Network of Excellence for Medical Image Processing

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MIP: domains and tasks

	Application domains									
Tasks	Neurological imaging	Cardiovascular imaging	Mammography	Endoscopy	Microscopy (cells)	Dermatology	Bone imaging	Virtual liver surgery planning	Pulmonary imaging	Ophtalmology
	WP02: Shared database of reference medical images WP04: Medical Images on the Semantic Web: (UNIUD:)									
QA – Telepathology?					WP06: UNIUD					
	WP0: IMI, RTU, ICL									
Image segmentation (and object recognition?) Kur deti Raudi (WP?-bendras)	WP11: KTU KMU-Rad UT CNIT TECHNION (fMRI) ELLETRA	WP12: KTU (LT01, LT02), KMU-Rad CNIT DIBE (1) UMIST (2) UNIMORE (2) EPL	WP13: KTU KMU-Rad CNIT IFTR (PL) BUTE (3)	WP14: CNIT, EPL	WP15: CNIT IMBU(Lt?1)	WP16: CNIT UNIMORE (2) EPL (2)	WP17: UT(), ELLETRA	WP18 TU Chiss (m01, m02) KMU-Rad [illegible]	WP19 TU Chiss (m03, m04)	WP1A: RTU
3D visualisation	WP21: X	WP22: EPL		WP24: TUB(3)	WP25: ITR ELPNU			WP18 TU Chiss (m01, m02)	WP19: TU Chiss (m03, m04)	WP2A: RTU
	WP3: IFTR (PL)									
Image fusion/registration (different modality matching)	WP31: KTU, KMU-Rad UNIMT ASTON IFTR (PL)	WP32: IFTR (PL)			WP35: ITR ELPNU	WP36: UNIMORE (2)	WP37 HUJI (1)		WP19 TU Chiss (m03, m04)	
Image compression	WP41: LT01, LT02, . CNIT HUJI (1) UMIST (1) UNIMORE (pcommon, 2), ITR ELPNU									
Image databases: content based retrieval and anotations	WP51: HUG (d1-d3, cb01-cb03) DUTH(4) DIBE (1, wpd)		BUTE?		WP55: UNIUD	WP56: UNIMORE				
Interpolation of medical images							WP67: UT (d1, d2) ELLETRA			

MIP: domains and tasks

The list is far to be complete

- Neurological imaging
- Cardiovascular imaging
- Mamography
- Endoscopy
- Microscopy
- Dermatology

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MIP: domains and tasks

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- Surgery planing
- Bone imaging
- Pulmonary imaging
- Ophtalmology

(to be continued...)

MIP: domains and tasks

Domain-oriented tasks

- Medical image segmentation and pattern recognition
- Multidimensional medical image and data visualisation
- Registration and fusion of multiple modality medical images and data

MIP: domains and tasks

"Common" tasks - tasks with common tools

- Reference Image Database

  WP: Content based retrieval and annotations in shared database of reference medical images
- Image Compression
  - lossy compression (JPEG, JPEG2000)

  WP: Applied medical image compression
- Imaging Related Standards
  - DICOM (e.g. spatial resolution), PIKS, etc.

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Activities of the NoE

- Direct

  To make the NoE open for new ideas and new partners, special attention will be paid for spreading excellence by organizing

  - schools for doctoral students;
  - workshops for researchers within and outside the network;
  - conferences for the joint research results available for outside participants and inviting representatives from the companies, producing medical imaging modalities

- Virtual

IS for Image Processing Groups

Main ideas - any suggestions welcome

- Groupware system (CSCW)
  - WWW-based + e-mail notification
  - Support of image exchange and storage
  - Support of DICOM data sets
- Free examples (ACL+CMS)
  - PHProjekt
  - php GroupWare (webdistro)

NoE consortium:

- 78 scientists and 16 Ph.D. students
- 25 institutions
- 13 countries
  - A, DE, CH, EL (GR), HU, I, IL, LT, LV, MT, PL, UA, UK

We would like to extend the NoE!

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EFMI WG MIP

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