FLOSSWorld Africa Regional Workshop

In association with Idlelo

Nairobi – February 2006

Overview

- **FOSSFA, Idlelo and FLOSSWorld**
  - Background
  - Discussions
    - Developers
    - Government
    - Education and Capacity Building
    - Localisation
- **Overall impression**

FOSSFA, Idlelo & FLOSSWorld

- FOSSFA aims to develop local capacity and create jobs in Africa by developing an OSS market

  - initially targeting the public sector in government, health and education, through

    - Encouraging change of policies in African governments to adopt its use;

    - Research and Development;

    - Product Development uniformly across Africa;

    - Local Capacity Building which will translate into jobs creation

Alignment and Opportunity

Clear alignment and the opportunity to network

with a wide FLOSS community in Africa

FLOSSWorld @ Idlelo2

- Blended Programme
  - Attend the keynotes
  - Attend the sessions

- with an ear for research questions ...

- Consolidate and discuss observations in the FLOSSWorld dedicated

Information Society European Commission

African Advanced Institute for Information & Communications Technology

Idlelo Sessions were to include:

- Remarks by FOSSFA Secretariat (Nhanhla Mabaso (CSIR), Milton Aineruhanga (WOUGNET), Bill Kagai (Circuits & Packets Communications Ltd)

- Review of feedback from Mailing Lists (Nicholas Kimolo - FOSSFA Consultant)

- Key note addresses by leading FOSS Activists (Pierre Ouedraogo-Francophonie, Fatimata Seye Sylla - DFI)

- Rishab Ghosh-Maatricht University, Aida Opoku Mensah - UNECA

Idlelo continued

- Keynote addresses (Mr. Abdulie Janneh- Assistant Secretary General, Executive Secretary, ECA, Sir John Daniel - Commonwealth of Learning, Mr. Mark Shuttleworth - Canonical/Ubuntu, Balthas Seibold - InWEnt), Dr. Richard Stallman- FSF, Dr. Juma Oketch, Secretary, eGovernment Directorate, Kenya

- Official opening by His Excellency The President of Kenya, Hon. Mwai Kibaki.

- Plenary on Delegates Expectations (Moderated by Prof. Henry Thairu-Jomo Kenyatta University)

Idlelo Continued

- Break out sessions on:

  - FOSS & E-Government (Sponsored Session) (Dr. Juma Oketch-Egovt Kenya, Mr. David Sawe-E-Govt Tanzania, Mr. Nhlanhla Mabaso-CSIR, South Africa)

  - FOSS & Health (Sponsored Session) (MD, Kijabe Mission Hospital, Kurt Brauchli, Frere Hospital, Nicholas Kimolo, Circuits & Packets Communications Ltd, Margret Nyambura, Afri Afya)

  - FOSS & Education (Sponsored Session) (Ms Shafika Isaacs-Schoolnet Africa,Joris Komen-Schoolnet Namibia, Hilton Theunissen-Shuttleworth Foundation, Prof. Derek Keats-UWC, AVOIR, John Walubengo- KCCT)

  - FOSS & Local Entrepreneurship (Sponsored Session) (Mugge Van Staden-Obsidian, James Lunghabo-Linux Solutions-Uganda, Dimo Calovski-UNCTAD, Thierry Amoussougbo - UNECA)

Idlelo continued

- Break out sessions on cross cutting themes
    - FOSS Localisation (Dr. Twaakyondo- University of Dar-es-salaam, Dwayne Bailey- Translate.org, Hande Bayraktar-Ubuntu)
    - Challenges on IPRs & Copyrights (Sponsored Session) (Heather Ford-Creative Commons, Denis Nicholson-Witwatersrand University)
    - Making Civil Voices Heard (Sponsored by Hivos) (Margreet Van Doodewaard - Hivos, Anriette EstherHuysen - APC, Caroline Nenguke-One World,Edna Karamagi - Brosdi Uganda)
    - Challenges on African FOSS Local Entrepreneurship (Sponsored by INWENT) (Christiane Weber - InWEnt,Ben Akoh-OSIWA, Makane Faye - UNECA, Roland Christian, President of CHALA)

Discussions Overview

- e-government

- developers - skills and capacity building

- FLOSS in Education

e-governance

- What, and how large, is the role of government in the ICT sector in target countries?

- What is the degree of IT use in government authorities?

