



The Free Software and Open Source
Foundation for Africa



Third African Conference on Free and Open Source Software (FOSS) and the Digital Commons - IDLELO 3

Making the Knowledge Economy Work for Africa

Conference Dates : March 16-20, 2008.

Conference Venues: Université Cheikh Anta Diop Dakar (UCAD II), Senegal
Campus Numérique de la Francophonie (AUF), Dakar,

REPORT

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Background

FOSSFA is the premier African FOSS organization, and was founded under the auspices of the Bamako Bureau of the African Information Society Initiative within the mandate given by African Governments in 1995 to the United Nations Economic Commission for Africa (UNECA). The Vision of FOSSFA is to promote the use of FOSS and the FOSS model in African development, and the organization supports the integration of FOSS in national policies. FOSSFA also coordinates, promotes, and adds value to African FOSS initiatives, creativity, industry, expertise, efforts and activities at all levels. FOSSFA partners with development organizations who share these goals towards a participatory and gender-mainstreamed sustainable development and the attainment of the Millennium Development Goals in Africa. FOSSFA is governed by a Council elected during Idlelo, from which the Executive is chosen. FOSSFA members may be individuals, organizations, development agencies or government FOSS bureaus. The South African Minister of Public Service and Administration, Ms Geraldine Fraser-Molekete is the present Patron of FOSSFA.

IDLELO 3 partnership

The third IDLELO was a partnership event among the following

1. The Free Software and Open Source Foundation for Africa – FOSSFA
2. The Senegalese Ministry of Telecommunications, Land Transportation, Infrastructure, Post and ICT
3. The Senegalese Ministry of Education
4. The South African Department of Public Service and Administration – DPSA
5. The South African Department of Science and Technology – DST
6. The German Federal Ministry for Economic Cooperation and Development (BMZ)
7. L'Organisation Internationale de la Francophonie - OIF
8. The Senegalese Telecommunications and Posts Regulatory Agency – ARTP
9. The Senegalese State Information Agency - ADIE
10. Cheikh Anta Diop University - UCAD
11. The Agence Universitaire de la Francophonie - AUF
12. InWEnt - Capacity Building International, Germany - INWENT
13. The Open Society Institute (OSI, OSIWA and OSISA)
14. The Advanced Information Technology Institute of the Ghana-India Koffi Annan Center for Excellence in ICT – AITI-KACE
15. The Commonwealth of Learning

16. Bokk Jang Bokk Jef Senegal
17. International Business Machines – IBM
18. The Internet Corporation for Assigned Names and Numbers – ICANN
19. Meraka Institute
20. One Laptop per Child – OLPC
21. The Panos Institute of West Africa – PIWA
22. The United Nations University - UNU-MERIT
23. Kheuwel.com
24. Google
25. The Association of African Universities – AAU
26. Toubia Oil
27. Blaise Electroics

IDLELO 3 OBJECTIVES

Among other things, Idlelo 3 was to allow:

- * Governments to share experiences in the use of FOSS in government and administration,
- * FOSS users, developers and localizers to showcase results obtained since the last Idlelo,
- * Participants to benefit from policy, academic papers and practitioners input from world-acknowledged speakers on featured tracks, with a focus on the overall theme of "making the knowledge economy work for Africa"
- * New and innovative FOSS initiatives to be presented and evaluated,
- * To set out the South African FOSS experience for the benefit of continental Africa
- * Seminars, round tables, mini conferences and deepened discussions on global and African FOSS issues.
- * Intensive hands-on training on current FOSS tools in several professional domains,
- * Students to connect to experts in the field
- * Organizations and entities looking for FOSS expertise to make valuable contacts towards recruitment,
- * Market African FOSS expertise,
- * The launch and commissioning of several FOSS awards, researches and innovative initiatives,
- * A review of the activities of the Free Software and Open Source Foundation for Africa (FOSSFA) as well as the renewal of its governance structure,

* Decisive meetings on the continental FOSS agenda and a Road Map.

