Free/Libre Open Source Software in Health Care: The Need for Worldwide Networking and Convergence

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IT Science Center Rügen gGmbH
Chair EFMI LIFOSS WG
Vice-chair IMIA OS WG

Outline

Introduction

(1) Introduction

(2) IT in Health care – FLOSS in health care – global perspective

(3) FLOSS-HC strategy

(4) Some real world FLOSS-HC systems

(5) Social Networks

(6) The role of IMIA OS WG and EFMI LIFOSS WG

(7) Conclusions

IT Science Center Rügen gGmbH

Center for applied research and Development in the sector of information techn

Main work areas:
Mobile Multimedia
Free/Libre Open Source Software
Health care and aging science

The situation in health care

Why does IT in health care lack behind other areas?

(in terms of penetration and interoperability)

(1) Market fragmentation
(2) „Medicine is not a science, it is an art“ → not easy to standardise
(3) Very different stakeholders with traditonal roles (physicians, nurses, health insurance, pharmacist, physiotherapist, hospital, Reha-Clinic...)
(4) Affinity of users to IT is not very high
(5) Use of modern IT solutions may clash with traditional workflows
(6) IT in health care is a moving target

The situation in health care

Additional problems for emerging economies and developing countries

(1) Lack of IT infrastructure
(2) IT solutions are too expensive
(3) Lack of knowledge and training
(4) Lack of IT solutions that fulfil the requirements from a developing country point of view
(5) Access to existing solutions
(6) Lack of knowledge about existing solutions

The situation of FLOSS in health care

Why does FLOSS in health care lack behind other areas?

(1) Market is highly specialised (expert knowledge, not a commodity)
(2) Developers != Users
(3) IT specialists develop for health professionals (two different worlds)

...

The situation of FLOSS in health care

Why does FLOSS in health care lack behind other areas?

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...

FLOSS-HC strategy

How to push FLOSS in health care?

(1) FLOSS-HC inventory – What is already there?

(2) FLOSS-HC communication platform and software repository – Where to find information about FLOSS-HC?

(3) FLOSS-HC use case database – What is really needed? These use cases and may be workflows should describe the use cases from the health professional view point

(4) FLOSS-HC knowledge base – Description of modules and their capabilities

(5) FLOSS-HC dissemination activities / education

FLOSS-HC inventory

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List of open source healthcare software

From Wikipedia, the free encyclopedia

This article's external links may not follow Wikipedia's content policies or guidelines. Please improve this article by removing excessive or inappropriate external links. (December 2007)

The following is a list of software packages and applications licensed under an open source license or in the public domain for use in the healthcare industry.

Software that is freely available, but not licensed under an open source license should be placed in the List of freeware health software.

Contents [hide]

1 Categories
- 1.1 Public Health and Biosurveillance
- 1.2 Electronic health or medical record
- 1.3 Medical Practice Management Software
- 1.4 Health System Management
- 1.5 Imaging/Visualization
- 1.6 Medical Information Systems
- 1.7 MPI - Master Patient Index
- 1.8 Standards Libraries
  - 1.8.1 Older Libraries
- 1.9 Signal Processing
- 1.10 Research
- 1.11 Operating System
- 1.12 Data Translation
- 1.13 Mobile / Handheld Devices
- 1.14 Integration
- 1.15 Coding
- 1.16 Data (free data related to the healthcare industry)
- 1.17 Telemedicine
- 1.18 IHE
- 1.19 Private Health Record
- 1.20 Other
- 1.21 Out of the box distributions
- 1.22 Interoperability testing

2 See also
3 References
4 External links

Categories [edit]

