Care for the World Minisymposium

Collaboration, Openness, Transparency and Trust as Prerequisites for High Quality, Effective and Efficient Health Care

Thomas Karopka\textsuperscript{a}, Syed Mohamed Aljunid\textsuperscript{b}, Nurhizam Safie\textsuperscript{b}, Luis Falcon\textsuperscript{c}, Holger Schmuhl\textsuperscript{d} and Kjeld Lisbye\textsuperscript{e}

\textsuperscript{a} BioCon Valley GmbH, Germany
\textsuperscript{b} United Nations University, International Institute for Global Health, Malaysia
\textsuperscript{c} GNU Solidario, Spain
\textsuperscript{d} Institute for Biological and Medical Imaging, Helmholtz Center Munich, Germany
\textsuperscript{e} Ideas Clinic, Aalborg University Hospital, Denmark
## Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
</tr>
</thead>
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<tr>
<td>08:30 - 08:35</td>
<td>Opening and Welcome</td>
<td><em>Thomas Karopka</em></td>
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<td>08:35 - 08:50</td>
<td>The role of FLOSS in achieving the MDGs</td>
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<td><em>Hans Demski</em></td>
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<td>Ideas Clinic Aalborg</td>
<td><em>Søren Grøndahl Buch</em></td>
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<tr>
<td>09:45 - 10:00</td>
<td>Discussion</td>
<td><em>All</em></td>
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</table>
Trends in Maternal Mortality: 1990 to 2010
Table 2. Estimates of maternal mortality ratio (MMR, maternal deaths per 100 000 live births), number of maternal deaths, and lifetime risk by United Nations Millennium Development Goal region, 2010

<table>
<thead>
<tr>
<th>Region</th>
<th>MMR</th>
<th>Range of MMR uncertainty</th>
<th>Number of maternal deaths</th>
<th>Lifetime risk of maternal death, 1 in:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lower estimate</td>
<td>Upper estimate</td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>210</td>
<td>170</td>
<td>250</td>
<td>287 000</td>
</tr>
<tr>
<td>Developed regions</td>
<td>16</td>
<td>14</td>
<td>18</td>
<td>2200</td>
</tr>
<tr>
<td>Developing regions</td>
<td>240</td>
<td>190</td>
<td>330</td>
<td>284 000</td>
</tr>
<tr>
<td>Northern Africa</td>
<td>78</td>
<td>55</td>
<td>120</td>
<td>2800</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>500</td>
<td>450</td>
<td>750</td>
<td>162 000</td>
</tr>
<tr>
<td>Eastern Asia</td>
<td>37</td>
<td>24</td>
<td>58</td>
<td>6400</td>
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<tr>
<td>Eastern Asia excluding China</td>
<td>220</td>
<td>150</td>
<td>310</td>
<td>83 000</td>
</tr>
<tr>
<td>South-Eastern Asia</td>
<td>240</td>
<td>160</td>
<td>380</td>
<td>28 000</td>
</tr>
<tr>
<td>Western Asia</td>
<td>71</td>
<td>48</td>
<td>110</td>
<td>3500</td>
</tr>
<tr>
<td>Caucasus and Central Asia</td>
<td>46</td>
<td>37</td>
<td>62</td>
<td>750</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>80</td>
<td>68</td>
<td>99</td>
<td>8800</td>
</tr>
<tr>
<td>Latin America</td>
<td>72</td>
<td>61</td>
<td>88</td>
<td>7400</td>
</tr>
<tr>
<td>Caribbean</td>
<td>190</td>
<td>140</td>
<td>290</td>
<td>1400</td>
</tr>
<tr>
<td>Oceania</td>
<td>200</td>
<td>98</td>
<td>430</td>
<td>510</td>
</tr>
</tbody>
</table>

Number of Maternal deaths in 2010: 287,000
Challenges in the WHO European Region

Owerweight affects 30-70% of adults
Innovation in Health Care

Collaboration
Openness
Transparency
Trust
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<td>Discussion</td>
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</table>
Open Source Health Informatics

