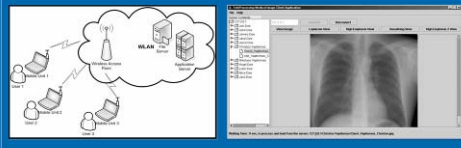


IMAGE TELEPROCESSING SYSTEMS



- Java-based server-client platform for secure remote viewing and processing of medical images
- Easy integration of processing algorithms

C. Vaptismas, P. Georgiadis, Ch. Hikimtzis, K. Sidiropoulos, N. Dimitropoulos, D. Cavouras. Development of a secure wireless system for teleprocessing of medical images, 2nd International Conference "From Scientific Computing to Computational Engineering" (2nd IC-SCCE), Athens, Greece, July 5-8, 2006.



IMAGE TELEPROCESSING SYSTEMS



- Distribution of demanding image processing workloads to different powerful servers situated at remote sites
- Java-based web-service platform
- Image segmentation on US images using the proposed system

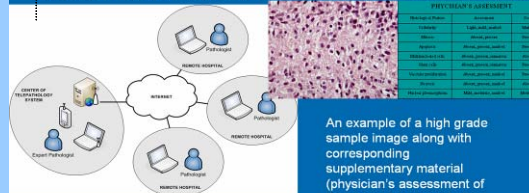
Ch. Hikimtzis, P. Georgiadis, A. Daskalakis, K. Sidiropoulos, N. Dimitropoulos, D. Cavouras. Development of a web service platform for remotely designing medical image processing applications, 2nd International Conference "From Scientific Computing to Computational Engineering" (2nd IC-SCCE), Athens, Greece, July 5-8, 2006.



3. WIRELESS MEDICAL INFORMATION SYSTEMS



WIRELESS MEDICAL INFORMATION SYSTEMS



Schematic representation of the architecture of the web-based telepathology system.

An example of a high grade sample image along with corresponding supplementary material (physician's assessment of the tumour's histological characteristics)

Glotsos Dimitris, Georgiadis Pantelis, Kostopoulos Spiros, Daskalakis Antonis, Kalatzis Ioannis, Panagiotou Panagioti, and Cavouras Dionisis. "A Pilot Study for Investigating Minimum Requirements for Remote Astrocytomas Grading", accepted for publication in Analytical and Quantitative Cytology and Histology.



4. RFID-based medical identification systems



PDA-BASED WIRELESS MEDICAL INFORMATION SYSTEMS EMPLOYING RFID IDENTIFICATION TECHNOLOGIES



- Identification of the patient through his/her RFID tag
- Query the hospital's database and retrieve patients medical data (history, images, clinical reports, current pharmaceutical treatment, etc.)

K. Sidiropoulos, P. Georgiadis, N. Dimitropoulos, D. Cavouras. Personal Mobile Medical Assistant Employing RFID Technology, 5th European Symposium on Biomedical Engineering (5th ES-BE 2006), Patras, Greece, July 7-9, 2006.



**TECHNOLOGICAL EDUCATIONAL
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TELEMEDICINE



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Director: Prof. D. Cavouras, Ph.D.,

E-mail: cavouras@teiath.gr

URL: <http://www.teiath.gr/stef/tio/medisp/index.htm>

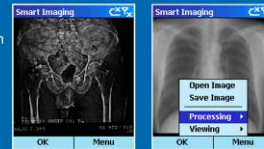
MEDISP's INVOLVEMENT TO STATE OF THE ART TELE-TECHNOLOGIES

1. PDA and Smartphone-based teleconsultation systems
2. Image teleprocessing systems
3. Wireless medical information systems
4. RFID-based medical identification systems



PDA AND SMARTPHONE BASED TELECONSULTATION SYSTEMS

- Remote Image Acquisition
- Image Loading
- Image Processing



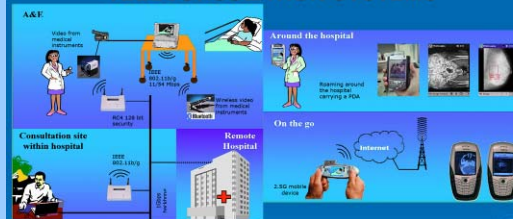
P. Georgiadis, K. Banitsas, H. Georgiou, K. Sidiropoulos, N. Dimitropoulos, S. Tachakra, D. Cavouras. A Smartphone-Based Teleradiology System, 4th European Symposium on Biomedical Engineering (4th ES-BE 2004), Patras, Greece, June 25-27, 2004.



2. IMAGE TELEPROCESSING SYSTEMS



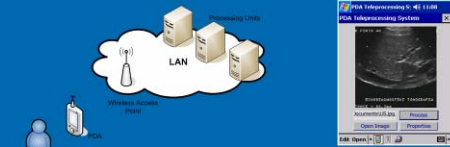
1. PDA AND SMARTPHONE BASED TELECONSULTATION SYSTEMS



K. Banitsas, P. Georgiadis, S. Tachakra, D. Cavouras. Using handheld devices for real-time wireless Teleconsultation, 26th Annual International Conference, IEEE Engineering in Medicine and Biology Society (26th EMBC), San Francisco, California, USA, September 1-5, 2004.



IMAGE TELEPROCESSING SYSTEMS



- PDA-based server-client platform for remote processing of medical images
- Multi-platform implementation (Java).

P. Georgiadis, K. Sidiropoulos, H. Georgiou, C. Makris, D. Glotsos, D. Cavouras. A PDA-Based teleprocessing system, 1st International Conference on Experiments / Process / System Modeling / Simulation / Optimization (1st IC-EpMSO), Athens, Greece, July 6-9, 2005.



PDA AND SMARTPHONE BASED TELECONSULTATION SYSTEMS

- Remote Image Acquisition
- Image Loading
- Image Processing



P. Georgiadis, K. Banitsas, H. Georgiou, K. Sidiropoulos, S. Tachakra, N. Dimitropoulos, D. Cavouras. A PDA-Based teleradiology system, 1st International Conference "From Scientific Computing to Computational Engineering" (1st IC-SCCE), Athens, Greece, September 10-16, 2004.



PDA AND SMARTPHONE BASED TELECONSULTATION SYSTEMS



K. Banitsas, P. Georgiadis, S. Tachakra, D. Cavouras. Mobile consultant: combining total mobility with constant access, 26th Annual International Conference, IEEE Engineering in Medicine and Biology Society (26th EMBC), New York City, New York, USA, August 30-September 3, 2005.

P. Georgiadis, K. Sidiropoulos, Ch. Hikitizis, K. Banitsas, N. Dimitropoulos, D. Cavouras. PDA-based teleradiology system with real-time voice conferencing capabilities, 2nd International Conference "From Scientific Computing to Computational Engineering" (2nd IC-SCCE), Athens, Greece, July 5-8, 2006.



IMAGE TELEPROCESSING SYSTEMS



- Java-based RMI system for remote processing of medical images
- Remotely accomplished edge-detection algorithm on breast ultrasound images

Ch. Hikitizis, P. Georgiadis, K. Sidiropoulos, D. Glotsos, D. Cavouras. Development of a remotely accomplished edge-detection algorithm on breast ultrasound, 1st International Conference on Experiments / Process / System Modeling / Simulation / Optimization (1st IC-EpMSO), Athens, Greece, July 6-9, 2005.

