2ND VU SYMPOSIUM ON ICT FOR DEVELOPMENT (ICT4D)

MAY 22 2015 - THEME: "DATA FOR DEVELOPMENT"

ORGANISED BY:
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About this Symposium: Data4Dev

A Big & Open Data revolution is sweeping through the world. However, many developing regions are still far from participating in and benefitting from it to the fullest extent. Quantity as well as quality of data is problematic. Data collection on the ground is not systematic; publication, curation, access and service provisioning are very difficult, one cause being severe limitations of resources and infrastructure (Internet, Web, electricity). At the same time, the potential of data technologies to leverage social and economic development of underprivileged communities is huge, but still mostly untapped.

The second ICT4D Symposium at VU University highlights different perspectives of this important topic. We are pleased to introduce guest speakers from different countries and disciplines, presenting their interesting topics and views on ICT4D and Data4Dev.

"Data for Development (D4D) and its challenges"
by Gayo Diallo - Associate Professor in Computer Sciences at University of Bordeaux, FR

Mobile operator Orange launched the D4D innovation challenge, to leverage mobile Big Data for societal development. One of the studies in D4D addresses Public Health in Senegal. The study investigated whether analyzing and crosslinking large Call Detail Records (CDR) data from the use of mobile phones could feed this reflection. In order to do this, two diseases that require rapid hospitalization for their care: myocardial infarction (MA) and stroke. The objective was to show the areas of Senegal in which the absence of a nearest hospital can result in death or serious sequelae. As a result, it was possible to identify areas at high risk, in support of Public Health decision makers.

This study was conducted by Aalto University (Finland), Old Dominion University (USA), University of Tunis (Tunisia) and University of Bordeaux (France) in the context of the last edition of the Orange Data For Development (D4D) challenge.

Dr. Gayo Diallo is an Associate Professor in Computer Sciences at University of Bordeaux (France), where he is member of the ERIAS research group (INSERM U897 center) and the LaBRI labroratory. Prior to taking this position, he was a post-doctoral researcher at the Laboratory of Applied Computer Sciences (ENSMA, Futuroscope-Poitiers, France) and a post-doctoral Research Assistant at City University of London (UK). He is actively pursuing his research in the areas of the Semantic Web technologies and Ontologies, Medical Knowledge Representation and DB&IR integration. His research work is mainly applied to the healthcare related domain.

'Mobile health and the role of data in Malawi'
by Marije Geldof – ICT4D Consultant, NL

Marije Geldof has a MSc. in Artificial Intelligence from the VU University Amsterdam and a PhD in ICT for Development (ICT4D) from the Royal Holloway, University of London. Most recently she worked in Malawi for D-tree International, which is an American NGO that develops mobile phone applications based on government clinical guidelines for use by health workers, with the aim of improving adherence to the guidelines and in that way quality of care. The presentation will focus on the practicalities and challenges of implementing mobile applications in Malawi and reflections about the role of data in mobile health more generally.

"ICT4D 3.0 – Smart rural Big & Open data 4D?"
by Hans Akkermans – The Network Institute @VU Amsterdam

Big & Open Data is a hot topic in the developed world. How is it for developing countries? The Data revolution also has potential for developing countries but the related research and technology issues to be solved are very different and in fact more scientifically challenging and complex.

Prof. Dr. Hans Akkermans is a full professor of Business Informatics at VUA, and the founder and director of the interdisciplinary Network Institute @ VUA. He holds a cum laude PhD degree in theoretical physics from the University of Groningen. He is a regular international keynote speaker, and has published over 170 scientific articles in information systems, physics, engineering, and e-business. He is the chair of the Board of Governors of the Royal Academy of Sciences KNAW-accredited Netherlands Graduate Research School of Information and Knowledge Systems SIKS. As a guest lecturer he has lectured at higher education institutes in African countries, including the Osei Tutu II Institute of Advanced ICT Studies of KNUST in Kumasi, Ghana, the Martyr's University

in Uganda, the Stellenbosch University in South-Africa. He is the founder - director of the Web Alliance for Regreening in Africa, which is an initiative to make ICTs work for the rural poor, through knowledge sharing and innovation.

