

Related projects

This page provides links to some of the projects which have influenced *openEHR*, or are in some other way relevant.

PICNIC

PICNIC¹ (Professionals and Citizens Network for Integrated Care) was an EU-funded 5th Framework project which developed a multi-tier architecture designed for regional shared care, and based on recognised previous works including the OMG's Health Domain Task Force (HDTF) specifications (COAS, PIDS and RAD), and the Distributed Healthcare Environment (DHE) developed and refined in a number of EU projects including RICHE, its successor, **NUCLEUS**², EDITH and **SHINE**³. It is implemented in many hospitals across Europe under the **HANSA**⁴ project. The **book**⁵ "Regional Health Economies and ICT Services" documents PICNIC and other similar efforts.

PICNIC is relevant to *openEHR* because it represents a deployment of distributed middleware based on ideas and standards which are also being used by *openEHR*. For example, *openEHR* implementations of the OMG PIDS and RAD specifications are likely to emerge in the future, using PICNICs experience to guide the implementation.

CLinical E-science Framework - CLEF (2002-2005)

CLEF is a UK Medical Research Council funded project in the E-Science programme that aims to establish methodologies and a technical infrastructure for the next generation of integrated clinical and bioscience research. With UCL, the other collaborating universities are at Manchester (co-ordinating), Sheffield, Brighton and Cambridge. The clinical centres are the Royal Marsden Hospital, UCL Hospital and the Institute of Child Health.

One of the major goals of the project is to provide a pseudonymised repository of histories of cancer patients that can be accessed by researchers. The hypothesis of CLEF is that a useful research resource can be legitimately generated from routine clinical data. The project is developing a research workbench supporting queries on large volumes of anonymised cancer and genetic records. This resource is being enriched through the lexical analysis of narrative reports and summaries, which make up a considerable proportion of the fine-grained clinical information that is held electronically in contemporary systems.

The ethical, policy and technical aspects of preserving confidentiality when migrating data from a real hospital information system to the pseudonymous repository, and on subsequent query of it, are important aspects of the work.

The UCL record **server**⁶ is providing the repository for CLEF including relevant archetypes, the security architecture and the query middleware component.

1. <http://www.euser-eu.org/ShowCase.asp?CaseTitleID=490&CaseID=1013&MenuID=56>

2. <http://www.ehto.org/aim/volume2/nucleus.html>

3. <http://www.ehto.org/aim/volume2/shine.html>

4. http://www.ehto.org/ht_projects/initial_project_description/hansa.html

5. <http://books.google.co.uk/books?vid=ISBN158603538X&id=gKEVkfRB6XoC&pg=PA2&lpg=PA2&ots=EQSfFGC4U4&dq=professiona>

6. daisy:68-OE (EHR Server at University College London)

Nautilus/Odyssée

The open source Odyssée product from Nautilus, France, was a highly innovative recording and reporting system for endoscopy and echocardiography, based on a generic architecture and kernel. One of its key innovations is:

- "fils guides" (guide paths) - the terminological approach of Odyssée is to have a completely "generative" or "compositional" lexicon, with no pre-coordination, and a separate database of coordination rules (in the form of trees, indexed by path patterns), called "fils guides", which control how terms can be coordinated in actual notes and reports. The advantage of this approach is that it allows for a small lexicon (< 50,000 terms) to cover a large amount of medicine (contrast with Snmoed-ct - 1.3 million node semantic net); it is easily manageable due to being very systematic and relatively small.

Odyssée has also adopted a variant of archetypes, and uses them in concert with the *fils guides*. Where non-deterministic input is desired by the user (i.e input doesn't follow a pre-modelled pattern), the *fils guides* are employed; when deterministic input is required, archetypes are loaded and used. According to Philippe Ameline, head of Nautilus, both techniques perfectly mix, since *fils guides* can extend Archetypes leaves, and an Archetype can be fired by a *fil guide*.

Another endeavour underway at Nautilus is the "Ligne de Vie" (life line) health record server, which is a multi-tier EHR architecture combining birth-to-death patient health records, available on a per-issue/problem basis, with a simple security approach.