Working Groups

Chair: (2011-2014)
Mr. Thomas Karopka,
Projektleiter ScanBalt HealthPort
BioCon Valley® GmbH
Walther-Rathenau-Str. 49 a, 17489 Greifswald
Germany
Tel +49 3834 515-303
Email: tk@bcv.org

Goals & Objectives

Objectives: The objectives of the group as developed at its formation in 2002 remain relevant, and the focus of the group remains on educational, promotional and ‘evangelistic’ activities to raise awareness of open source software.

While the group is named ‘open source’, our areas of interest include free/libre software and open source software (as described at in the European Commission-funded FLOSS project -
EFMI LIFOSS WG

EFMI WG LIFOSS Libre/free and open source software in health informatics

last update: October 2009

Membership:

The EFMI Working Group LIFOSS membership is open to everyone who agrees to the WG’s objectives, tries to actively participate and references to the WG whenever applicable.

For the enhancement of the communication between the members the EFMI LIFOSS WG now has established a Google Group account.

If you would like to become a member you are kindly invited to register to this group (http://groups.google.com/group/efmi-lifoss-wg)

Objectives:

1. to help replicate the success of free/libre and open source projects in the health informatics domain, in particular those within education, research, clinical practice and administration
2. to build a repository of knowledge about free/libre and open source developments of relevance to the health informatics domain
3. to develop an Open Source Market Place
4. to develop a website for the WG
5. to explore the implications of digital rights management, digital signatures, copyright and intellectual property issues
6. to develop the epistemological democracy leading to research publications
7. to liaise with and explore implications of EUROREC

The EFMI LIFOSS WG aims to promote:
1. evaluation of free/libre and open source materials and approaches
2. exploration and development of open standards
3. use of free/libre and open source systems, and knowledge transfer about these systems
4. a European focus, including activities aimed at, but not exclusive to, the European Union

Recent Activities:
The EFMI LIFOSS WG organised a workshop at Med-e-Tel 2009 in Luxembourg.
MedFLOSS.org

Medical Free/Libre and Open Source Software

Welcome at Medfloss.org

Medfloss.org provides a comprehensive and structured overview of Free/Libre and Open Source Soft (FLOSS) projects in the domains of medical informatics and health care. It is an open information portal aiming to foster the exchange of ideas, knowledge and experiences about existing projects and the related ecosystem.

Beside actual software projects also professional service providers, events and scientific publications listed.

For more information please refer to the Mission Statement.
IMIA Open Source Working Group

Submitted by Anonymous on Wed, 2010/11/24 - 11:15

Rating: ★★★★★ Your rating: None Average: 4.3 (3 votes)

Type: Working Group
Role: Consultant Coordinator FLOSS Advocat Information Provider
Served country/region: Worldwide

IMIA OS WG has been formed in 2002 with the objective to focus on educational, promotional and 'evangelistic' activities to raise awareness of open source software in health care. The primary objectives of the IMIA OS WG are to:

- disseminate knowledge about the benefits and prospects of FLOSS in health care among IMIA members and outside of IMIA,
- provide a neutral collaboration platform for all stakeholders in health care in respect to FLOSS,
- to foster collaborations between FLOSS-HC projects and
- to lower the perceived barriers to the adoption of FLOSS in health care
Conclusions

- There are excellent tools and projects in the domain of Free/Libre Open Source Software for Health Care.
- However, the potential impact is quite limited so far.
- Ecosystem building is of paramount importance.
  - This includes responding to end user needs, modular development, financing/funding, regional capacity building and education, dissemination.

Use the power of networking.