Categories: 22

Projects: 169

Imaging/Vizualisation: 40

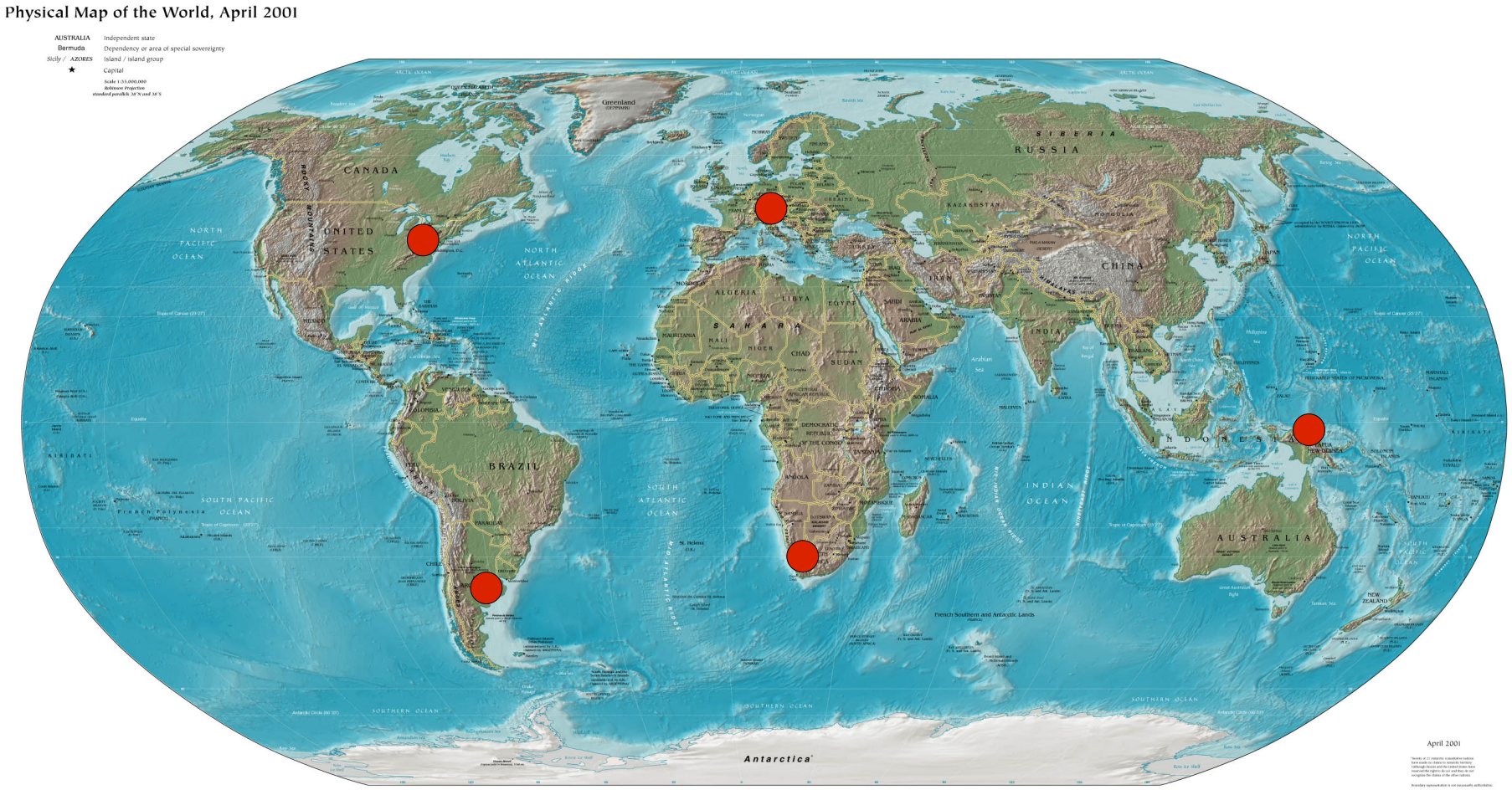
Electronic Medical Record: 23

FLOSS-HC inventory

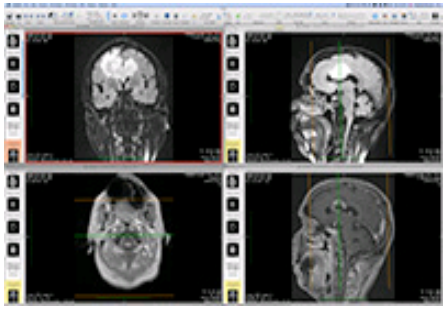
Categories: 19

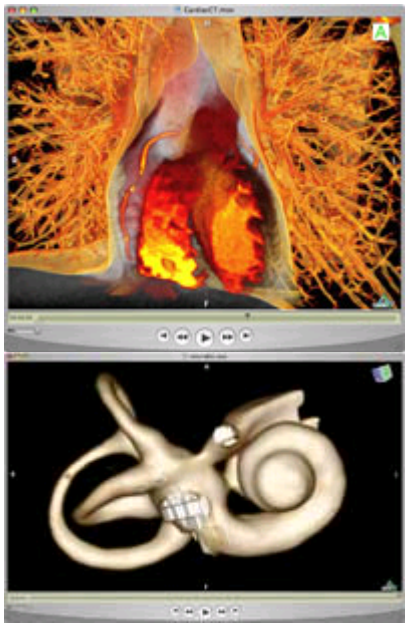
Projects: 117

Some examples: FLOSS-HC projects world wide



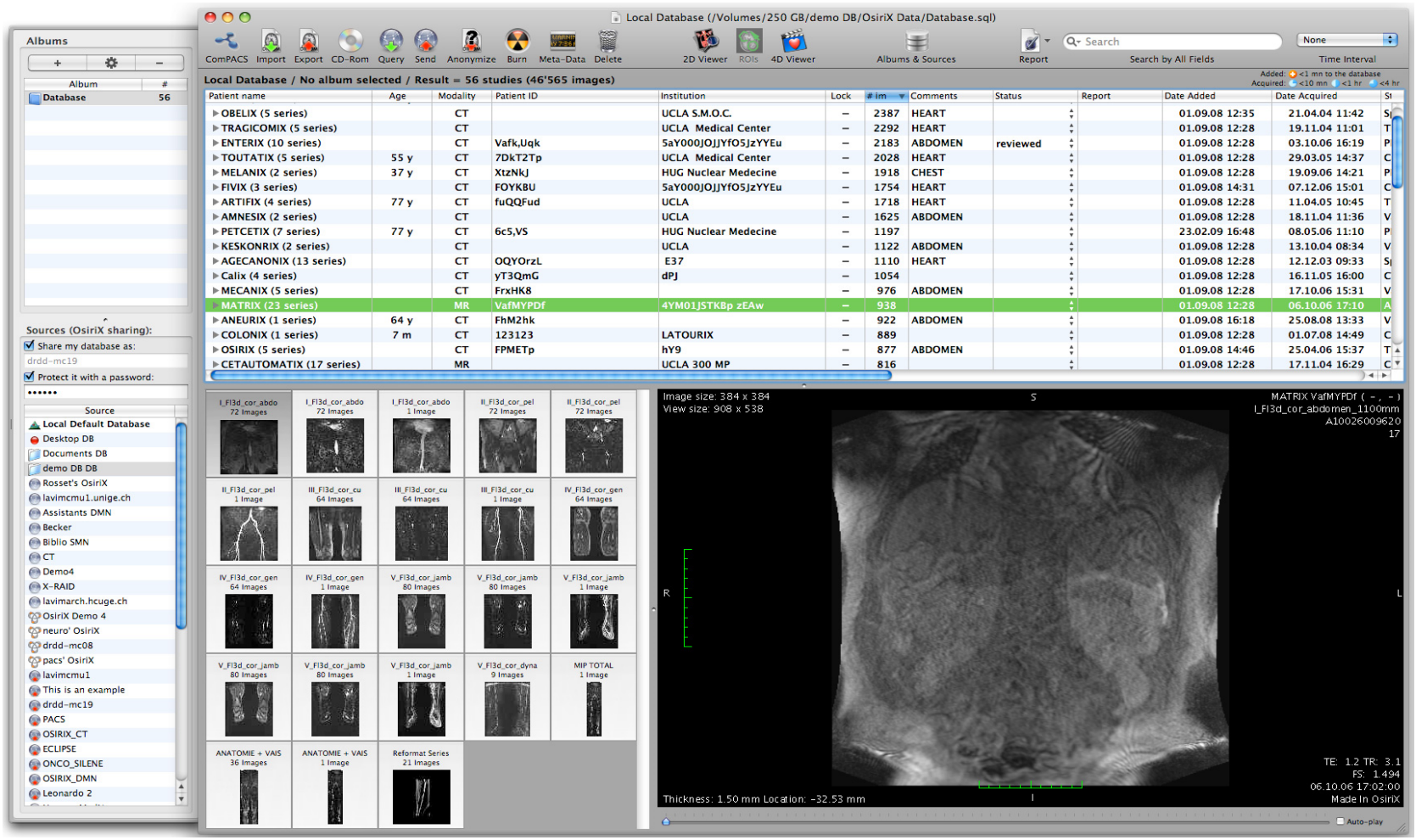
OsiriX – Imaging Software





Source: http://www.osirix-viewer.com/Snapshots.html

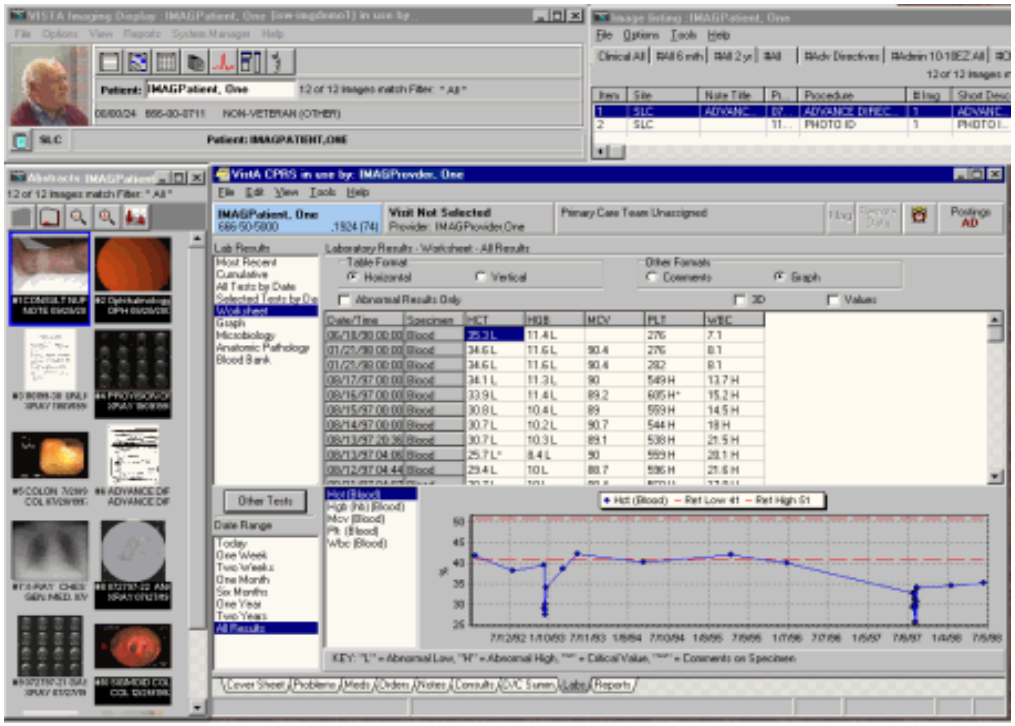
OsiriX-GUI/Database



Veterans Health Information Systems and Technology Architecture (VistA)

VistA Versions - Fed.Govt.

