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### **Web based system for handling DICOM structured report documents from PACS for educational and research purposes**

A. Delistamatis, M. Mantatzis, E. Kaldoudi, D. Ouzounis, P. Prassopoulos;  
*Alexandroupolis/GR*

**Purpose:** The standard DICOM Structured Report (SR) enables constructing and transferring medical reports as well as their storage along with images of each examination in the PACS. The purpose of the study is to develop a web-based system communicating with PACS, for extracting information from stored SR documents for educational and research purposes.

**Material / Methods:** This system consists of an interface communicating with PACS, made up of web service technologies. The interface extracts data from SR documents stored in the PACS and stores them in a local database of the system. The system database is administrated from an easy to use web user interface which enables viewing and analyzing the data, creating new SR documents for a study and offering full archiving capabilities.

**Results:** The proposed system gave the opportunity to add medical reports in a study, using web user interface. The stored reports in the system could be transferred towards PACS in the format of DICOM SR and vice versa. Complex queries can be applied by establishing a synchronization between the database of the proposed system and PACS i.e. applying keywords related to specific pathology or imaging findings to reports and analyze results according to time periods, body area and imaging modality, gender, patient's age etc.

**Conclusions:** Any PACS can use the proposed web-based system for create SR documents, administrate them and analyze data for educational or research purposes.