- What are the main hindrances to increased and effective IT use in government? E.g. cost, availability of support, choice of vendors…

- What is the awareness of FLOSS and open standards?

- What is the behaviour towards open standards and interoperability in practice?

e-governance

- What is the extent of FLOSS usage?

- What policies do local and regional government authorities want to adopt?

- What is the relation between international, national, regional and local policies and actions towards FLOSS and open standards/interoperability?

State of FLOSS in Africa

- State of ICT Policy Development
  - examples
- Policy process in South Africa

FLOSSPOLS findings: government

- 80% of European regional governments have *some* use of FLOSS

- ...but 30% say they don't use it, even when they do use FLOSS applications! (unaware use)

- ...and most use is not extensive: e.g. partial on server, not complete on desktop

FLOSSPOLS findings: government

- Main reasons to use FLOSS:
  - Need to customise
  - Independence from vendors
- Main reasons *not to* use FLOSS:
  - Fear that no technical support is available
  - Fear that (re-) training costs will be high
- Fears are perhaps false:
  - Those with *actual FLOSS experience* don't report such problems with support and training

Status of National ICT Policy Development
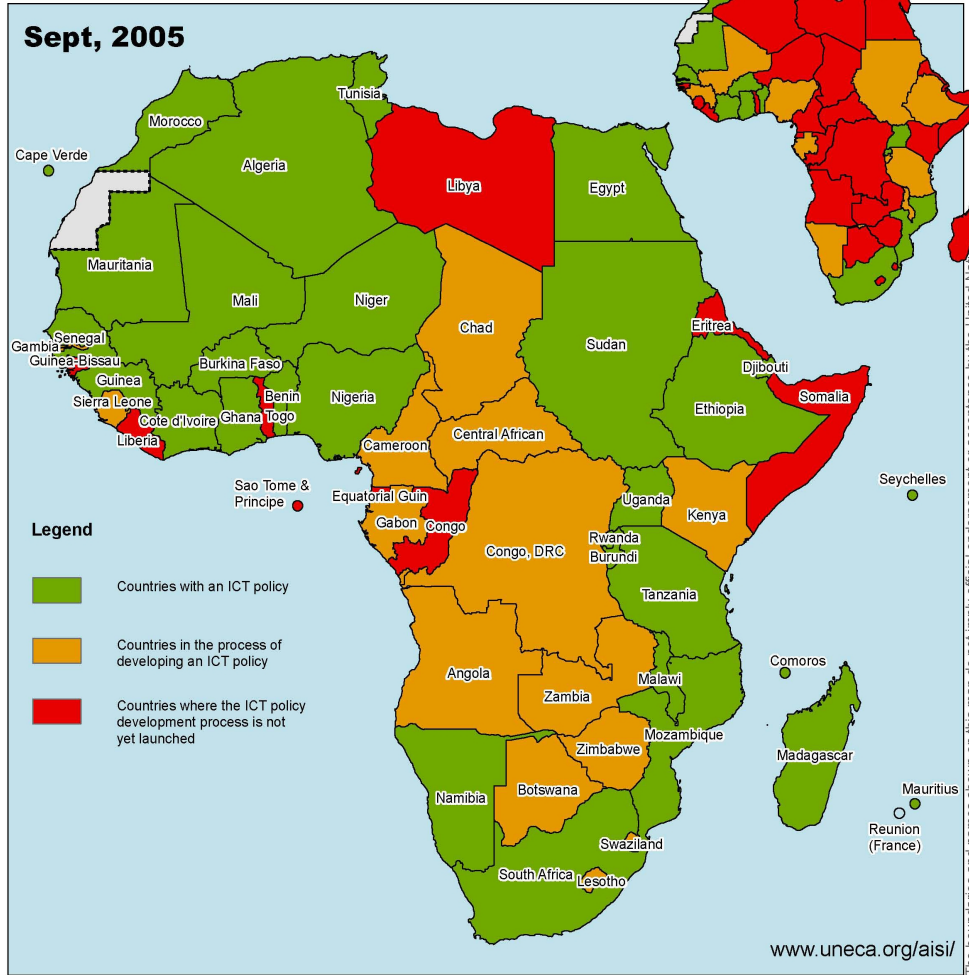
Some Examples

- Malawi
- Kenya
- Tanzania
- South Africa

Malawi

- FLOSS not well represented in the current national ICT policy document
  - the document requires updating
  - the Malawi government seems to be encouraging a FLOSS policy on account of its potential for growing the local ICT industry

Projects (Malawi)

- Infrastructure
  - M-Streams, Malswitch, Sustainable Development Network Program, and the Malawi Government Wide Area Network.