"Downscaling ICT, or why we will make DatAfrica as small as possible"
by Christophe Guéret – KNAW DANS, The Hague

Open data policies and linked data are powerful tools for increasing transparency, participatory governance, and accountability. A closer look at linked data technologies, however, proves that their design and deployment exclude the majority of the world's population. State of the art data-centric technologies have been designed to scale-up to take care of an ever increasing amount of users and variety of data. This up-scaling has a cost: caring for a large crowd does not allow for paying attention to individuals and many are left out. Our work on "downscaling" aims at taking care of this long tail of left aside potential ICT users. We aim at co-designing with them small-scale, affordable, and pervasive systems that can help them make the most out of semantic web technologies before they can even get access to the Web.

Dr. Christophe Guéret is a senior researcher and data scientist at the digital preservation institute Data Archiving and Networked Services (DANS) from the Dutch Royal Academy of Arts and Sciences (KNAW).

"Integrating Data to reach the world" by Karl Lundfall – Text2Change , The Netherlands

At Text-To-Change, we offer mobile-based solutions such as SMS and call services and focus on projects in developing countries implying a social change among the end users of the service. Currently, we manage multiple projects within different systems using different technologies. We are unable to connect any data from one context to the other. There are interoperability problems here making cross-platform services impossible. We need an intelligent, unified, and future proof solution. RDF is a data format known be able to deal with heterogeneous data sets, and has many features that can be utilized when trying to improve outreach of third world countries. We will explore the possibilities of merging datasets from different applications using RDF.

"Knowledge through digital storytelling in rural Sarawak, Malaysia"
by Cheah Wai Shiang –Universiti Malaysia Sarawak, Malaysia

Literacy is always a problem among the indigenous people in rural Sarawak, Malaysia. Among the possible reasons are lack of exploitation of the community to the outsider; lack of teaching and learning facilities; and subjects lack of local content and context. Although there exist various technology enhanced learning applications, most of them are inadequate to deploy in our local community. This talk will first share our experience in deploying various education technology for rural community in Borneo, Sarawak, Malaysia. This is followed by a detail discussion on one promising tool for empowering the community knowledge through digital story telling. With digital storytelling, it able to mobilize the local communities to educate their people about culture, history and etc. However, more need to be done to overcome the technology constraints before it able to showcase the powerful of digital story telling as the empowerment tool for rural community.

Dr. Cheah Waishiang is senior lecturer at the Universiti Malaysia Sarawak. His expertise is in the area of Agent oriented Software Engineering, agent oriented modelling and simulation, mobile software technology, games AI, collaborative learning technology, ICT4D.

