Is (Web) Science Ready for Empowerment?

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VU University Amsterdam,

World Wide Web Foundation & Sahel Eco

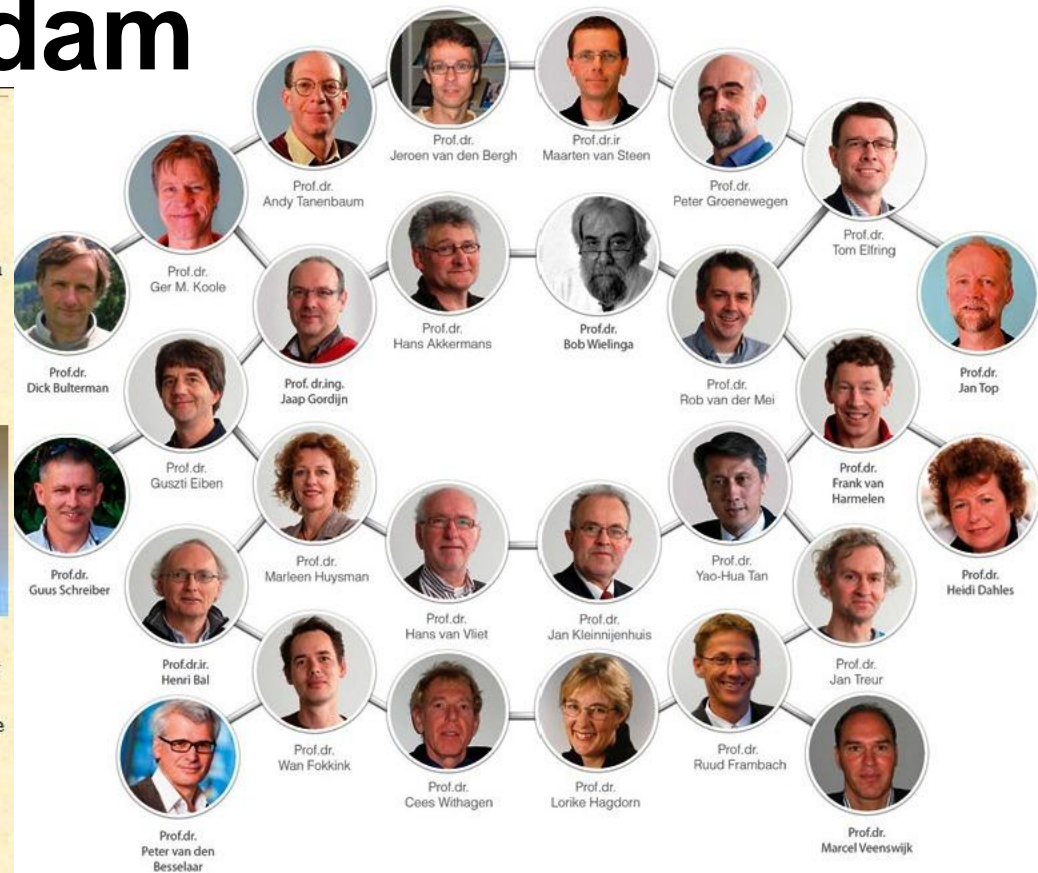# The Network Institute @ VU Amsterdam

SUNDAY, JANUARY 30, 2011

VU Amsterdam Professor Hans Akkermans awarded a goat in Northern Ghana

Researchers from VU University Amsterdam, together with partners from World Wide Web Foundation and Sahel Eco - Mali travelled sixteen days through the Sahel, exploring local information needs in remote rural areas. The outcomes will be used for development of innovative web services based on voice technologies.

LA VOIX DU PAYSAN

The tour starts in Dakar, capital of Senegal, next to Bamako, capital of Mali, descending the Niger river towards Segou, then via Tominian, Bandiagara, in the direction of Bankass downhill the Dogon valley. Next, crossing the border to Burkina Faso, heading for Ouahigouya, and Gourcy and subsequently Ouagadougou, capital of Burkina Faso. A final trip is made to the Up... ...yside near Tamale

Prof.dr. Jeroen van den Bergh
Prof.dr.ir Maarten van Steen
Prof.dr. Peter Groenewegen
Prof.dr. Tom Elfring
Prof.dr. Andy Tanenbaum
Prof.dr. Ger M. Koole
Prof.dr. Hans Akkermans
Prof.dr. Bob Wielinga
Prof.dr. Jan Top
Prof.dr. Dick Bulterman
Prof. dr.ing. Jaap Gordijn
Prof.dr. Rob van der Mei
Prof.dr. Frank van Harmelen
Prof.dr. Guszti Eiben
Prof.dr. Heidi Dahles
Prof.dr. Guus Schreiber
Prof.dr. Marleen Huysman
Prof.dr. Yao-Hua Tan
Prof.dr. Hans van Vliet
Prof.dr. Jan Kleinnijenhuis
Prof.dr. Jan Treur
Prof.dr.ir. Henri Bal
Prof.dr. Wan Fokkink
Prof.dr. Ruud Frambach
Prof.dr. Cees Withagen
Prof.dr. Lorike Hagdorn
Prof.dr. Peter van den Besselaar
Prof.dr. Marcel Veenswijk

