Educational PACS of the Medical University of Szeged

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(1 page abstract)

This paper describes the Picture Archiving and Communication System (PACS) developed for the Medical University of Szeged. The main aims of the development were to provide a tool to collect studies from different modalities and from different buildings, to archive them in a standard format and to use the archived information in the education and in the clinical routine. The system is able to collect studies from CT, MR, NM, US, SPECT modalities, from X-film scanners and from any station communicating according to DICOM storage- query/retrieve service class. The data are automatically converted from Interfile 3.3, ACR-NEMA 2.0 or TIFF formats into DICOM 3.0 format and stored in the data-server of the system. The study headers can be edited by graphic editor programs. The PACS can collect information also from the Radiology Information System (RIS) of the Department. In order to have an effective database management the users may use Oracle to retrieve, present or modify data. The Oracle system stores the whole header information but does not contain the image data itself. The clients can reach the database using the Oracle server. The data protection is solved by the Oracle system capabilities and it can be used to avoid unauthorized connections. Our DICOM server gives the studies to the processing stations (PC-s, UNIX workstations or X-terminals). Here the user can retrieve, process and present studies, furthermore, as a special aim, they can edit text and images into HTML format to create graduate and post-graduate educational material. Then this educational material can be stored also in the system/CD-ROMs and can be used in the training of medical students. Our PACS system is modular, flexible and based on a 4th generation functional programming language Tcl/Tk. This language has Oracle connection and graphical interfaces. In this way the same source code can be used by each client.