FOIA Vista (Freedom of Information Act)
RPMS (Indian Health Service)
CHCS (DoD)
VistA Office EHR
NASA (Derivative of RPMS)



VistA Versions – Community

OpenVistA (Mesphere)
VxVistA (DSS, Inc.)
WorldVistA
RPMS (IHS)

VA: 163 Hospitals, 850+ clinics
RPMS: 49 Hospitals, 190 centers
NASA: 14 Health centers
DoD: 70 Hospitals, 411 Clinics

OSCAR

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only in current section

OSCAR Canada Users Society

Home

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Navigation

- About OSCAR
- Information for OSCAR Users
- User Manuals
- OSCAR Users Groups
- OSCAR Support
- OSCAR Software Development
- OSCARA (OSCAR hardware)
- CAISI (OSCAR Integration)

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News

BC User group meeting 2010
Nov 25, 2009

OSCAR booth at SPH CME conference in Vancouver is well attended
Nov 25, 2009

Welcome to OSCAR Canada Users Society

OSCAR is a Suite of Applications which serve to enhance the health and social service community's ability to provide the highest level of care.

All OSCAR applications are built in free **open source** software, which means you are free to download the program, use the program, or modify it.

- **OSCAR Electronic Medical Record (EMR)** has full billing capabilities, chronic disease management tools, prescription module, scheduling and many other features. OSCAR can run locally in an office or be accessed over the internet.
- **MyOSCAR** is a patient controlled personal health record that integrates with the OSCAR EMR.
- **MyDrugRef** is a "social-network" for pharmacists and physicians to facilitate "knowledge transfer" of drug information and is fully integrated with the OSCAR EMR.
- **OSCAR CAISI** is a national, award winning, full featured Case Management, Bed Management, and Program/Facility Management system, used by many leading Agencies and Residential Programs in Toronto, Hamilton, and Ottawa. This OSCAR partnership won the 2007 Silver Award of Excellence in the Efficiency & Operational Improvements from CIPA Canadian Information Productivity Awards
- **OSCAR Resource** is a compilation of free clinical resources which can be accessed through the EMR at the point of care.

A growing number of experienced OSCAR Support Providers provide a full range of set-up and support services for all the software in the OSCAR Suite of Applications. Read more on open source and **why an open source EMR is your best choice**.

The First Ontario OSCAR Users Group gathered at the Stonechurch Family Health Centre, Hamilton, Ontario

OSCAR users gathered for The BC OSCAR User group meeting in Vancouver on March 27, 2009 where the 2009 BC OSCARs were awarded

Blogs

- OSCAR Canada blog
- OSCAR PEI
- OSCAR Alberta
- OSCAR Argentina

Listservs

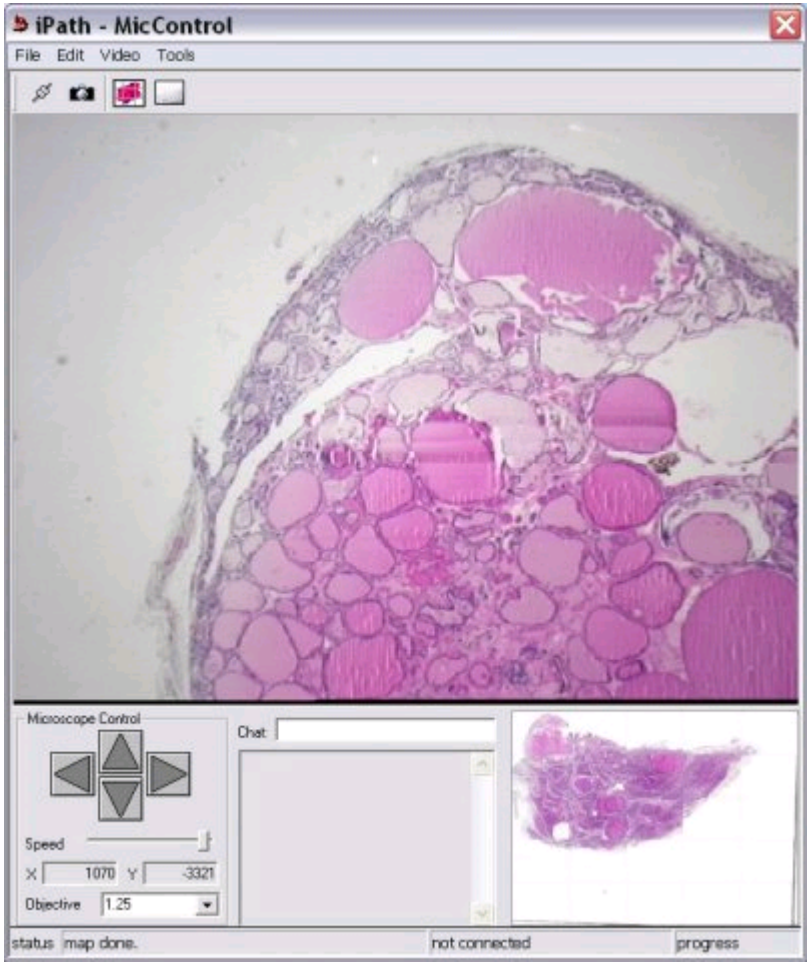
Subscribe to:

- OSCAR Users (this is the most active list)
- Medical Office Assistants
- Developers

Membership

OSCAR users- please register with the OSCARcanada Users Society. There is no cost to be a member of the OSCARcanada Users Society and you will receive periodic updates about important OSCAR developments, news and meetings. Members are also be able to vote at the AGM

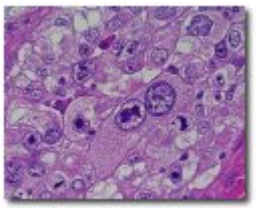
iPath – Telemedicine Platform - http://telemed.ipath.ch/ipath/

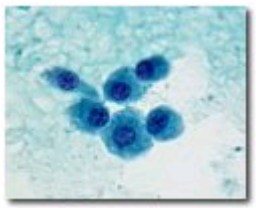


Collaborative platform fo exchange of medical knowledge, distance consultations, group discussions and distance teaching in medicine

Active Users: 4545
Groups: 273

University of Basel
Prof. Dr. med. Martin Oberholzer





Source: http://sourceforge.net/projects/ipath/

OpenMRS

OpenMRS

OpenMRS® is a community-developed, open-source, enterprise electronic medical record system platform.