Swarm up!
Role of FLOSS in Achieving MDGs & Universal Coverage: UNU-IIGH Model

Professor Dato’ Dr Syed Mohamed Aljunied
MD (UKM) MSc (Public Health) (Singapore) PhD (London); DLSHTM (London); FAMM; FPHMM

Professor of Health Economics & Interim Director
United Nations University-International Institute For Global Health
Kuala Lumpur
Outline

- Introduction
- Health Related MDGs
- Universal Coverage: The Health System Goal
- e-Health: The Promises and Realities
- Why e-Health fails?
- Benefit of FOSS
- Role of UNU-IIGH in FOSS
- Conclusion
UN Millennium Development Goals (18 Targets)

- Goal 1: Eradicate Extreme Poverty and Hunger
- Goal 2: Achieve Universal Primary Education
- Goal 3: Promote Gender Equality and Empower Women
- Goal 4: Reduce Child Mortality
- Goal 5: Improve Maternal Health
- Goal 6: Combat HIV/AIDS, Malaria and Other Diseases
- Goal 7: Ensure Environmental Sustainability
- Goal 8: Develop a Global Partnership for Development
UN Millennium Development Goals: Health Related

- Reduce Child Mortality
  - Reduce by two-thirds the mortality rate among children under five

- Improve Maternal Health
  - Reduce by three quarters the maternal mortality ratio

- Combat HIV/AIDS, Malaria and Other Diseases
  - Halt and begin to reverse the spread of HIV/AIDS
  - Halt and begin to reverse the incidence of malaria and other major diseases
<table>
<thead>
<tr>
<th>Goals</th>
<th>Status in 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eradicate Extreme Poverty and Hunger</td>
<td>+ - (1,2)</td>
</tr>
<tr>
<td>Achieve Universal Primary Education</td>
<td>+ (3)</td>
</tr>
<tr>
<td>Promote Gender Equality and Empower Women</td>
<td>- (4)</td>
</tr>
<tr>
<td>Reduce Child Mortality</td>
<td>- (5)</td>
</tr>
<tr>
<td>Improve Maternal Health</td>
<td>- (6)</td>
</tr>
<tr>
<td>Combat HIV/AIDS, Malaria and Other Diseases</td>
<td>++ (7,8)</td>
</tr>
<tr>
<td>Ensure Environmental Sustainability</td>
<td>++++ (9,10,11)</td>
</tr>
<tr>
<td>Develop a Global Partnership for Development</td>
<td>+++++-- (12,13,14,15,16,17,18)</td>
</tr>
</tbody>
</table>
Achieve MDGs

Sustainable Health Financing, Universal Coverage and Social Health Insurance

Resolutions
- Establishment of prepayment scheme
- Risk sharing among population
- Avoidance of Catastrophic Health Expenditure
- Adequate and equitable distribution of health resource (financial and human)
- Plan for Universal Coverage
What is Universal Coverage?

- securing access by all citizens to appropriate promotive, preventive, curative and rehabilitative services at an affordable cost

Obstacles to Universal Coverage

- Raised in health care cost
- Emerging and re-emerging new diseases
- Increasing prevalence of chronic diseases
- Lack of sustainable health financing system
- Inadequate Information for health decision making
Health Expenditure as % of GDP (2010)

Source: www.data.worldbank.org/indicator/SH.XPD.PUB/countries
Can ICT help developing countries in achieving their health system goals?

Can ICT help to mobilise limited resources in health care to maximise the outcome?

Can we provide low cost but reliable ICT solutions to be deployed in developing countries?
Promise of e-Health

- Reduce Cost and Increase Efficiency
- Improve quality of service and patient safety
- Increase equity of access to health information and services
- Empowers individuals and enhance accountability
The realities....