IDELELO3 OPENING CEREMONY

After South Africa in 2004, Kenya in 2006, the third IDLELO was held for the first time in a sub-Saharan francophone country (Senegal, 2008). With active participation of a diversity of FOSS organizations' representatives and more than two hundred delegates from Africa, Europe, and America, the Dakar IDLELO3 conference started on March 17, 2008.

Nnenna Nwakanma opened the session and Fatimata Seye-Sylla, Ibrahima Niang (representative of Abou Salam Sall, UCAD's Rector), Mohamed Tidiane Seck from ADIE, Balthas Seibold from InWent, Bassirou Guissé, the Secretary General of the ministry of Infrastructure, Land Transportation and Telecoms for Senegal, Pierre Ouédraogo from OIF, Lewis Rabkin, representing the South African Minister Geraldin Fraser Molekete, gave short communications to delegates.

Nnenna Nwakanma, on behalf FOSSFA's Council members, thanked various sponsors that gave active support to FOSSFA and recalled that “partnership is not always about money”. She pointed out selected challenges such as funding, open partnership models, more effective African participation in the debate on open standards. To the IDLELO3 participants she asked to “take something away and leave something behind” in light of the conference theme “Making the Knowledge Economy Work for Africa”.

Ibrahima Niang, representative of Pr. Abou Salam Sall, Rector of UCAD, considered FOSS as an opportunity for developing countries to bridge the digital divide and stated that UCAD remains engaged to promote the development and the use of FOSS to build networks and share knowledge.

Pierre Ouédraogo from OIF recalled the continuous support of its organisation to the FOSS movement since 1997. As a result of this engagement, key initiatives have been developed (African FOSS meetings, Private sector development, emergence of national associations' of FOSS users, CHALA...) to ensure cultural and linguistic diversity.

Balthas Seibold from InWent stressed the potential of FOSS for the promotion of the private sector in Africa and an enabling environment for sustainable economic development, a focus of Germany's cooperation through the BMZ. He announced a new program called “[ict@innovation](#)”, which will focus on fostering small and medium-sized enterprises (SME) in the field of Free and Open Source Software through regional networking and strengthening of consulting capacities of ICT associations and training institutions in Southern and East Africa (see also Annex III of this report). Finally, he reiterated the willingness of InWent to continue to actively support the FOSS movement.

On her address to the audience by video, Minister Geraldine Fraser-Moleketi recalled the importance of the Dakar declaration for South Africans, Using the symbol of Goree Island, she raised the issue of what should and should not be

treated as property. She urged FOSSFA to create balance and lead to better knowledge development opportunities in Africa and make sure that Africa participates actively in open standards processes. She appealed for continuous dialogue between the FOSS movement and the Proprietary industry in order to reach a consensus towards a single standard to meet consumers' needs. She pointed out the need for open standards, governments and organisations' minimum interoperability standards, including Open Document Format (ODF).

Bassirou Guissé, representative of Habib Sy, Senegalese Minister of Infrastructure, Transportation and Telecommunications, reinforced the commitment of the Senegalese Government to promote FOSS as a mean to develop initiatives for a local software industry and suggested the establishment a national FOSS day. To anticipate future innovations, the Senegalese Government seriously consider the option to include open standards on all upcoming key development programs, as showed by it's Intranet and computer training courses within universities. He appealed to IDLELO3 to be a model for opening doors to the free exchange of knowledge in Africa.

GOVERNANCE AND POLICY

The Monday program began with exchanges on Governance and Policy. The focus of Kim Tucker on his presentation to address FLOSS and ICT Innovation was on FLOSS Innovation to support, augment or enhance Government Service Delivery towards sustainability. Education (equal access to education, learning resources, quality, relevance, learning opportunities, knowledge) and Technologies of general relevance (wireless access, connectivity, human language technologies, mobile access, ...) were the areas of emphasis.

Anne-Marie KONAN PAYNE presented the multimedia information system (SimGouv) of the Government of Cote d'Ivoire. SimGouv's objective is to establish a dynamic link between the Government and citizen through an efficient and open government communication platform. FOSS have been intensively used when building the system and also enabled the expression of creativity of local talents. FLOSS flexibility was a key enabling factor for the system to reach high level of performance in Government's communications.

