

Open Source Tools in Medical Informatics: The Eclipse Open Healthcare Framework

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Eclipse, Open Healthcare Framework



Eclipse OHF

- The Eclipse Foundation
 - Open source community whose projects are focused on providing an extensible development platform and application frameworks for building software (www.eclipse.org)
- The Eclipse Open Healthcare Framework (OHF)
 - Project within Eclipse formed for the purpose of expediting healthcare informatics technology
 - Extensible frameworks and tools which emphasize the use of existing and emerging standards in order to encourage interoperable open source infrastructure, thereby lowering integration barriers (www.eclipse.org/ohf)



Eclipse OHF

- Diverse Initial Contributors
 - Mayo Clinic
 - Jiva Medical
 - Inpriva
 - IBM



Eclipse OHF



- Growing a Diverse Community
 - Committers from four companies and four universities
 - Most committers are involved in healthcare specification and standardization bodies
 - User community of close to thirty vendors and universities
 - Mutual help between developers from competing companies
 - Connecting to everyone in many ways
 - Newsgroup, website, wiki, bugzilla, paper publications, joint research efforts, joint standards efforts, presentations, demonstrations, testing events, etc.



Eclipse OHF

- **Diverse Project Components**
 - **HL7**
Health Level 7 v2.x and v3 toolkit
 - **CTS**
HL7 common terminology service built upon LexGrid repositories and technologies
 - **STEM**
Spatiotemporal epidemiological modeler to create models of emerging infectious disease
 - **SODA**
Service oriented device architecture device integration including Device Kit and SAT



Eclipse OHF

- **Diverse Project Components**

- IHE

- Implementations of Integrating the Healthcare Enterprise profiles

- Bridge

- Implementations of IHE profiles for use with a Web services wrapper

- **Integrating the Healthcare Enterprise**

- An initiative by healthcare professionals and industry to improve the way computer systems in healthcare share information

OHF IHE/Bridge User Community

(by year 'joined')

2006

- CapMed
- IBM HIE
- NHIN



2007

- Possibility Forge
- PracticePartner
- Bell Canada
- MedCommons
- MedQuist
- Blueware
- Accenture
- Duke University
- Health@Net (Austria)
- Synapsis (Italy)
- MECIDS



2008

(more coming! – awaiting confirmation)





Significant OHF IHE/Bridge Events

- IHE 2007 North American Connectathon (Jan '07)
- US NHIN Phase 1 Demonstration for DHHS (Jan '07)
- HIMSS 2007 Interoperability Showcase (Feb '07)
- Healthcare Day at EclipseCon 2007 (March '07)
- IHE 2007 EU Connectathon (April '07)
- World of Health IT (Oct '07)
- IHE 2008 North American Connectathon (Jan '08)



MECIDS Project Highlight

- Middle East Consortium for Infections Disease Surveillance
 - Regional cooperation on disease surveillance
 - Build capacity to deal with disease outbreaks
 - Build relationships to manage cross-border cases

- Adopt OHF

Leverage the same technical infrastructure and interoperability specifications being created and actively adopted worldwide within the clinical domain (IHE), for public health. **The same architecture that serves clinical care can be used to support clinical research, public health and biosurveillance. We have proved this with the MECIDS project.**



MECIDS Project Highlight

The screenshot displays the 'Public Health Affinity Domain' web application. The top navigation bar includes 'Submit Data', '<< Home', 'Summary', and 'Document'. The main content area is titled 'Lab Report Document - Human' and shows a 'Public Health Laboratory Report Microbiology Studies' for 'Salmonella 2 [softa] [390420009]'. The report includes subject information (Cohen, Sarah), dates, and a table of 'Microbiology Test Results' with columns for 'Specimen Type', 'Code', 'Code System', and 'Comments'. A second window shows a 'Statistical report - Distribution of organisms' with a bar chart and a pie chart. The bar chart shows the number of organisms for various types, and the pie chart shows the distribution of these organisms. A map of the Middle East is visible in the bottom right corner of the screenshot.

Open Source Tools:

Eclipse OHF - IHE

Eclipse BIRT

Eclipse OHF - STEM

Get Involved !

<http://www.eclipse.org/ohf/>