Interdisciplinary collaboration: ICT/CS, Social Sciences, Business, Cultural Studies

Launch Web Alliance for Regreening in Africa (W4RA)

World Wide Web Foundation (Nov. 2009):

- (1) Web Science (Trust/net); (2) Web standards (W3C); (3) Web in Society

W4RA
[Network Inst/VUA-WebF]
Is the first project of The Web in Society program

www.webfoundation.org

www.mvoices.eu

Mobile Web & m-Agro Knowledge Sharing in Africa (W4RA)

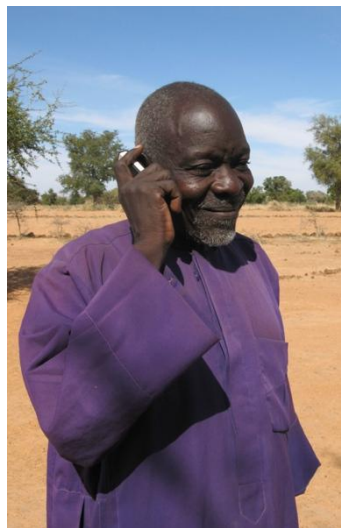# **Regreening**

- Knowledge sharing issues
  - ○ Distances between rural communities in Sahel
  - ○ Infrastructure and access
    - ➤ *Commonly: no electricity, no computer, no internet*
    - ➤ *But: mobile and radio*
  - ○ Lack of relevant content
    - ➤ *Literacy and education*
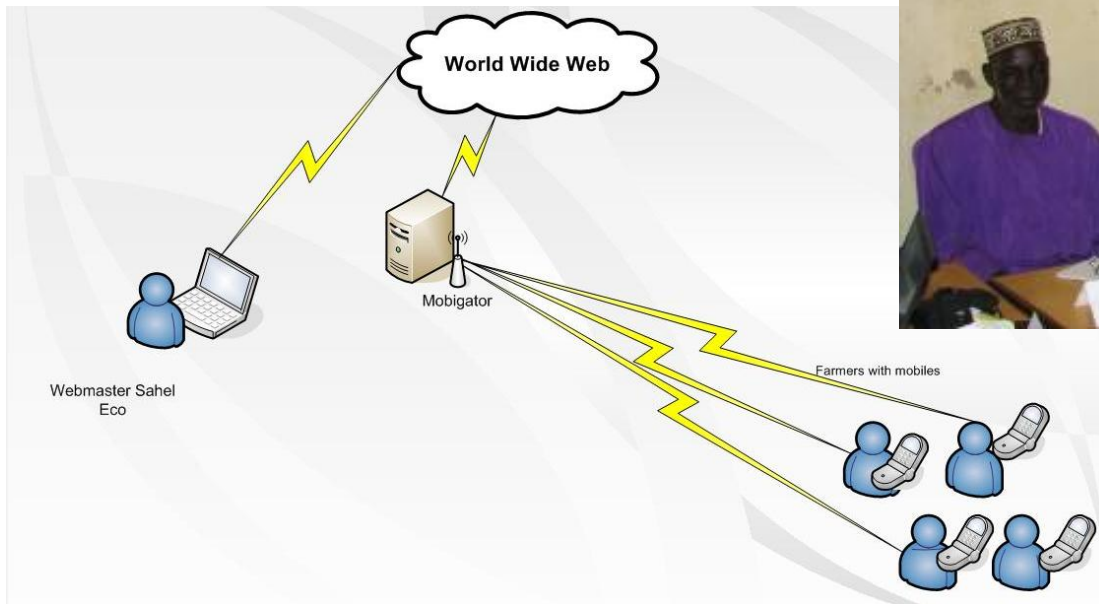 - ○ Languages