M. Tidiane Seck announced that government of Senegal's approach to address E-Administration and Governance was not based in any study or written strategy. The learning by doing strategy was adopted and has provided proven results. The global vision consisted in shifting from a model where the Government is central to another new one where the citizen is the heart of the system. Intensive usage of FOSS was a catalyst for local private sector involvement. To ensure sustainability of the system, a critical mass of FOSS users and developers was trained in a training of trainers courses to transfer

FOSS knowledge.

For Aslaam Raffee, from the South African Department of Science and Technology, E-government requires the seamless flow of information across all tiers of Government. Talking about GITOC, he pointed out technical principles and standards for achieving Interoperability. FOSS is one area of GITOC's focus. The working group on FOSS and Open Standards helped to develop a policy in 2001, which policy was improved later in 2007. The key elements of this policy are:

- use FOSS or provide an explanation,
- migrate to FOSS even if you are using proprietary software,
- develop in FOSS and use an appropriate licence,
- government content is open content unless there is a reason to do otherwise,
- encourage the use of FOSS, open content, and open standards in South Africa broadly.

The Government of Mali's vision on E-Administration was presented by Souyhahebou Coulibaly of the Agence des Technologies de l'Information et de la Communication (AGETIC). Through SchoolNet Initiative and World Francophone Numeric University, AGETIC promotes FOSS development in Mali mainly in the education sector for the time being. This strategy will enable the country to build enough capacity to sustain the development of future activities.

HUMAN CAPACITIES, CAPABILITIES AND COMPETENCIES

For Pierre Ouédraogo of OIF, FOSS are enabling tools for development and cultural diversity. OIF's goal in supporting FOSS movement is to boost the emergence of hands-on trainings within communities, reinforce national and regional capacities, foster creativity, and promote FOSS inclusion as strategic tools in national and regional policies. Freedom on technology choice is essential for democracy, rule of law, governance and interoperability of open standards. Community digital solidarity around FOSS paves the way for developing countries numeric industrialization and ownership.

Ben Akoh and Thandi Mbvundula, respectively from OSIWA and OSISA gave an overview of their organization's vision on FOSS. They also recalled OSIWA and OSISA initiatives on the field to accompany and support FOSS movement throughout the Continent. Their foundation supports evidence-based advocacy and must not be seen only as a grant organization. OSIWA's and OSISA's focus is on content development, solutions that demonstrate results, building up capacities.

Solomon Gizaw talked about Ethiopian Free & Open Source Software Network (EFOSSNET). EFOSSNET vision's is to see FOSS contribute its share for the development of Ethiopia. The network promotes the optimal utilisation of FOSS through conducting appropriate research and ensuring continuous improvement by establishing sub-networks of youth, developers and users and policy makers. As active actor on the OOXML debate in Ethiopian and throughout the Continent, EFOSSNET highlighted technical shortcomings of the proposed standard and urge African Governments to pay attention to those issues before voting.

“When talking about human resources we may think about the academic. Africa should reach a critical mass of capacities and build world class capabilities on FOSS otherwise we will remain consumers”, said Derek Keats.

BUSINESS MODELS AND COMMUNITY DEVELOPMENT

On Tuesday morning, track leader Wire James Lunghabo of Linux Solutions Uganda introduced the tracks goals, which include a better understanding of an African knowledge economy based on FOSS and respective business models, which drive innovation and allow local actors to make money.

Balthas Seibold of InWEnt - Capacity Building International of Germany presented a new joint programme with FOSSFA, which is targeted towards building sustainable business models for FOSS in Africa: The initiative "ict@innovation" is aimed at building capacities in innovative Information and Communication Technologies (ICT) through FOSS in Southern and East Africa. According to the speaker, the focus is on FOSS as a key technology to drive innovation, add local value and foster development-oriented and affordable ICT applications. ict@innovation will work on business models, certification schemes and local applications for African ICT-SME sectors and the development of related training programmes. The programme is financed by the German Federal Ministry for Economic Cooperation and Development (BMZ). Seibold invited all interested parties, particularly African ICT training institutions, university or regional or national ICT association to join ict@innovation, which is online at www.inwent.org/ict-innovation .