- e-Health projects are costly
- Many e-health projects failed to be upscaled
- e-Health projects evaluation are rarely done
- Most developing countries failed to implement and obtain the benefit of e-health
Paper Vs Electronic Formats for Individual Patient Data (National)

## Global Implementation of Telemedicine-2009

<table>
<thead>
<tr>
<th>Service</th>
<th>Established</th>
<th>Pilot</th>
<th>Informal</th>
<th>No Stage Provided</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teleradiology</td>
<td>33%</td>
<td>20%</td>
<td>7%</td>
<td>2%</td>
<td>62%</td>
</tr>
<tr>
<td>Telepathology</td>
<td>17%</td>
<td>11%</td>
<td>9%</td>
<td>4%</td>
<td>41%</td>
</tr>
<tr>
<td>Teledermatology</td>
<td>16%</td>
<td>12%</td>
<td>7%</td>
<td>3%</td>
<td>38%</td>
</tr>
<tr>
<td>Telepsychiatry</td>
<td>13%</td>
<td>5%</td>
<td>5%</td>
<td>1%</td>
<td>24%</td>
</tr>
</tbody>
</table>

Source: WHO Global Survey on E-Health 2009 (114 countries)
Global Barriers to Telemedicine

Source: WHO Global Survey on E-Health 2009 (114 countries)
The New Generation Hospitals

Putrajaya Hospital

Ampang Hospital

H Selayang
Mongolia
Why Open Source Software is attractive?

- Low cost
  - Not necessarily free
- Flexible
  - Opportunity to Innovate
  - Source code can be viewed and modified
- Vendor Neutral
  - Not proprietary
- Public domain
  - Can be downloaded from Website
Growth of FOSS Market

- Availability of high quality software
- Low cost and low barrier to entry
- Availability of customization and local support service
- Vendor independence and flexibility
Brief Info on UNU-IIGH

- UNU-IIGH is designated as a research and training centre of UNU.
- Established in 2007 with USD 46.5 Million Endowment Fund from Malaysian Government.
- Staffing: 21 (5 RF, 9 Research Staff, 7 Admin Support).
- Vision: To be a leading and innovative centre on research and capacity building in Global Health.
United Nations University- International Institute For Global Health (UNU-IIGH)
UNU-IIGH Thematic Areas: Research and Capacity Building

UNU-IIGH Thematic Areas

- Health Leadership
- Newly Emerging and Re-Emerging Diseases
- Climate Change and Health
- Impact of Globalization on Health
- Information Technology in Health
- Control of Non-Communicable Diseases Including Mental Health
- Accessibility, Efficiency and Quality of Care in the Health System
- Impact of Globalization on Health
Role of UNU-IIGH in FOSS

- FOSS Softwares
  - UNU-Casemix System
  - OPTIMIST (UNU-HIS)

- e-Learning Programmes
  - Casemix Online
  - Open Source On-line Training
Our Flagship Project:

- Development of Casemix System to enhance provider payment method in Social Health Insurance Programme for Universal Coverage
- Costing and Health Econs studies
- Covers 19 Countries covering 300 million people and 3000 hospitals/health facilities
- Funders: AUSAID, ADB, GIZ and WHO
What is Casemix System/DRGs?

“Casemix System or DRGs is a classification of patient treatment episodes designed to create classes which are relatively homogenous in respect of the resources used and which contain patients with similar clinical characteristics.”
Uses of Casemix System

- Budgeting/Funding
- Cost control
- Reimbursement/Paying the health care providers
  - Prospective Payment
- Quality control
- Benchmarking
19 Countries working with UNU-IIGH/ITCC on Casemix

- **Asia**
  - Indonesia
  - Philippines
  - Mongolia
  - Vietnam
  - Malaysia
  - Bhutan

- **Middle East**
  - Yemen
  - United Arab Emirates
  - Saudi Arabia
  - Iran

- **South America**
  - Uruguay
  - Chile

- **Africa**
  - Ghana
  - Sudan
  - South Africa
  - Tanzania
  - Kenya

- **Europe**
  - Turkey
  - Macedonia
Benefits of Casemix System

- Improve Efficiency of Hospital Services health care system
  - Reduce wastages
  - Cost Savings for Hospitals
- Improve Quality of Care
  - Promote Evidence Base Practice
  - Support Benchmarking
  - Improve patient satisfaction
- Improve Health Management Information System
  - Better Decision Making
UNU Casemix Grouper

- An international grouper
- Priority to developing countries
- Packaged with capacity building programme
- Comes with accessory software
- Based on Open Source Concept
- Provided at low cost to poor countries

Copyright of United Nations University-IIGH
Module 1 Registration

The registration for Module 1: Introduction to Case-Mix for the third batch of students is now opened. This batch is due to begin class by the 6th of September 2010.