Focus on HIV/AIDS

Source: http://www.openmrs.org

OpenMRS Partners

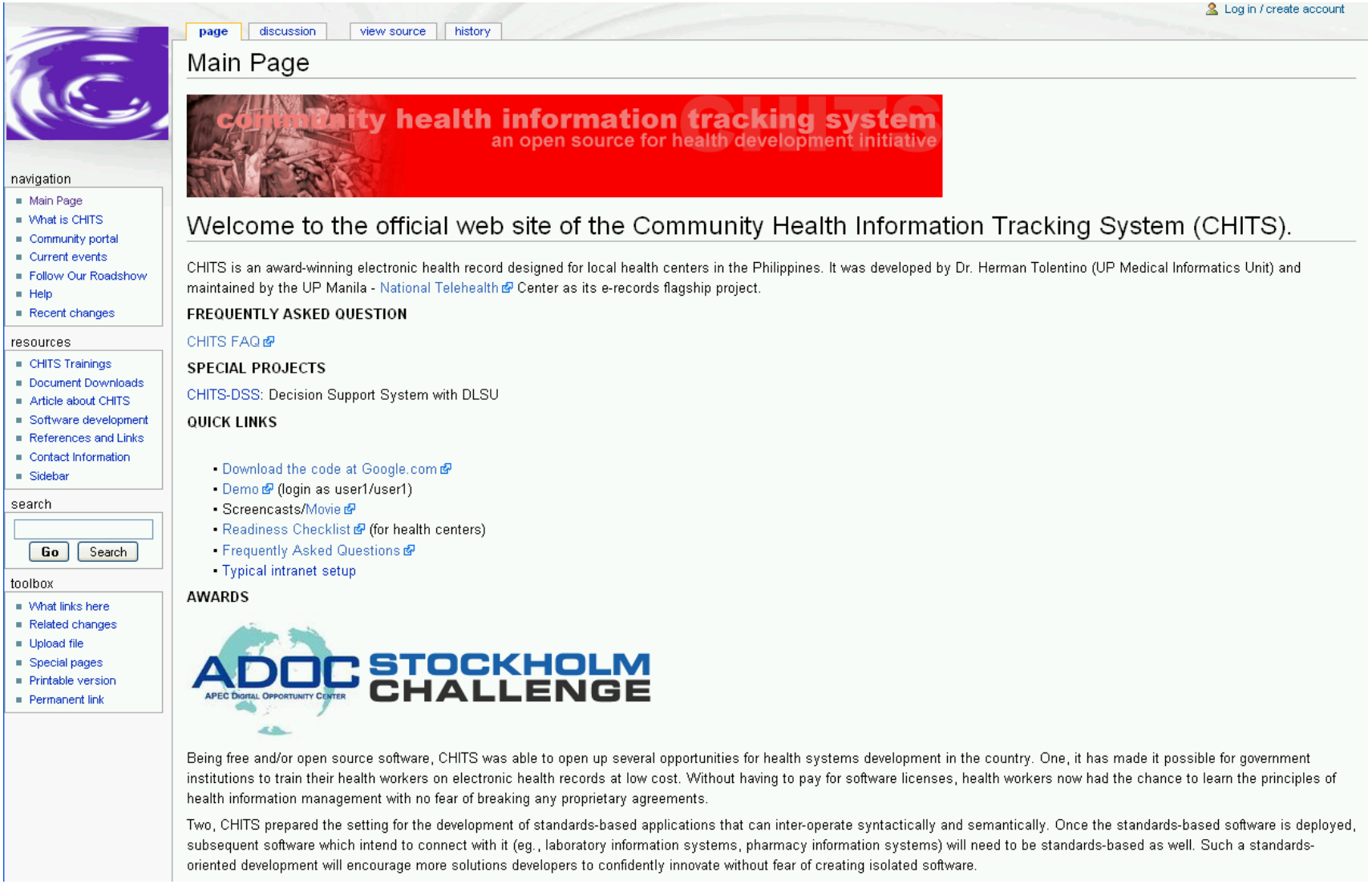
Regenstrief Institute, Inc.

Partners In Health, Boston

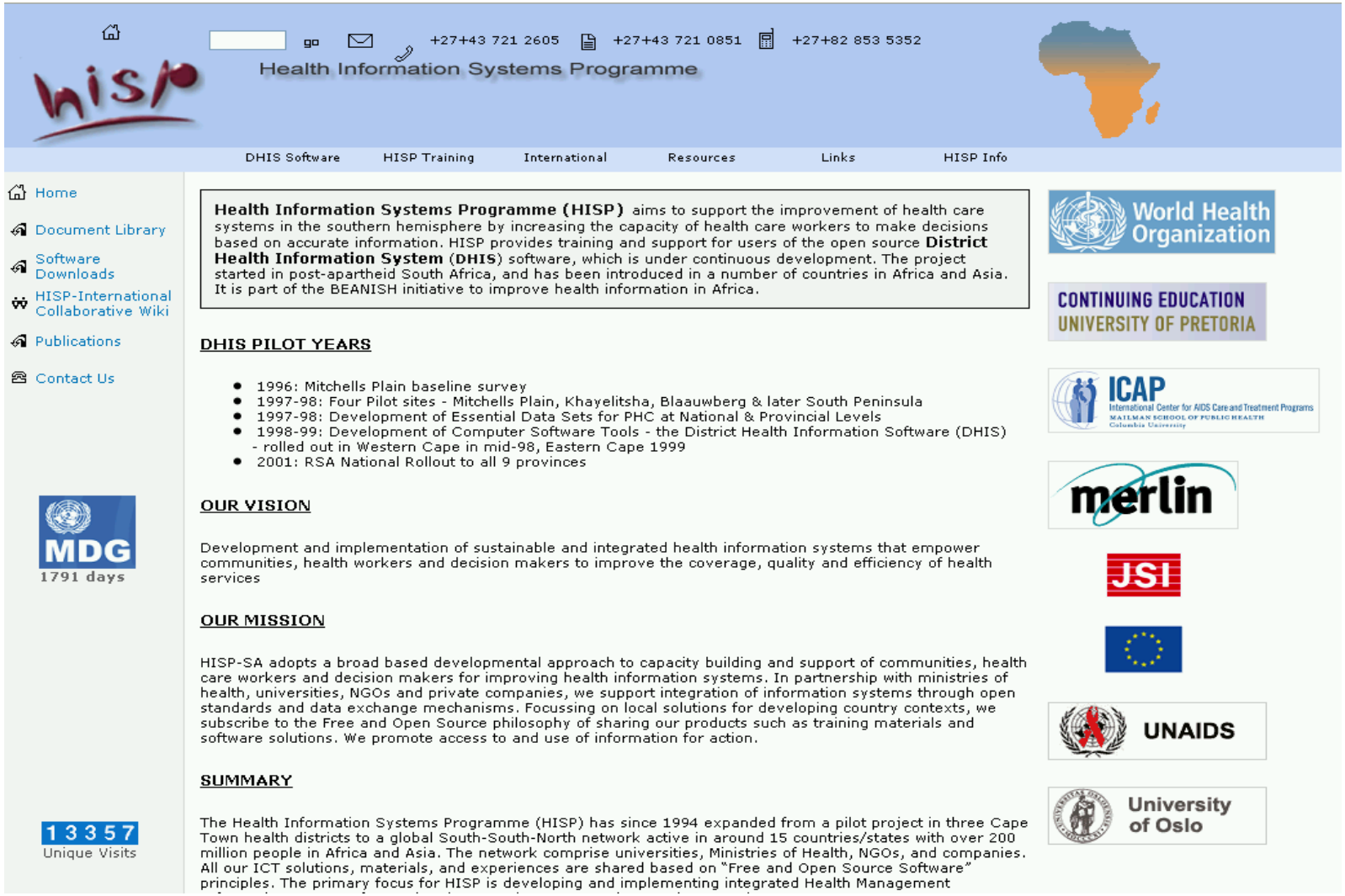
OpenMRS implementations

South Africa, Rwanda, Lesotho, Zimbabwe, Mozambique, Uganda, Tanzania, Kenya

Community Health Information Tracking System (CHITS)



Health Information Systems Programme: http://www.hisp.org



Mobile Systems: FrontlineSMS http://www.frontlinesms.com/

Mobile Systems: RapidSMS http://www.rapidsms.org/

RapidSMS

Home | Blog | Overview | Getting Started | Case Studies | Code | Community

RapidSMS is a free and open-source framework for dynamic data collection, logistics coordination and communication, leveraging basic short message service (SMS) mobile phone technology.

Welcome to the RapidSMS Project!

The Challenge

The Impact

The Technology

Tour RapidSMS

What is using RapidSMS really like? Deployed in Kenya, Child Count is a specialized platform that brings diagnoses, referrals and treatment out of the clinics and into the communities.

Get Started

Does RapidSMS suit your needs? Learn what you need to set up RapidSMS and how to customize it.

Case Studies

One of the best ways to see if RapidSMS is the right tool for you is to see how it is currently being deployed. Also, please review a recent report prepared by Columbia University on Malnutrition Surveillance in Malawi.

Download Now!