“You can not limit another's freedom” said John “Maddog” Hall on his Tuesday's presentation. The freedom around FOSS should be understood as the freedom to read the source code, make changes to the source code, redistribute those changes, and use the software for any purpose. Proprietary companies can not meet the needs of everyone. Nor will they even try, it is not profitable. He pointed out major challenges the region is facing and concluded that every one can free himself from software slavery as evidenced by success stories of young talented entrepreneurs that are now running their own profitable FOSS businesses.

Consider business as knowledge economy driver said Alex Gakuru during his presentation on “Connecting and sustaining linkages between technical communities and business”. Key business expectations on Software are as follows:

- Simplify operations, lower costs, increase profits, efficient,
- Mission Critical stable applications, little support, available when needed
- Open solutions support advantages over closed counterparts
- Value proposition to shareholders, management takes credit
- Expect to pay for services rendered, free not overriding factor
- Service provider to make a good living offering services
- Develop skills, internally and to your clients

Focusing on “every client is unique” -individual business needs, establishing “National FOSS Fora”- periodic physical meetings and learning from market and competition to win the business, are way forward for sustainable open business models.

Thomas Rolf highlighted results and lessons learned after the implementation of business through open source bundle and integrated solutions for SME in Ethiopia. More than 5.000 Laptops Per Child were implemented in primary schools, 25 e-Learning courses developed and implemented. Computer Terminals were loaded with latest software, e-Books and e-Learning material students can download all kind of digital content. Business Open Source Software provided to small and medium enterprises along with training and support. The people behind FOSS are more innovative, better team players, more dedicated and they are the unique selling point.

Karsten Gerloff of the United Nations University, presented the economics of FOSS. According to him, only 7% of programmers in the US work in packaged software companies, 30% work in sectors producing mainly custom software / integration / support, almost 60% work in the “user sector” - finance, government, manufacturing, retail. Today most people (and firms) who write software do not make money by selling software, but by selling their time! This is the economics of FLOSS, not the economics of proprietary packaged software. FOSS skills are developed through informal apprenticeships and skills development is no.1 reason for developers to participate in FOSS communities. FOSS skills lead to jobs. FOSS businesses add local value and raise local skill levels.

Alex Gakuru, Dorcas Muthoni, Wire James and Arnold Pietersen shared experiences during the panel discussion on “African FOSS Business Models and Skills for ICT-Based SME to develop and deliver innovative and appropriate FOSS products, services, and training”. The panel was moderated by Andrea

Goetzke, consultant to InWEnt. She asked the panelists, how they perceived the chances of making a living out of FOSS in Africa. As the first panelist, Dorcas Muthoni presented a case study on OSS business model using a strength, weakness, opportunity and threat (SWOT) analysis approach. Services of her company include the following:

- Designed products: OpenCabinet, e-SME, CallCenter
- Custom Solutions: Cut across software development, integration and customization
- Training: Professional Development and Essentials Courses Professional open-source services: Subscription support and hourly technical aid

Glenn McKnight's objective was to make the audience understand how to overcome barriers in the digital economy which requires appropriate policies, technological tools and education for accessible system design and implementation. In other terms, Compliance means job opportunities. People with disabilities are being locked out of the digital economy because of a lack of will and ambivalence toward inclusive accessible design. A robust and strong digital economy requires the removal of barriers through the deployment of accessible design elements in our computer, information technology and communications. Using FOSS and by directing our research and policy directives to address these problems, we will overcome the digital divide and ensure full participation in the global digital economy.

OPEN STANDARDS

Introducing the mini conference co-organized by OSI, IBM and Google, Aslam Raffee recalled the definition of an open standard. He considered a standard open if it meets all the following criteria:

- * it should be maintained by a non-commercial organization,
- * participation in the ongoing development work is based on decision-making processes that are open to all interested parties,
- * all may access committee documents, drafts and completed standards free of cost or for a negligible fee,
- * the intellectual rights required to implement the standard (e.g. essential patent claims) are irrevocably available, without any royalties attached,
- * there are no reservations regarding reuse of the standard,
- * there are multiple implementations of the standard.