Registration Form

About UNU-IIGH

UNU-IIGH is a Research and Training Centre of United Nations University inaugurated by the UN Secretary General in April 2006 as an in-house community of scholars mandated to conduct research on issues that address the challenges of global health which are of concern to the United Nations and its Member States — particularly the developing countries. The institute’s UNU-IIGH research and capacity building themes include: accessibility, efficiency and quality of service delivery of health care systems; newly emerging and re-emerging diseases; non-communicable diseases and control policy; information technology in health; climate change and health and impact of globalisation on health.

For Enquiries: Prof Dr Syed Aljunid

Site news

(No news has been posted yet)
Development of Casemix System based on FOSS in UNU-IIGH
DEPLOYMENT OF CASEMIX SYSTEM IN DEVELOPING COUNTRIES: UNU-IIGH MODEL

- Disease & Procedure Codes
- Financial Data
- Case-Mix Index
- Base Rate
- Hospital Tariff
- CCM
- Customised CaseMix Grouper
- Cost-Weights
- UNU-DRG-Grouper
Challenges in Implementing FOSS in Developing Countries

- Ignorance on existence of FOSS by decision makers
- No clear policy to promote FOSS
- Lack of trained human resource to develop and support FOSS
- Locked-in by Non-FOSS Vendors
- Users perception that Non-FOSS is of better quality
- Corruptions in IT Procurement
CONCLUSION

- Challenges to achieve objectives of healthcare system including Universal Coverage
- ICT is significant component of Health System
- e-Health solutions are more accessible to developed countries
- Developing countries with limited resources and fragile health system have not been successful in using e-health
- FOSS offer a potential solution to enhance ICT use in healthcare system
- Economic evaluation study on e-health should be carried out systematically
UNU-IIGH Capacity Building Program

Nurhizam Safie. Ph.D.
Research Fellow

nurhizam@unu.edu
Capacity Building in UNU-IIGH

**Capacity Building** : A continual process by which individuals and organizations develop abilities to perform functions, solve issues, set and achieve objectives which involves all stakeholders.

**Two types of Capacity Building** :

1. **Online** - Open Source Online Training
2. **On site** - Workshops/seminars and forums
Capacity Building Model

PLAN — TRAIN

REFLECT — OBSERVE
Online training objectives

1. To promote digital awareness on open source health information systems among healthcare practitioners
2. To provide initial and preparatory knowledge on open source health information systems
3. To disseminate the timely knowledge to learners anywhere, anytime and at their learning paces.
Open Source Online Training in Healthcare

This online course is designed specifically to provide initial and preparatory knowledge for development and implementation of open source hospital information systems in developing countries.

Kindly fill-in the Registration Form as well as answer the Pre-Test. The purpose of the pre-test is to assess your preliminary understanding of the course. Once you have completed the registration form and pre-test, we will issue your username and password within 24 hours.