- Software projects:
  - improving public funds accountability and transparency:
    - Financial Management Information Systems
    - Govt HR Systems.

Kenya

- Government "apprehensive" regarding the benefits of ICT for the country. So far the private sector has dominated.

- directorate of e-government has developed an ICT strategy in which government is trying to use ICT across the board and is currently partnering with the private sector.

- The mindsets in government regarding FLOSS are changing and issues of regulation have been dealt with in order to make it easier to enter market.

- Policies on regulation are being finalised.

- Top issue: skills and capacity building. Looking beyond private sector.

Tanzania

- Government creating a conducive environment for progress.

- Tanzania has a Nation-wide IT policy and also an implementation strategy.

- Both the private and public IT sectors are regulated. Aim: harmonise pub, pvt, civil (interop.)

- Emphasising public services delivery indep. of platforms - FLOSS-friendly.

Tanzania continued

- Development Vision 2025
    - (1) high quality livelihood;
    - (2) peace, stability and unity;
    - (3) good governance;
    - (4) a well educated and learning society; and
    - (5) a strong and competitive economy capable of producing sustainable growth and shared benefits.

Tanzania continued

- focus areas in harnessing ICT in Tanzania include
  - strategic ICT leadership;
  - ICT infrastructure;
  - ICT Industry;
  - Human Capital;
  - Legal and Regulatory Framework;
  - Productive Sectors; Service Sectors; Public Service;
  - Local Content; and Universal Access.

Tanzania continued

- Challenges include
  - infrastructure and connectivity
  - access e.g. to on-line distance education
  - skills and capacity
  - teacher training
  - localisation
  - policy development for inclusion, equity, etc.

Similar issues emerged elsewhere in Africa

- Spectogram: PS ....FLOSS
  - 3 Camps
    - PS is the answer – FLOSS will only succeed if government policy dictates
    - Moderate/pragmatics – horses for courses
    - Freedom revolutionaries – as a matter of policy ... it will change everything
  - Why are you standing here? What solutions?

Barriers

- Complacency in Government (Kenya)
  - There is no support infrastructure to assist in the use of technology.
  - There is no system in place which enables communication with the rest of ministry,
  - The infrastructure may be in place, but there is no support structures or training structures in place
  - A key hindrance to the use of technology is that leadership is not assimilating new technology
  - The Kenyan government is also preventing young people with zeal to exploit ICT
  - The junior staff are not afforded any equipment simply because they are not senior enough

Barriers continued

- Unclear strategies

- involving private sector would lead to clear implementable strategies

- lack of solutions based on floss (e.g. finance or HR) used by govt

- lack of availability of technical support

- lack of affordability of computer equipment

- the problems also involve donor issues as donors (development partners) bring their own choice of solutions, and thus push forward non-floss solutions

Solutions

- 1.Awareness campaign- leadership to management
- 2.Cost
    - 2.1 Increased governments funding
    - 2.2 Adopting FOSS solutions e.g. Uganda
- 3.Support
    - 3.1 capacity building enhances, especially on technical aspects.
- 4.Development of sector strategies- awareness on benefits
- 5.Change of roles and training
- 6.Resistance to change
    - 6.1 Awareness of benefits
    - 6.2 change of roles and training

FLOSS Policy in South Africa

- NACI: FLOSS and Open Standards: a critical issue for bridging the digital divide
  - http://www.naci.org.za
- National Strategy Document:
  - http://www.oss.gov.za
- National Task Force
  - Declaration and WGs - http://wiki.go-opensource.org

Developers

and capacity building

FLOSS Developers

- What local FLOSS projects can be observed in target countries?

- How do these local projects differ between regions and countries?

- How much do target countries participate in major global FLOSS projects?

- Are projects in target countries funded differently from each other, or from Europe? E.g. the existence of "prizes" or "bounties" for writing specific software modules (sponsored by Shuttleworth in South Africa, Red Hat in India) is not seen in Europe.