Download RapidSMS

SEARCH

Enter search keyword SUBMIT

RAPIDSMS IN THE BLOGOSPHERE

Feed Search Results Are Unavailable

RAPIDSMS IN THE TWITTERVERSE

@mberg Yep ;) RapidSMS install tomorrow!
February 3, 2010 *Katrinskaya (Katrin Verclas)*

RT @vitalmhealth: RapidSMS Draws Major Attention... http://ow.ly/128wF
February 3, 2010 *evanmwheeler (evanmwheeler)*

UNICEF -> RapidSMS.org #om10
February 2, 2010 *Ed_Dodds (Ed Dodds)*

RapidSMS Draws Major Attention... http://ow.ly/128wF
January 31, 2010 *vitalmhealth (Vital mHealth)*

MobileActive.org: http://mobileactive.org

MobileActive.org

A global network of people using mobile technology for social impact.

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Testing the Waters with Mobile Surveys: Water Quality Reporter

Safe drinking water is a necessity for life. But according to a **2005 report** published by the World Health Organization and UNICEF, 1.1 billion people worldwide lack access to quality drinking water.

In South Africa, a current project is monitoring water quality with SMS in a push to bring safer water to the area. Run by the **University of Bristol** and the **University of Cape Town**, the four year project is two-fold: 1) develop a new means of testing water quality and 2) develop a new means of reporting the results of these water quality tests.

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- Environment
- Health
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HEALTH

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Ghana mHealth Ethnographic Study Shows Promise of Mobiles to Support Community Health

The recently released **mHealth Ethnography Report** is an important addition to the growing body of knowledge about the potential for community health initiatives supported by mobile technology. As we have noted before, much of the health care in rural communities is provides by community health workers, largely untrained paraprofessionals.

The report hones in on the potential of SMS/text messages and voice services accessible via mobile to reinforce outreach services and support for these community health workers. The authors assess the initial state of information, communication, and mobile phone use for maternal and newborn health in the health sector and the general population in the Dangme West District in the Greater Accra Region.

It indicates that mobile phones are already used by many healthcare workers and by the general population to seek health related information or coordinate related transportation in emergencies.

Read More

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- Citizen Media
- Democratic Participation
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- Environment
- Health
- Livelihoods & Economic Development

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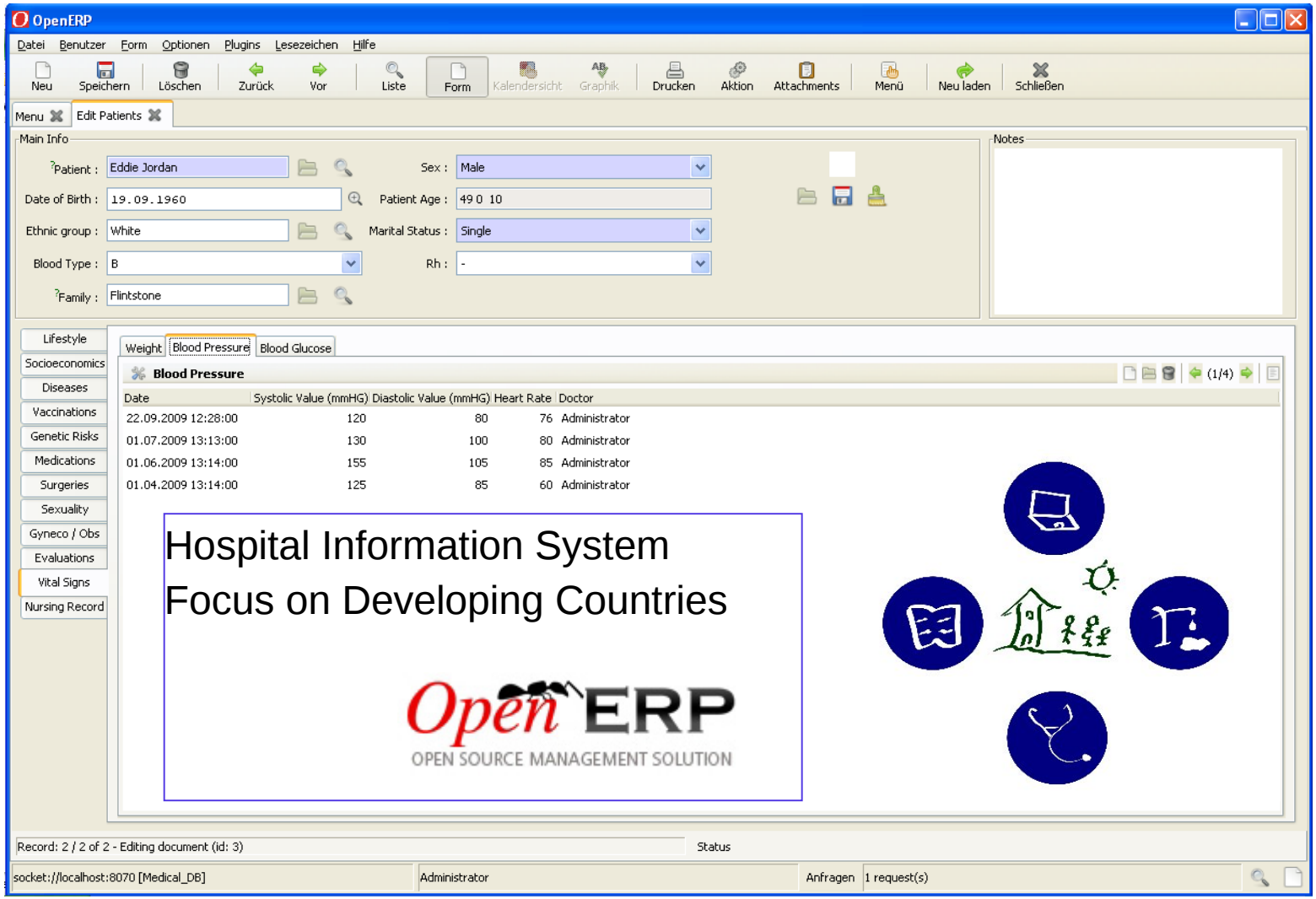
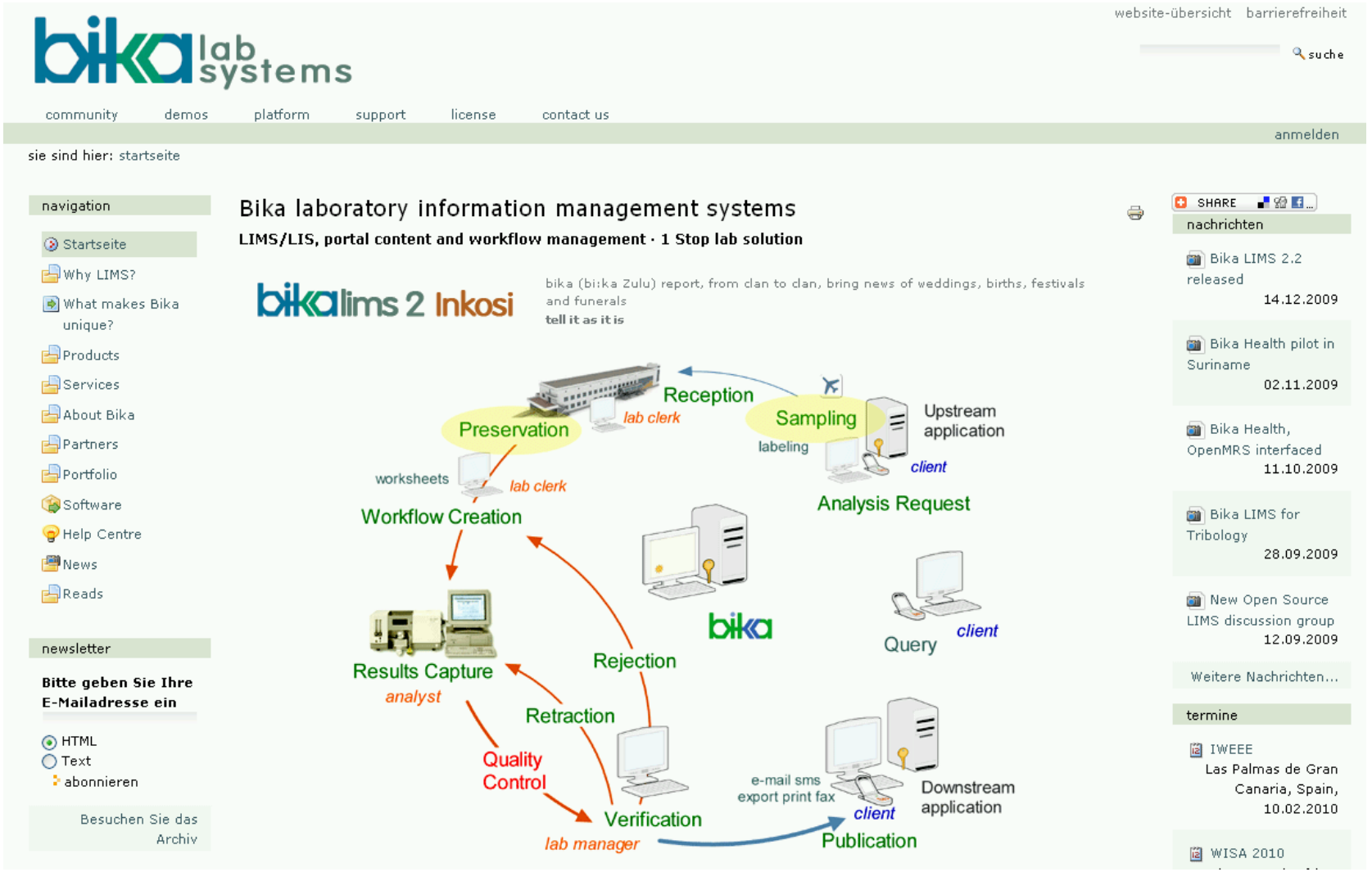
Project of the Month on SourceForge, Sept. 2009 Medical