For enquiries: Dr Nurhizam (Research Fellow)

Skype ID: optimist.admin

Site news

(No news has been posted yet)
E-LEARNING INITIATIVE CAPACITY BUILDING FOR HEALTHCARE WORKFORCE OF DEVELOPING COUNTRIES

Nurhizam Safie and Syed Aljunid

DOI: 10.3844/jcssp.2013.583.591

Journal of Computer Science

Volume 9, Issue 5
Pages 583-591

Abstract

This study aims to explicate the strategic utilisation of e-learning is of utmost significance as e-learning plays a pivotal role in the improvement of healthcare learning and knowledge transfer, especially in developing countries and in pursuing of Millennium Development Goals (MDGs). Rapid technology changes make the process of training healthcare professionals in hospitals a major challenge. The objective of this study is to look into the current status of e-learning in healthcare and to highlight the key areas of intervention needed to enhance the development of e-learning initiatives in healthcare.
Malaysian Technical Cooperation Programme (MTCP)

The Malaysian Technical Cooperation Programme (MTCP) was first initiated at the First Commonwealth Heads of Government Meeting (CHOGM) for Asia Pacific Region in Sydney in February 1978. It was officially launched on 7 September 1980 at the Commonwealth Heads of State Meeting in New Delhi to signify Malaysia’s commitment to South-South Cooperation, in particular Technical Cooperation among Developing Countries (TCDC).

In line with the spirit of South-South Cooperation, Malaysia through the MTCP shares its development experiences and expertise with other developing countries. The MTCP was first formulated based on the belief that the development of a country depends on the quality of its human resources. The programme forms part of the commitment of the Malaysian Government towards the promotion of technical cooperation among developing countries, strengthening of regional and sub-regional cooperation, as well as nurturing collective self-reliance among developing countries.

The MTCP emphasises the development of human resources through the provision of training in various areas which are essential for a country’s development such as public administration, good governance, health services, education, sustainable development, agriculture, poverty
MTCP Sponsored Open Source Hospital Information System Development Workshop

POSTED ON JULY 14, 2013
UNDANGAN

1st International Workshop on IT Security in Healthcare

PEMBICARA:
1) Assoc. Prof. Dr. Zuraini Ismail, Head of Department Advanced Informatics School Universiti Teknologi Malaysia (UTM)
2) Dr. Nurhizam Safie, Research Fellow United Nations University International Institute for Global Health (UNU-IIGH)
3) Seyed Mohamad Motahar, Ph.D. Candidate (UKM), Pakar Tryton framework - GNU Health.
4) Yahaya Abdul Rahim, Dosen Senior Universiti Teknikal Malaysia Melaka (UTEM)
5) Riza Kurniawan (R-Tech Softmedia Surabaya), ERP implementer.

MATERI:
Aspek keamanan informasi dalam bidang pelayanan kesehatan
GNU Health security (open source sistem informasi rumah sakit)

WAKTU DAN TEMPAT PELAKSANAAN
Hari/tanggal : Senin / 3 Juni 2013
Jam : 09.00 -- 16.00
Tempat : Program Magister Ilmu Komputer Universitas Budi Luhur
Kampus Universitas Budi Luhur -- Jl. Raya Ciledug, Petukungan Utara, Jakarta Selatan

Pendaftaran by email : hadisyahrial@gmail.com
Pendaftaran GRATIS
Termasuk makan siang + sertifikat
Paling lambat tanggal 28 Mei 2013
Open Source Security in Healthcare Forum
ASIA PACIFIC COLLEGE  JULY 27, 8:30AM - 3:30PM  |  RM. 213
3 Humabon Place, Magallanes, Makati City

TOPICS:

- The Impact of the Data Privacy Act of 2012 on Electronic Health Records
- A Primer on PhilHealth’s ElectronicClaims System
- Implementation of Open Source Software in Healthcare: Trends and Challenges
- IT Security Issues in Healthcare
- Data Privacy in Healthcare: an International Perspective
- What lies ahead?

Resource speakers:

DR. NURHIZAM SAFIE
Research Fellow (IT in Health)
United Nations University - International Institute for Global Health
UNU-IIIGH Building

MR. YAHAYA ABDUL RAHIM
Post-graduate candidate
United Nations University - International Institute for Global Health
UNU-IIIGH Building

DR. ALVIN B. MARCELO
Associate Professor
University of the Philippines Manila
International Open Source Network

Registration fee: P 300.00 (includes free flowing coffee and certificate of attendance). Payment will be collected upon registration. Please notify Jayne Niduaza via e-mail at krentzniduaza@gmail.com for reservations.

