### Foundation for Research and Technology - Hellas, Institute of Computer Science

#### **Computational BioMedicine Laboratory**

#### **Center for eHealth Applications and Services**

# **Doctor Eye (DrEye)**

## Overview

**Doctor Eye** viewer is an open access, flexible and easy to use platform, for intuitive annotation and segmentation of tumor regions. Its clinically driven development followed an open modular architecture focusing on plug-in components.

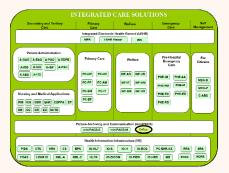
Doctor Eye's main advantage is that the user can quickly and accurately delineate complex areas in medical images, in contrast with other platforms that do not facilitate the delineation of areas with complicated shapes. Additionally, multiple labels can be set to allow the user to annotate and manage many different areas of interest in each selected slide. The close collaboration with clinicians in designing the platform has ensured that it can be effectively used in the clinical setting.

The **Doctor Eye** application belongs to the Picture Archiving and Communication family (ICS-X) of FORTHICS' Integrated Care Solutions suite.

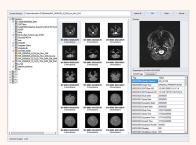
The platform can be part of the workflow of any clinical environment, from health centers to hospitals. It can also be used as a tool in a clinical trial or as a training tool in an educational environment.

**Doctor Eye** viewer is suitable for use by various clinicians such as such as radiologists or oncologists, and by anyone who need to view DICOM images, their structure or perform measurements and analysis on their imaging data.

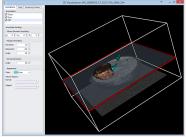




**DrEye** is part of the
Integrated Care Solutions (ICS)
Software Suite Covering the Areas of
Primary Care, Secondary and Tertiary Care, Emergency Care,
Welfare and Citizen self-management



DICOM browser



3D visualization

# **Target Domains**

Healthcare domain, clinicians, such as radiologists or oncologists.

FORTH-ICS www.ics.forth.gr

## Description

**Doctor Eye** viewer is a flexible and easy-to-use DICOM Viewer and Editor for quick and precise identification and delineation of tumors in medical images.

The design of the platform is clinically driven in order to ensure that the clinician can efficiently and intuitively annotate large number of 3D tomographic datasets.

Both manual and well-known semi-automatic segmentation techniques are available in the platform allowing clinician to annotate multiple regions of interest at the same session. Additionally, it includes contour drawing, refinement and labeling tools that can effectively assist in the delineation of tumors. Furthermore, segmented tumor regions can be annotated, labeled, deleted, added and redefined.

**Doctor Eye** can also interact with PACS systems via DI-COM Query / Retrieve, allowing the clinician to search and retrieve for desired images.

The platform has been tested over hundreds of MRI datasets to assess usability, extensibility and robustness with promising results.

**Doctor Eye** is regularly maintained according to feedback received by a number of regular users from different clinical settings. Its functionality is expanding according to clinical needs that arise from existing and new users.



ICS Installations in Greece since 2005



No.: 010140702 No.: 08014041/01

FORTH-ICS products and services have been certified according to the
requirements set by
ISO 9001:2008 and ISO 27001:2013

### Additional Information

The software suite Integrated Care Solutions (ICS) is a series of IT software, centered around the electronic health record, to support Patient Administration (ICS – A), solutions for Citizen (ICS-C), Pre-hospital Emergency Care (ICS – E), Health Information Infrastructure (ICS – H), the Integrated Electronic Health Record (ICS – I), Nursing and Medical Applications (ICS – M), Primary Health Care (ICS – P), citizen self-management (ICS-C), IT support (ICS – S), Welfare (ICS – W) and Picture Archiving and Communication (ICS – X). The ICS-X system is installed and operates at the University Hospital of Patras since 2005.



CeHA web site

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