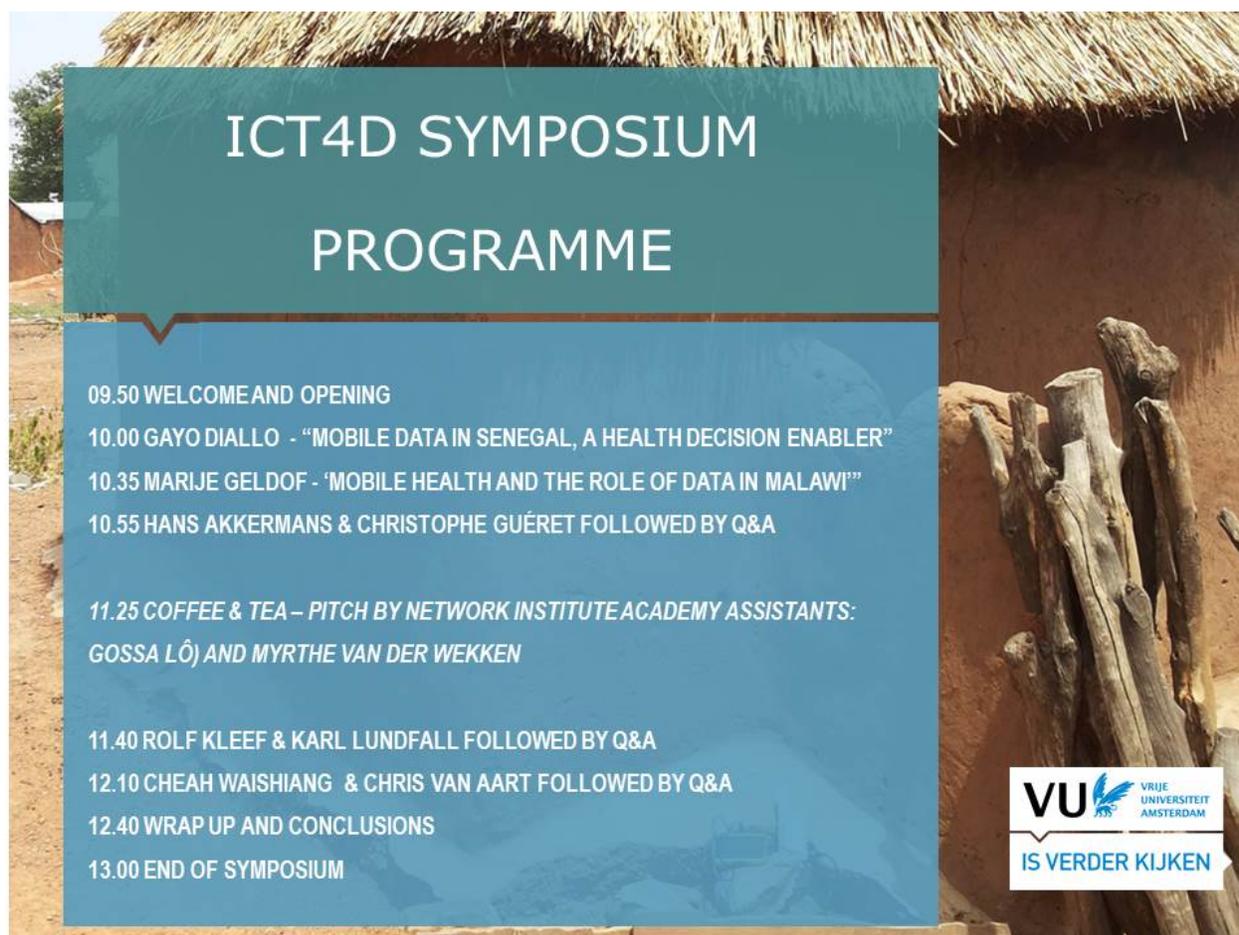## Data, "there is an app for that"perspective, by Chris van Aart -2CoolMonkeys

Food Security is a top priority across Africa and one of the big Societal Challenges. The apps by 2CoolMonkeys & W4RA focus on various aspects of food security, including support by rain/meteo/geodata, and agro-value chain development. A key difference with urban western contexts, resides in the fact that intended Africa data-oriented components and solutions have to work under highly unreliable and limited infrastructure and connectivity conditions, as they often exist in rural Africa. In western countries, the assumption is that Internet is always available and

that data-rich info services can be delivered. So we will need info service delivery that does not depend on invalid assumptions such as ubiquitous Internet (moreover, not even ubiquitous electricity), technological or reading/writing literacy in the first place.

Dr. Chris van Aart is a result-driven professional with a more than 20 years of experience in translating and implementing business analysis, knowledge management, content management into successful solutions. Typical qualifiers: analytical, creative, result-oriented, inventive, technical know-how, resolute, adventurous, enthusiastic, both team player and independently worker and no-nonsense. He is the founder of the multiple award-winning aobile app-and web-production company 2CoolMonkeys, located in the Netherlands. Its highly skilled team has created apps and web solutions for world leading companies, research institutes and governments.

Gossa Lô (bachelors student Lifestyle Informatics) and **Myrthe van der Wekken** (master student Organizational Science) have been selected to be the Network Institute Academy Assistants for this year. For this research project, named "Knowledge Sharing for the Rural Poor". they did field work in Northern Ghana, with grant from the Network Institute, and supported from W4RA and the University for Development Studies Ghana.

Symposium chairs: Dr. Victor de Boer and Ms. Anna Bon – The Network Institute

More information about the symposium and other activities, please visit the website of W4RA, the Web Alliance for Regreening in Africa, one of the research programs of the Network Institute @ VU.

http://w4ra.org