International Open Source Network
Software Freedom For All
Workshops in 2011 and 2012
Conclusion

• The role of UNU-IIGH in FOSS capacity building is significant in this era of high demand for healthcare technology.

• Open source software is a solution to the overwhelming cost of healthcare particularly in developing countries.

• Any collaborative efforts are most welcomed !!!
I'M SORRY, THIS IS THE LINE FOR PEOPLE WHO VOLUNTEERED TO HELP THEIR COMMUNITY. YOU'RE LOOKING FOR THE ETERNAL DAMNATION DEPARTMENT.
Medfloss.org – An open information portal dedicated to Free/Libre and Open Source software and its adoption in health care delivery

Hans Demski, Holger Schmuhl

Laboratory for Medical Information Systems, Institute for Biological and Medical Imaging, Helmholtz Zentrum München

IMIA Open Source Health Informatics WG; EFMI Libre/Free and Open Source Software in Health Informatics WG

Copenhagen, 22.08.2013
Medfloss.org - Motivation
Resources are scattered all over the information space

- No comprehensive repository (database) of FLOSS dedicated to health informatics available
  - Comparability not given: no sufficiently structured information about projects available, no unified terminology used
    - Relevant projects for specific purpose cannot be identified or narrowed down
  - Missing lobby and marketing machinery
- Original sources may lack detailed further information like number of deployments, reference sites/success stories, professional service providers and publications
“Medfloss.org provides a comprehensive and structured overview of FLOSS projects in the domains of medical informatics and health care delivery. It is an open information portal that aims to foster the exchange of ideas, knowledge and experiences about existing projects and the related ecosystem. “

- Online since February 2010
- Based on Drupal
- Users can add and modify any content, free registration required to prevent spam and assure quality and validity of given information
Structured and interlinked information

Tagged in numerous categories (general and health care specific)

- 290 projects
- 91 professional service providers
- 213 scientific publications
- 35 events (conferences, trade shows)
- 44 organizations and other resources (Web sites, etc.)
- Linux distributions
Browse projects via the Project Wizard or sorted by popularity, application type, enterprise function or supported standard.
The bazaar offers direct access to further valuable resources like service providers (companies), events and scientific publications.
Linux distributions packaging medical FLOSS projects and further resources like related Web sites, organizations, etc. are given here.
Structured information about projects is given in a standardized format using unified terminology:

- Projects are tagged in multiple categories.
- General categories provide details about license, programming language(s) and toolkit(s), supported platform(s), client type(s) etc.
- Health care specific categories are used to present the application type, supported enterprise function(s) and supported interoperability standards
- Integrated Ohloh ® Widget provides information about number of developers, maturity and project activity
GNU Health

Rating: ★★★☆☆  Your rating: None  Average: 4 (14 votes)
License: GNU GPL
Application type: EMR  Hospital Management System
Standard: HL7  ICD10  SNOMED
Language: Dutch  English  French  Greek  Indonesian  Italian  Portuguese  Spanish  Vietnamese
Client type: Native  Web-based
Platform: Cross-platform
Programming language/toolkit: Python  GTK+
Database: PostgreSQL

Ohloh® Factoids:

GNU Health

- Mostly written in Python
- Average size development team
- Young, but established codebase
- Average number of code comments
- 4 active contributors

Commit Activity Timeline:

Updated Mar 05, 2013  more at Ohloh
Project specific additional resource are given below the free text description:

- Links to external resources like project’s homepage, downloads, screenshots, documentation/wiki, support/mailing lists, etc.

