OpenREM

Open-source software for patient radiation dose monitoring, optimization, and data analysis in medical imaging (CT, fluoroscopy, mammography).

https://example.com/1762583716454

Overview

OpenREM is a free, open-source application for patient radiation dose monitoring and optimization, primarily used by qualified medical physicists and radiology teams. It is designed to gather comprehensive data and support the goal of minimizing patient risk while ensuring effective medical imaging. The software imports data from a wide range of X-ray dose-related sources, including DICOM Radiation Dose Structured Reports (RDSRs) from CT, planar X-ray, fluoroscopy, and mammography modalities. It provides a web interface for displaying summary exposure data, which includes filtering and searching capabilities. Key functionalities include generating visually intuitive charts for data exploration (e.g., mean and median dose metrics, histograms, workload data) and creating skin dose maps for fluoroscopy procedures. For further analysis, data can be easily exported to spreadsheets (CSV and XLSX). Patient privacy is a core feature; by default, patient-identifiable data (PID) such as name and date of birth are not retained. The system is configurable to store PID, or a one-way SHA 256 hash of the ID/name can be stored for patient tracking without direct identification, which supports compliance efforts.

Key Features

- Patient Radiation Dose Monitoring
- DICOM Data Import (CT, Fluoroscopy, Mammography)
- Web Interface for Data Display and Filtering
- Data Visualization and Charts
- Fluoroscopy Skin Dose Mapping
- Data Export to Spreadsheets (CSV/XLSX)
- Patient Privacy Protection (PID Hashing/Non-retention)
- DICOM Store and Query-retrieve

Pricing

Model: free

Free, open-source software licensed under the GNU General Public License (GPLv3).

Target Company Size: small, medium, enterprise

Integrations

DICOM (RDSR), CSV Files