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

# **Computational BioMedicine Laboratory**

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

## miniPACS (ICS – X)

#### Overview

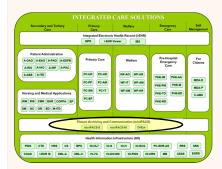
The miniPACS application features the ability to store imaging examinations in a central repository (server), where they can be searched and reviewed by users who have similar and compatible applications. Exams come primarily from imaging equipment such as Radiography, Computed Tomography (CT) and Magnetic Resonance Imaging (MRI), or Ultrasound and are stored in the Digital Imaging and Communications in Medicine (DICOM) format. Communication with Radiology Information System (RIS) is supported.

The miniPACS application belongs to the picture archiving and communication family (ICS - X) of FORTH-ICS' Integrated Care Solutions suite. It is based upon an open, scalable and evolvable architecture that integrates distributed information and knowledge in a flexible manner, focusing on the timely and effective delivery of the appropriate information to all authorized users. Being the outcome of applied research, it encompasses both state of the art trends and realworld requirements for effective use.

The main characteristics of the miniPACS application are:

- It is fully configurable and adaptable to any health care unit's workflows using intuitive user-friendly interfaces.
- It is a subsystem of an integrated solution. It can be installed either as stand-alone system or in combination with other ICS or 3<sup>rd</sup> party applications.
- It supports automation of business processes both within and between healthcare facilities.
- It can electronically interface with eGovernment services, 3<sup>rd</sup> party applications and open devices. All interfaces are based on standards such as HL7, FHIR, DICOM, XML, and web services.
- It is customizable and scalable according to the needs of each institution.
- It supports role based access control.





ICS-X 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



Access to Radiology Images Managed by the mini-**PACS** Application



X-ray Viewer

## **Target Domains**

ICS-X is suitable for the imaging department in healthcare units.

**FORTH-ICS** www.ics.forth.gr

### Description

The Picture Archiving and Communications family of ICS products have been designed for health care professionals who require a medical imaging technology for economical storage and convenient access to images from multiple modalities (source machine types).

The miniPACS application provides a scalable and customized solution to radiology examinations archiving that adheres to IHE framework directives. It implements the basic actors and transaction of Integrating the Healthcare Enterprise (IHE) Radiology Profile that facilitate the archiving and management of radiology examinations. It is accompanied by a straightforward to use administration tool, which facilitates custom configuration and basic administration. Additionally, custom solutions, such as pre-fetching techniques, routing of examination studies to specific workstations, as well work-list adapters or any kind of RIS adapters based on IHE Radiology Profile can be easily implemented and incorporated to the existing solution. The examination studies are archived in operating system file system. This way it can be easily deployed over any scalable RAID implementation.



ICS Installations in Greece since 2005



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 suite follows high quality international trends regarding both the structure of the Electronic Health Record (EHR), as well as integration with third party systems through the use of internationally acclaimed standards and protocols (like HL7, DICOM, etc.). The system is installed and operates at the University Hospital of Patras since 2005.



CeHA web site

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