According to Roslyn Docktor, working collaboratively to solve complex problems, being adaptive and responsive to change, shifting control from vendors to governments and offering choice, are key incentives for IBM to reinforce its commitment to support Open Standards. She recalled the Open Standard policy achievements for the audience, the OOXML story and run a

quiz on Governmental Programs-Open Standards and ODF.

For Ben Akoh from OSIWA, it's essential that African civil society put pressure on Governments to pay more attention to procurement practices, particularly software agreements between them and proprietary software companies. Transparency in public procurement is not ensured if a non-disclosable agreement is signed between a country and a private software company. He encouraged the civil society to initiate debate on Open Standards, involve all stakeholders, raise awareness and reach consensus on key issues. He appealed delegates to identify a FOSS advocate in every country, especially in those Cote d'Ivoire, Kenya, Ghana, ...) that have the right to vote in a up coming decision on OOXML.

FOSS AND EDUCATION

Africa is a continent of diversity and is not fully active in the knowledge economy, said Kim Tucker introducing the FOSS and Education track. Education in Africa has not yet been impacted by technology. Innovation, localization and creativity through adapted methodologies and approaches can pave the way for knowledge for sustainable development. The freedom to use the knowledge for any purpose implies no dependence on proprietary software and allows including to make a living offering commercial services around the knowledge resources, to adapt it to your needs (localisation), to make copies and help your neighbours, to enhance and share for the benefit of all.

WikiEducator and FLOSS4Edu, An African wide collaboration in the development of Open Educational resources was introduced by Nicholas Kimolo. WikiEducator is a mediawiki based platform for hosting of Educational materials that anyone can edit. The WikiEducator is an evolving community intended for the collaborative: planning of education projects linked with the development of free content; development of free content on Wikieducator for e-learning; and work on building open education resources (OERs). FLOSS4EDU is an Initiative incubated by WikiEducator with the following vision: "Make available appropriate educational content and a set of easy to use FLOSS tools to educational institutions while building the largest community of educational practitioners collaborating on the development of Free and Open Educational Resources in Africa". The strategy is as follows: a) build a network of Educational Practitioners (Individual and Institutions) willing to participate in the development of OERs - (Collaboration4Content), b) Adoption of the Open Digital Villages concept and provide access "paid" through content development - (Access4Content), c) Continue building capacity to Educational Practitioners in developing OER Content (Learning4Content), d) Promotional Activities and Advocacy (Advocacy4Content).

The African Virtual Open Initiatives and resources (AVOIR), a network for

capacity building in free software engineering through FOSS development in Africa, was introduced by Paul Scott. AVOIR overall goal is to create a wider network and synergy and use existing talents to build capacity through FOSS. With Free & Open Source Software the barriers to entry are as low as they can be and the Potential is there to create opportunities for economic growth. Very little collaborative software development happening in Africa. AVOIR can significantly change this trend by building human capacity in software engineering through the collaborative development of Free Software, developing and supporting Free Software Innovation in African higher education institutions, uniting scarce and dispersed skills towards a common purpose, delivering world-class, innovative software and services in the process, creating an ecosystem to promote and strengthen innovation through transactions taking place within the ecosystem.

From the LOGO project to One Laptop Per Child (OLPC), Fatimata Seye Sylla recalled Government of Senegal's commitment to enable and increase the use of ICTs in the education sector. A very committed team designed a new teaching and learning approach: teachers are free to implement their own teaching methods while children are free to learn in their own way. Using 4 pilot schools under the LOGO project, the team implemented this strategy that shows results and its success paved the way for the OLPC project. OLPC is not a laptop project or a market opportunity. OLPC is by essence an educational project. The strategy consists in reaching a digital saturation in a given population for collaborative work within a community. The connectivity and power issues may be impediment for full implementation but when computers connect to each others even offline, children can work together by chatting and sharing information and videos. Children with XO is not a passive consumer of knowledge but an active participant in a learning community.