LA VOIX DU PAYSAN

Use Cases & Requirements: "W4RA Roadshow" Field Research

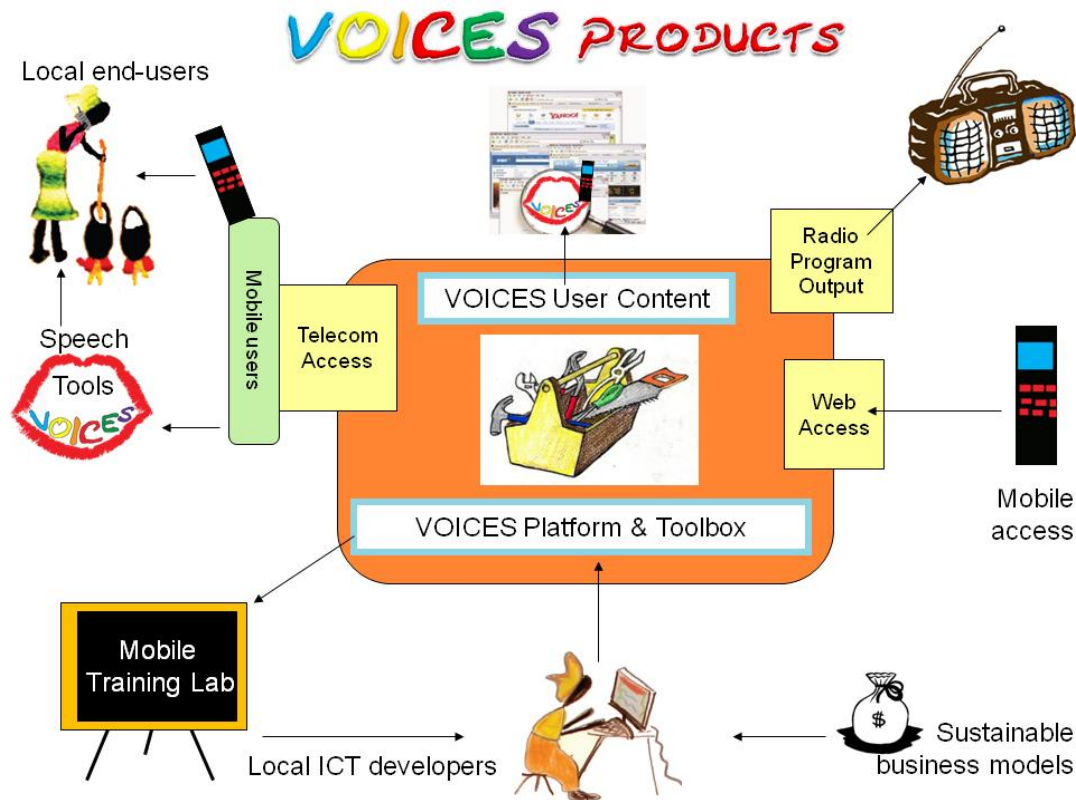- Demos, field visits, workshops, etc. (Jan. 2011)

Integrate Web with mobile & voice services

- Field pilot use cases Mali (to start end 2011):
  - o Web-based market info by mobile voice service to radio stations for broadcast
  - o m-event field organizer facilities Web-mobile-voice

Project aims

- Generic service development toolbox how to do this, and make a sustainable business out of it

The Question of Scientific Research 1: W4RA, Web in Society

o Is this *applied research*? No
- *Application of what then? [But neither is it pure research]*

o Is this a kind of *development aid*? No!

- Q1 [immediate]: Can the Web (be made to) mean something for knowledge sharing even under very constraining conditions?

o No internet, no computer, no electricity

o Multitude of languages, levels of literacy

- Q2 [Web future]: Can we have a Web of Speech?

o After all, human communication: talking >> writing

The Question of Scientific Research 2: Interpretations of Web Science

- The Web as phenomenon
  - As natural, social-empirical, subject-experienced
  - Consistent with [different!] external spectator-based philosophies and paradigms of research
  - Nat. sci style, social-quant.empirical, qual./interpretive
- The Web as engineered artefact
  - As technology, socio-technical design, innovation
  - Consistent with [different] engineering, design, CS research paradigms: techie eng, HCI, Sci o/t Artificial
- The Web as empowering mechanism
  - WebSci: Spectator or Engager? WF; action research

Under-recognized paradigm: Agora and Phronesis in Science

- Science is taking place in the "agora"
  - Nowotny *et al.*: mode-2 knowledge production
  - Co-evolution of science and society
  - Changes concept of what reliability and validity of produced knowledge is
    - *Cf. **Living Lab** methodologies of research **in the field***

- There are more types of knowledge and goals of science than episteme and truth alone: phronesis
  - Practical reason: is/ought and fact/value *separations* not sustainable (not to be confused with *distinction*)

- Cases: W4RA, Web as empowering mechanism

Additional Slides

What is so special about the Web? What is the Science in Web Science?

- The argument cannot be that Web is something totally different (like black hole vs. normal star)

- Rather, acts as massive aggregator / integrator / concentrator mechanism for wide range of social and technological tendencies already at work

- This at unprecedented scale (global & local)

- And depth: communication and information is key human thing; transformative in many domains of society; constitutive in some; so: their dynamics
  - My hypothesis: That's also why the idea of Web as empowerment makes sense