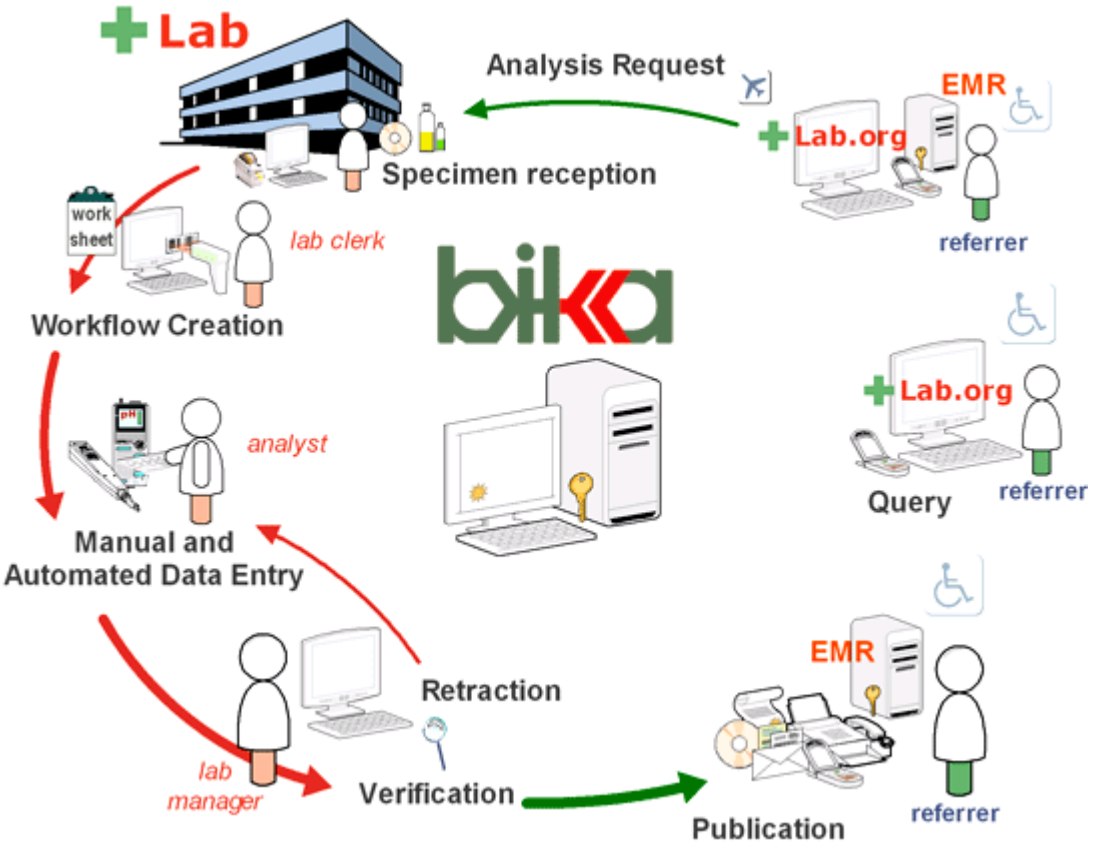


Bika lab systems: http://www.bikalabs.com/

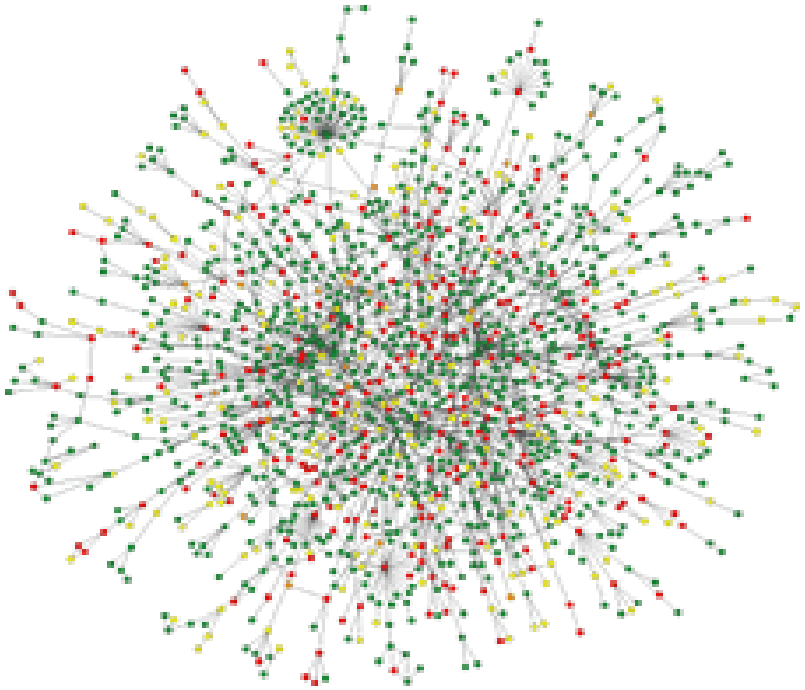


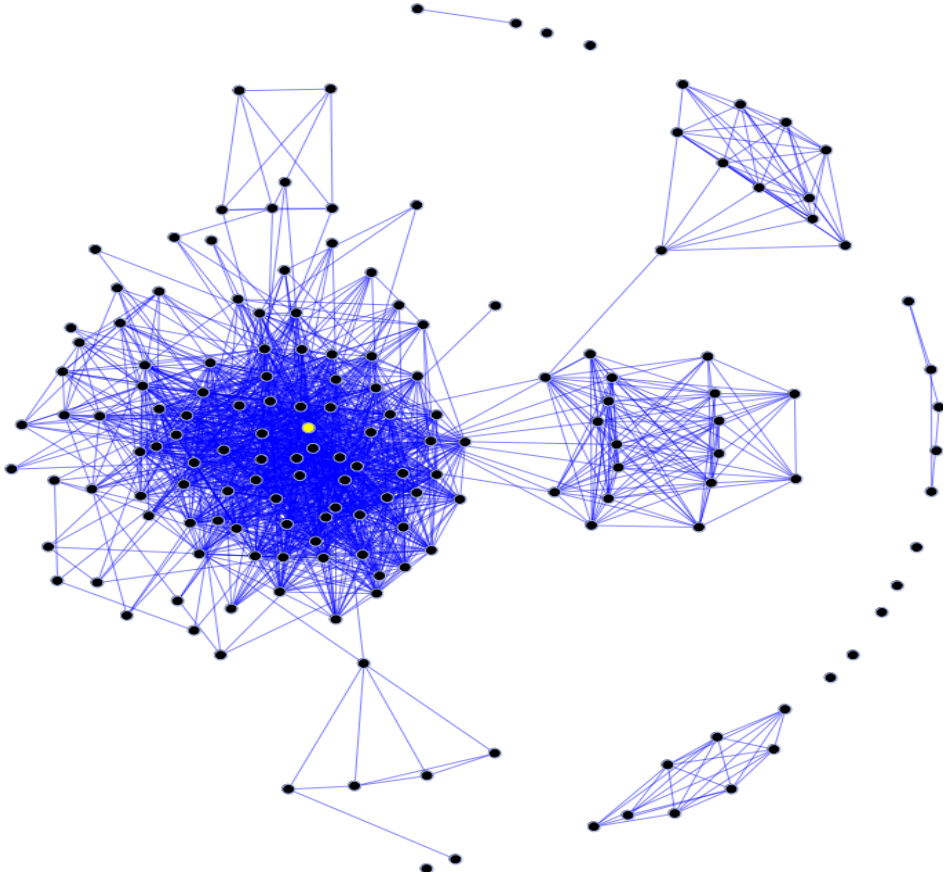
Bika Lab Systems: bikaHealth

bikahealth

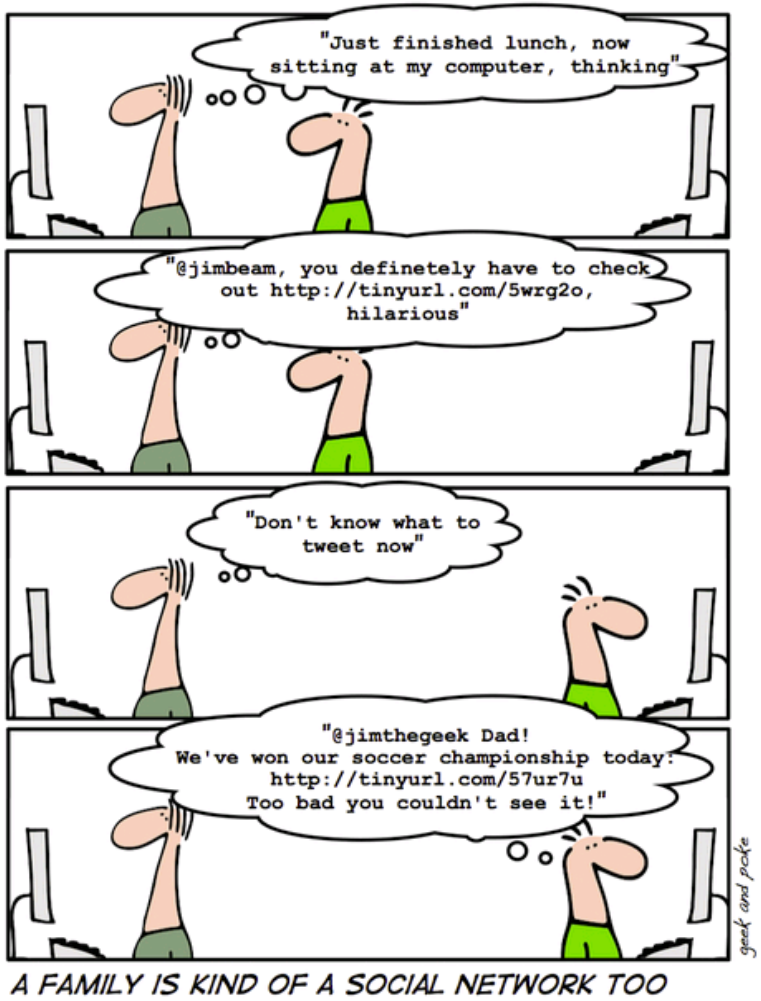


Social Networks





Social Networks



Source: http://geekandpoke.typepad.com/geekandpoke/2008/07/social-network.html

The Role of IMIA OS WG

(1) Advocacy for FLOSS in Medical Informatics

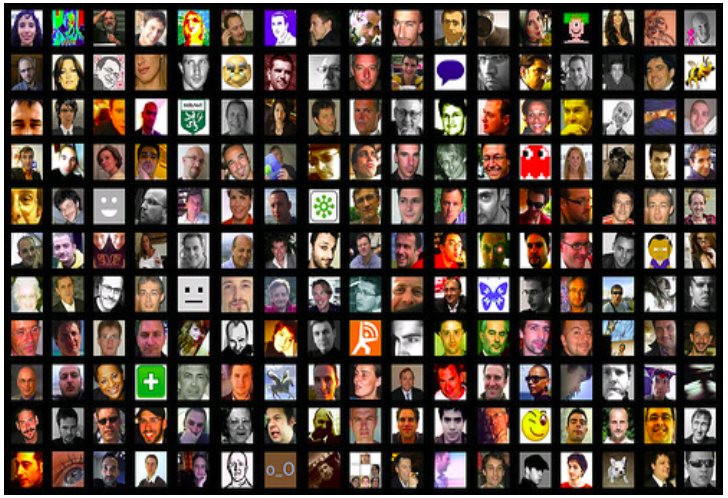
(2) Dissemination of Knowledge and Experience around FLOSS-HC

(3) Networking among all stakeholders

(4) „Bridging the Continents“

As „The“ global representative for Medical Informatics this is one of the main objectives

(5) Serve as a hub in the network of networks of FLOSS-HC stakeholders



FLOSS in Health Care – Building a network

LIFOSS

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

EFMI LIFOSS WG http://groups.google.com/group/efmi-lifoss-wg/

Google groups

EFMI LIFOSS WG

Diese Gruppe durchsuchen | Groups-Suche

