Health Information Infrastructure (ICS – H)
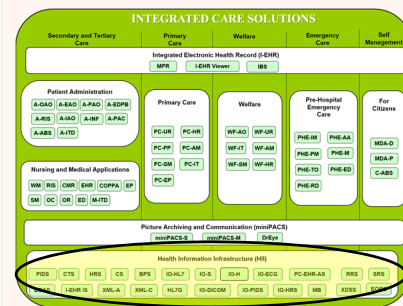
Overview

Health Information Infrastructure (ICS – H) includes a set of healthcare-related components to support cross-vendor and cross-enterprise integration. Its purpose is to resolve issues related to the proper identification of the subjects of care, the exchange of integrated EHR indexing and health data (utilizing appropriate health oriented protocols like HL7), the facilitation of collaboration between healthcare professionals and patients/ experts, authorization for accessing healthcare related resources, and the management of common medical terminology.
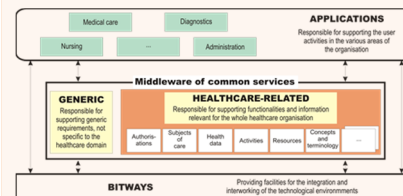
Health Information Infrastructure components constitute the health information infrastructure family (ICS – H) of FORTH-ICS' Integrated Care Solutions suite. They are based upon an open, scalable and evolvable architecture that integrates distributed information and knowledge in a flexible manner, focusing on the timely and effective delivery of the appropriate information to all authorized users. Being the outcome of applied research, they encompass both state of the art trends and real-world requirements for effective use.

The main characteristics of the **Health Information Infrastructure** components are:

- They are fully configurable and adaptable to institution's workflows.

- They are subsystems of an integrated solution. They can be used in combination with other ICS or 3rd party applications.

- They support electronic interfaces of end user ICS applications with 3rd party applications and open devices. All interfaces are based on standards such as HL7, FHIR, DICOM, XML, and web services.

- They are customizable and scalable according to the needs of each institution.

ICS-H 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

The European Committee for Standardization (CEN) Standard Architecture for Healthcare Information Systems (ENV 12967), Health Informatics Service Architecture or HISA, has been Adopted. HISA Provides Guidance and a Formal Standard for a Service Oriented Architecture, based on three co-operative Layers to Support the Creation of Flexible and Reusable Applications for the Healthcare Domain

Target Domains

ICS – H is suitable for the development of Integrated health information systems to support cross-enterprise cooperation.

Description

Health Information Infrastructure includes two major categories of components. The first category is a series of online services (web services) which provide services in accordance with predetermined procedures, while the second includes a series of reusable software objects which can be incorporated in other ICS applications.

- **Middleware Services**

Person Identification Service (PIDS), Clinical Observations Access Services (COAS), , Common Terminology Services (CTS), XML Acceptor (XML-A), XML Creator (XML-C), HL7 Gate (HL7G), Health Resource Service (HRS), Barcode Printer Service (BPS), Referral Retrieval Service (RRS), Stock Retrieval Service (SRS), Collaboration Service (CS), Message Broker (MB), Primary Care EHR Access Services (PC-EHR-AS), IHE XDS Service (XDSS), Eligibility Query Request Service (EQRS).

- **Reusable software objects**

DICOM Interface Objects (IO-DICOM), HL7 Interface Objects (IO-HL7), Security Interface Objects (IO-S), Helper Interface Objects (IO-H), PIDS Interface Objects (IO-PIDS), HRS Interface Objects (IO-HRS), ECG Interface Objects (IO-ECG).

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), 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.). Different components of the health information infrastructure are deployed in several integrated regional health information systems in Greece since 1998.

CeHA web site

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