- Links to further resources within our database like companies offering professional services, events where one can meet the project community or scientific publications about the project
Homepage: http://health.gnu.org/

Screenshots: http://health.gnu.org/screenshots.html

Files: http://health.gnu.org/download.html

Documentation: http://en.wikibooks.org/wiki/GNU_Health

Support: http://health.gnu.org/community.html

Professional service provider: incore IT Solutions OG

Thymbra

Related event(s):
III. International Workshop on e-Health in Emerging Economies
IV. International Workshop on e-Health in Emerging Economies
Med-e-Tel 2011
V. International Workshop on e-Health in Emerging Economies
VI. International Workshop on e-Health in Emerging Economies

Publication(s):
Report on existing open-source electronic medical records

Related organization or other resource:
GNU Solidario
Welcome at Medfloss.org

Medfloss.org provides a comprehensive and structured overview of Free/Libre and Open Source Software (FLOSS) projects in the domains of medical informatics and health care delivery. It is an open information portal that aims to foster the exchange of ideas, knowledge and experiences about existing projects and the related ecosystem.

Beside actual software projects also professional service providers, events and scientific publications are listed. Try the Project Wizard to find relevant projects for your use case.

For more information please refer to the Mission Statement.

Provided in cooperation with:

IMIA Open Source Health Informatics Working Group

EFMI Working Group Libre/Free and Open Source Software in Health Informatics

HelmholtzZentrum münchen
German Research Center for Environmental Health
Helmholtz Zentrum München, Institute IBMI - Working Group MEDIS
Packaging teams who create one-click install packages (like .deb or .rpm files) for popular Linux distributions:

- Debian Med: http://www.debian.org/devel/debian-med/
- openSUSE Medical: http://en.opensuse.org/Portal:Medical
- Fedora Medical: http://fedoraproject.org/wiki/SIGs/FedoraMedical
Aalborg University Hospital & Science and Innovation Center (AUHSIC)

- University Hospital since 2003
- 6500 employees
- Handles:
  - Highly specialized regional functions for approx. 640,000 inhabitants, including parts of the Central Denmark Region.

AUHSIC
- Approximately 6,000 square meters
- Established in 2005 – extended in 2010
- ‘Multidisciplinary research environment
- Cooperation with industry through the ”Ideas Clinic”
- Teaching students
- Give all parties the best conditions for research, innovation and commercialization.
What is Innovation at The Ideas Clinic?

"Innovation is ideas put into practice which then create value"

Ideas can be completely new ones or existing ideas tuned or combined in new ways.

Value can be heightened quality, improved economy and increased safety

The Ideas Clinics task is to facilitate healthcare innovation, adding value along the way
How to

Engineers
- Healthcare Technology
- Industrial Production
- Service Design

Graphic Designer

Legal Adviser

Nurses

Anthropologist

Business Developer

Secretary

Winners of The Danish Society of Engineers’ reward 2012
The basic model

- Identify an unmet need in the hospital sector

- Cooperate with the proposers and examine whether we are addressing the real need

- The need becomes a task, which we seek to solve in the best way possible (the idea proposer is still in the loop – user acceptance)

- Include existing solutions if needed

- Support the implementation of the solution

Aalborg Hospital Ideas Clinic is basically a High Performance Team that seeks the most simple path to the goal
First part of the process

- Reception
  - Criteria

- Initial investiga.
  - Novelty
  - Need

- Evaluation
  - SWOT

- Project def.
  - PiD

Product

Service
Rapid prototyping

Design thinking as a dynamic system

Skogstad, 2009
USER
USER
USER
Results

400+ ideas since 2009
102 ideas received in 2012
91 active ideas currently
2 active Service Design projects
15 ideas in commercialization stage
13 patent applications
Who can submit ideas?

Patients

Staff

Relations
Examples
# 1 Our Experience

Innovation can be and shall be systematic addressed in complex organisations
# 2 Our Experience

The Innovation Unit shall facilitate and the main organization innovate.
# 3 Our Experience

Innovation has to be embedded in the top management in order to allow and stimulate bottom-up innovation.
The effect of innovation need to be measured and documented
www.ideklinikken.dk