Building a virtual infrastructure for eHealth application as a bridge between the African Diaspora and the African continent: Approach of the Koegni-eHealth platform

Gilles Kom
Ulrich Kemloh
Xavier Scolard
Patrick Tchakouté
Ghislain Kouematchoua

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1. Motivation
2. Koegni-eHealth e.V.
3. Status
Motivation

• **Africans - Problems**
  – Expensive costs for health care
  – Poor ICT infrastructures
  – Lack/Accessibility of data for strategic decisions and long terms planning
  – …

• **African diaspora -Solutions**
  – Very powerful African diaspora
  – Willing to help (technology and resources)
  – …

• **Organisations /Structures willing to help**

➤Create a bridge between those entities in terms of a virtual environment
Koegni-eHealth Innovation for development

koegni-ehealth.org

Knowhow Transfer
Virtual Infrastructures
African Diaspora
Virtual Collaborative Systems
Sustainability

eLearning
Open Standard Open Platform
eHealth
Virtual Environments

Virtual environments and infrastructures for education and research are interactive platforms where many users can communicate and collaborate.

A virtual environment can be described as a framework into which tools, services and resources are plugged in order to offer a series of new possibilities.
Workflow

• First contact with operative partners / local sites
  – Dr. Halle, Dr. Choukem (Hôpital général de Douala)
  – Dr. Manga (Hôpital de District de Mfou)
  – Dr. Bouwa (Hôpital Ad Lucem de Bandjoun)

• Description of the local infrastructure (via a questionnaire submitted to the sites and many virtual conferences)

• Definition of the architecture based on the feedback received
Sample Questionnaire

- **Human ressources**
  - How many people are working in the informatic department (full / parttime) What are their profile?
  - What are the expectations or wishes of the IT Services vis-à-vis our team?

- **Network**
  - Overall description of the network environment
  - Number of physical and virtual servers, accessories (fax, scanner, printer, etc.)
  - Is there a connection between the various departments?

- **Security**
  - Protection, Security and Privacy of personal data
    - Description of the concept of network security and internet
    - Description of the concept of the protection and privacy of personal data
  - Risks to be considered as part of this project?
Feedback

• HGD
  – High standard infrastructure
• MFOU
  – Basic system
• Bandjoun
  – Non existant

➔ An integration in the existing system of Douala and Mfou is possible. A full deployment might be required for Bandjoun.
Koegni-eHealth platform
Infrastructures for each site

- **Servers**
  - INTEL Xeon E3-1220 Quad Core 3.1GHz
  - 16 GB DDR3-RAM
  - SATA RAID-Controller / Level 1 mirroring
  - 2 X 500GB SATA Drives

- **Clients**
  - Desktops, Laptops

- **Network**
  - VPN/Routers, Cables

- **Others**
  - Scanners/printers
  - High definition cameras
  - Headsets
Infrastructures for each site

• OpenMRS installed and configure on the servers

• First trainings done
  – Use of the medical record
  – Maintenance of the system (installation, backups,...)

• Sustainability
Integration at the HGD
• OpenMRS
  – Open Medical Record System
  – Used for training/Demo purposes

• Moodle for eLearning
  – System maintenance courses
  – Training courses

• Medical Imaging Viewer and analysis
Some impressions of the last two days

Cologne

Mfou

Douala
Thank you for your attention

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