Startseite — **Neu seit letztem Besuch**: 1 Nachricht

[Willkommensnachricht bearbeiten]

Diskussionen 10 von 11 Nachrichten Alle anzeigen » + neue Nachricht

FOSDEM 2010, Brussels, Belgium, 6th-7th of February
Von Thomas Karopka - 4:12 - 1 Autor - 0 Antworten

Call for papers - First Ibero-American Workshop on Data Quality (IAwDQ)
Von Ricardo Correia - 13 Jan. - 1 Autor - 0 Antworten

[efmi-lifoss-wg] Call for participation EFMI STC 2010 Conference in Reykjavík June 2-4
Von Bergh, Bjoern - 11 Jan. - 2 Autoren - 1 Antwort

Best wishes for a healthy, productive and happy new year 2010
Von Thomas Karopka - 2 Jan. - 1 Autor - 0 Antworten

Call for participation FLOSS-HC track at Med-e-Tel 2010, 14-16 April 2010, Luxembourg
Von Thomas Karopka - 10 Nov. 2009 - 1 Autor - 0 Antworten

OSEHC2010 Extension of deadline for paper submission until 30th of October
Von Thomas Karopka - 19 Okt. 2009 - 1 Autor - 0 Antworten

Fwd: IWEEE 2010 - International Workshop on e-Health in Emerging Economies
Von Thomas Karopka - 15 Okt. 2009 - 1 Autor - 0 Antworten