FLOSS Developers Continued

- What is the demographic composition (including gender break-up) of the FLOSS community, how developers in target countries think, what motivates them and how do they structure their activities – does this differ from country to country, and does it differ from Europe? Comparisons with previous studies such as FLOSS, FLOSS-US, FLOSS-Japan.

- How are local FLOSS activities in target countries related with other institutions (public administration, companies, schools, universities, etc.)?

- What is the present and possible future impact of FLOSS activities on the labour market, education, governance, and the economy of developing countries?

education/ capacity building

- What role do informal FLOSS communities, universities and other HEIs, and businesses play in the development of skills related to the software sector?

- How important are secondary skills (such as knowledge of licensing legal issues, teamwork and management) to software development, and how and where are these skills best learnt?

- How do attributes such as demographics and gender affect interest from participants?

- What is the impact on businesses – such as better skills and cost savings – of skills learnt through (unfunded) participation in FLOSS communities? What are the specific benefits to small and medium enterprises (SMEs)?

education/ capacity building

- What is the consequent impact on employment generation and employment levels?

- How, if at all, should universities and formal HEIs respond to maximize the skills provided in their environments, to best incorporate further skills learnt informally through FLOSS communities?

- How, if at all, should governments respond?

Focus under time restraints

- Developers:
  - Issues and Activities

- Education:
  - Expanding the impact of existing projects

- Government
  - State of FLOSS in government ICT policy

Developers: reflecting on previous findings

- Main reason to join community: "to learn and develop new skills"

- Money is not a main reason to join community...

- ... but 30% earn income directly from FLOSS

- 20% earn income indirectly from FLOSS

- Most community developers are not very active (<5 hours per week; 1-2 projects)

- <10% developers most active, >20 hours per week, write >70% of all software code

FLOSSPOLS findings: developers

- Learn *many* technical skills, basic as well as advanced

- Learn many *non-technical* skills (legal, management/teamwork, general – e.g. English)

- Think they learn most things better from FLOSS community than from formal courses

- Think employers may accept *proven* FLOSS participation instead of formal degree

FLOSSPOLS findings: employers

- Firms that use FLOSS are more positive about skills learnt from FLOSS communities, but...

- ...even firms that don't think FLOSS is important think many skills are learnt *better* in FLOSS communities than in formal courses

- Both types of firms think that *proven* FLOSS participation could be accepted if potential employee has no formal degree ("wrote a driver for Linux kernel" proves practical knowledge better than University computer science degree?)

In general ...

- Although there are some exciting developments in Africa, these trends are not yet obvious.

- The participants did not strongly identify with previous findings.

- So, what is happening and what are the challenges? (later)

Education

- Objectives:
  - i. Exchange of experiences
  - ii. Identify challenges and develop solutions
  - iii. Seek to create recommendations for follow-up actions/projects

Education continued

- Focus Groups:
  - Achieving universal access to ICT in educational institutions
  - Open educational content and creative commons licensing and
  - Developing technical support for FOSS capacity in education

Universal Access

- Challenge: Lack of ICT infrastructure in educational institutions

- Solution: Concerted advocacy to encourage governments to make budget allocations to acquire ICT. There also needs to be a heightened awareness of existing governmental initiatives in Egypt and South Africa to provide ICT to schools.

- Challenge: Incoherent government policies towards ICT e.g. encouraging use of ICT but increasing taxes on ICT hardware/software.

- Solution: Advocacy and discussions are required in order to make policy makers aware of the adverse impacts caused and encourage harmonization.

Universal access continued

- Challenge: Obsolete PC donations

- Solution: Implement minimum specifications/standards for equipment donated. The equipment which has been received should be matched to tasks that are not resource intensive.

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- Challenge: Inadequate physical infrastructure to house ICT equipment, low power supply etc.

- Solution: A more thorough needs assessment should be conducted prior to equipment acquisition.

- Challenge: Limited access due to lack of localization and language barriers in accessing content

- Solution: Mobilize persons at local level to support translation of content and localization and/or facilitate the acquisition of skills and resources needed to carry out these processes.

- Challenge: The information and ICT access needs of marginalized and disadvantaged groups such as persons with disabilities, poorest of the poor, rural and remote communities are not addressed or met.