Fwd: [openEHR-announce] 8th Medical Open Source Software Seminar (MOSS8) in Tokyo, Oct 31 2009
Von Ricardo Correia - 30 Sep. 2009 - 1 Autor - 0 Antworten

Fwd: [Fwd: Open World Forum: Don't miss the most important event of the year focused on open innovation]
Von Thomas Karopka - 29 Sep. 2009 - 1 Autor - 0 Antworten

EFMI LIFOSS WG Report
Von Thomas Karopka - 22 Sep. 2009 - 1 Autor - 0 Antworten

Mitglieder 50 Mitglieder Alle anzeigen » + Mitglieder einladen

sten.ha...@ait.ac.at Mitglied
don...@mun.ca Mitglied
rong.c...@cambio.se Mitglied
br...@mun.ca Mitglied

Seiten erstellen
Dateien hochladen
Einstellungen Ihrer Gruppe anpassen

Diese Gruppe melden XML Senden Sie eine E-Mail an die Gruppe: efmi-lifoss-wg@googlegroups.com

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www.frankfurt-school.de

Conference Calls weltweit
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Mit Skype. Internationale Einwahl.
PowWowNow.de/conferencecall

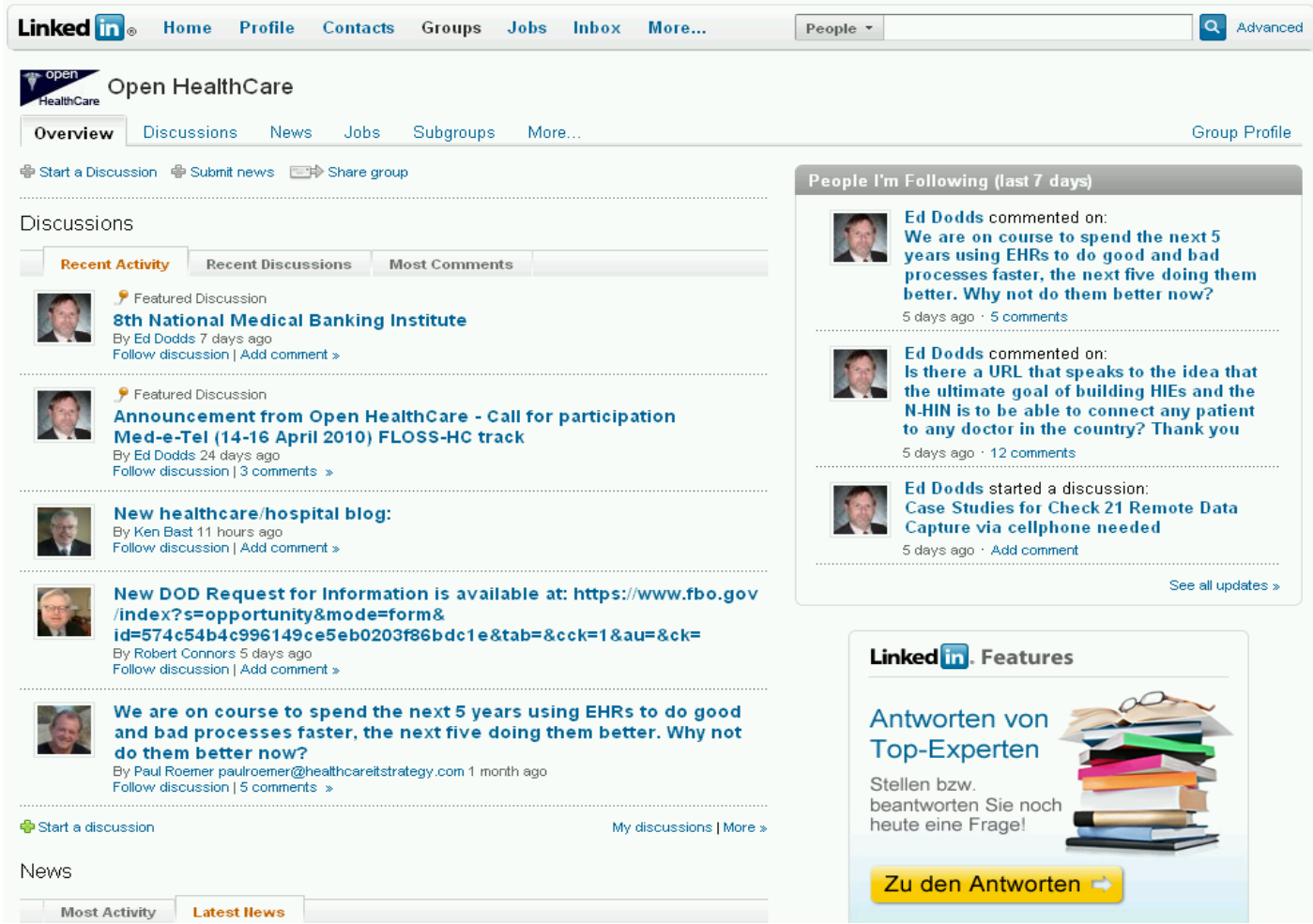
Gruppeninformationen

Mitglieder: 50

Gruppenkategorien:
Gesundheit
Computer
Region: Europa
Kategorien ändern

Weitere Gruppeninformationen »

Social Networks: Open HealthCare Group on LinkedIn



http://www.linkedin.com/groups?home=&gid=3102&trk=anet_ug_hm

Social Networks: http://healthopensource.ning.com/

PESCA – Plataforma para la eSalud en Código Abierto, Spain

OPIMEC – Observatorio de Prácticas Innovadoras ..., Spain

Fundación eSalud, Spain

Journal of Health Informatics in Developing Countries: http://www.jhidc.org

IMIA Working Group on Health Informatics for Development

Objectives:

- **Find out how health care informatics could improve conditions in developing regions and implement programs in that direction**
- **Organize forums for discussion of colleagues working in the field of health informatics**
- **List needs and resources for medical informatics for each country**
- **Organize educational activities in developing regions, especially through the implementation of professors exchange.**
- **Organize workshops and seminars with international experts participation**

Membership:

anyone implementing health informatics in a developing country setting

Contact:

Asia: Alvin B.Marcelo, Philippines (alvin.marcelo@gmail.com)
America: Daniel Luna, Argentina (daniel.luna@hospitalitaliano.org.ar)

Future Events of IMIA OS WG and EFMI LIFOSS WG

Organisation of International Workshops

2nd International workshop on Open Source in European Health Care – Crossing the Borders (OSEHC2010), Valencia, Spain, January 2010

http://www.biostec.org/OSEHC.htm

International Workshop on Ehealth in Emerging Economies (IWEEE) in collaboration with EFMI LIFOSS WG and IMIA OS WG, Las Palmas, Gran Canaria, February 2010, http://www.iweee.org

FLOSS track at Med-@-Tel 2010, Luxembourg, 14th -16th of April 2010, http://www.medetel.eu

Proposed FLOSS workshop at MEDINFO 2010, Capetown, South Africa, September 2010, http://www.medinfo2010.org

Conclusions

(1) There are already several systems also in the context of developing countries .... however, there is still a lot to do

- Some key challenges: Interoperability (also semantic interoperability)

  More adherence to open standards is needed

- ...but also Implementation of lightwight approaches

  (Good research is worth nothing if results are not transformed into reality)

(1) Don't re-invent the wheel – If there is something useful – use it – if it needs to be improved, improve it

(2) Mobile Technologies are very promising in E-health -> mHealth

(3) A community (and a critical mass of developers AND users) is of utmost importance for a successful FLOSS project

(4) Social Networking is a driving force for eHealth in emerging economies

(5) IMIA OS WG for international networking

(6) EFMI LIFOSS WG http://groups.google.com/group/efmi-lifoss-wg

Volim te
do neba
RESTAURANT
Thank you
Merci
Gracias
Obrigado