- Solution: There should be greater advocacy in order to have differentiated prices for access to the Internet and ICT services/tools particularly in education and for designated groups. In addition, awareness of efforts implemented in Africa to enhance access of educational institutions to high bandwidth at educational institutions should be raised (e.g. South Africa - 50% rebate, Egypt – Free, Senegal – 75% rebate, Namibia – Free)

Recommendations to FOSSFA (universal access)

- 1.Strong advocacy for lower access to connectivity and/or price differentiated access (criteria established) to Bandwidth and ICT resources

- 2.Encourage formation, awareness and linkages between African networks to share/provide technical support in such areas as localizations

Open education content and creative commons licensing

- Challenge: The biggest challenge is that of quality assurance of educational content.

- Solution: Provide funding for content development; Support for the promotion, awareness, dissemination and training in content development and management tools; Formation of online communities that function as peer review groups to assess quality of resources and exchange, disseminate and document good practices

- Challenge: How to best use pedagogical content and integrate it in the learning environment

- Solution: Greater awareness among educators of tools/resources available and these challenges

Open Content and Creative Commons

- Recommendations to FOSSFA
  - 1.Prepare a position paper addressing content and licensing issues.
  - 2.Teaching/learning environment is evolving rapidly and business models for providing content are changing to a knowledge-service model. The impact of these changes need to be understood and greater debate coupled with research followed by appropriate policy recommendations needs to be pursued.

Developing technical support and capacity building for using FOSS in education

- Challenge: Platform familiarity with Windows makes it difficult for "old" users to migrate to FOSS solutions

- Solution: There is a need to focus on rural areas where the majority of potential users exist. These persons have never had access to ICT and would readily assimilate/use FOSS tools. (The reality is that existing users of ICT represent a "privileged" minority in Africa.)

Capacity building in education continued

- Challenge: Lack of capacity needed to build the critical mass of capacity (training, technical support, programming skills etc) needed to address the challenges

- Solution: Better networking of groups providing technical support and training opportunities (both within and outside the continent e.g. Geekcorps), provide opportunities for students to practically apply their skills

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- Challenge: Lack of independently verifiable data on the effectiveness, sustainability, total cost etc of FOSS

- Solution: More focused-research and greater emphasis is needed on documenting and monitoring projects so that case-studies and cost/benefit analyses could be developed.

Capacity building – education: recommendation

- Challenge: The group identified a lack of standardization of FOSS tools, interoperability issues, lack of recognized certification or certifying institutions offering qualifications equivalent to those offered by proprietary systems (for e.g. Microsoft Office certification, MSCE etc) competence in use of FOSS tools/resources; Quality control and localization

- Solution: Adherence to good programming practices; Development of curricula and similar certification.

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- Recommendations to FOSSFA

  - A central body/ repository should be established within Africa to provide guidance/direction on FOSS in Education as well as on certification and standardization issues.

Conclusion

- Education is fundamental to development and the foundation for addressing and improving some of the key development challenges facing Africa. The focus groups recommend that FOSSFA convene a working group to address these important, pivotal issues as well as arrange future events to focus on education which is a prerequisite for advancements in other areas. The recommendations of the sub-groups should also be followed up by FOSSFA.

FLOSS Activities in Africa

- http://developer-roadshow.org

- http://fossfa.net

- South Africa

  - Education and capacity building

    - Kewl.NextGen - avoir.uwc.ac.za

    - OpenLab - http://www.getopenlab.com/

    - http://tuxlabs.org/

    - http://openicdl.org/

    - http://learnlinux.tsf.org.za/

  - http://translate.org.za

Africa Activities continued

- http://africalinuxchix.org/ promoting gender equity in FOSS

- Migrations – e.g. Uganda Martyrs' University: http://www.umu.ac.ug

- Go-Opensource Campaign: http://go-opensource.org/

- UNDP Regional Open Source Centre: http://www.undp-saci.org/

- Nettel@Africa – on-line masters course using Kewl.NextGen - http://www.nettelafrica.org/

- http://www.impilinux.co.za/ – Ubuntu l10n

- http://www.eacoss.org/

Overall Impression

- Skills and Capacity Building came out as the top priority in all areas

- Raise Awareness at all levels

- Localisation

- Policy processes need to be shared across governments

- Collaboration

- Dont forget the "L" in FLOSS

More information

- *Coordinator:* Rishab Ghosh, MERIT rishab@dxm.org

- ktucker@csir.co.za http://www.meraka.org.za

- eravat@uwc.ac.za http://www.uwc.ac.za

- FLOSSWorld: http://flossworld.org