FOSS EXPERIENCES

Value in sharing was pointed out by Samer Azmy in his presentation on « Mail in the Open Source Flavor».When individual efforts are published on the Internet the horizon is opened for others by delivering solution and we gain by the feedback from the community. Community generates content in language that meets its needs and awareness is raised. He recommended blogs for the following reasons:

- Search Engine Friendly
- Easy to setup
- Free as in Freedom
- Free as in Beer
- You can earn money from your blog
- It is archived and will never be deleted/it is the memory of our age.
- We link to each other , we build our network and our virtual community.

He gave an overview of selected open source solutions (Citadel, Scalix, PostPath and Zimbra). Citadel is a turnkey open-source solution for email and collaboration. One simple installation delivers a multitude of powerful features, including email, calendaring/scheduling, address books, bulletin boards, mailing list server, instant messaging, multiple domain support, modern AJAX-style web interface. Scalix's Linux email servers provide proven email and calendaring. Reduce the cost and complexity of enterprise email with a Linux mailserver. PostPath create a more open, powerful, low-cost, and flexible infrastructure for email and collaboration. Zimbra is open source server and client software for messaging and collaboration - email, group calendaring, contacts, and web document management and authoring.

The POLLES Project, Tools Platform in Open-Source for Higher Education, was introduced by Mouna Abakarim, Sefrioui Nabil, and Pr. Mokhtar Sellami. Within the Polles Project, the Sakai Project is a "community source" software development effort to design, build and deploy a new Collaboration and Learning Environment (CLE) for higher education and to support research collaboration. IDRC (Canada) provides financial support to this FOSS e-learning initiative. A scientific value-added to the Maghreb community in terms of visibility is expected to be provided with FOSS knowledge transfer , localization and content development.

Andrea Goetzke and Ibrahima Yade revisited the strategy for promoting Free/Open Software (FOSS) through experiences from the New Thinking network in Germany, Uganda and Senegal. The current connections to FOSS promotion is established through the following entities: New Thinking Network (Germany), SeneLogic (Senegal) and ict@innovation/InWEnt (Germany). ict@innovation/InWEnt ensures capacity Building in business and technical skills for African FOSS/ICT - SME. Andrea identified the following FOSS barriers in Germany: gaps in communication, lack of knowledge and skills, lack of awareness of options, and misconceptions. Creating a place, sharing knowledge online and inviting the community to participate were key steps in overcoming such barriers. The Senegalese connection is made through SeneLogic and IT-Pool | Berlin (part of newthinking community). SeneLogic will be based in Saint-Louis, northern Senegal, and will create decentralized open source centers said Ibrahima Yade. This innovative approach will enable the project to provide to underserved populations the following services:

- FOSS services to local non-profit educational organizations,
- internship programme for disadvantaged youth,
- training youth to apply skills in FOSS services in local community,
- plus trainings, Internet cafe ...

SeneLogic is partnering with local and international organisations and benefited financial support from GTZ, Open Society Initiative for West Africa - OSIWA, ARTP, SONATEL, and IDRC.

Dr TOHOURI Romain-Rolland introduced Telemedicine Advances and Challenges. Telemedicine is a rapidly developing application of clinical medicine where medical information is transferred via telephone, the Internet or other networks for the purpose of consulting, and sometimes remote medical procedures or examinations. Telemedicine may be as simple as two health professionals discussing a case over the telephone, or as complex as using satellite technology and video-conferencing equipment to conduct a real-time consultation between medical specialists in two different countries. Telemedicine generally refers to the use of communications and information technologies for the delivery of clinical care.

Depending on the need and availability of communications infrastructure, telemedicine uses a variety of transmission modes including ISDN, T1, asynchronous transfer mode, digital subscriber line, satellite, microwave, digital wireless, local telephone lines and the Internet.

Only five years ago, a 'typical' telemedicine set-up cost close to US\$300,000. Today, with improvements in technology, innovations in data compression and reductions in computing costs, the expense of the equipment required to conduct telemedical consults can be less than US\$5,000. For remote patient monitoring, the cost of some units is now less than US\$300. He shared experiences from Mali and Sierra Leone:

- Mali: teleradiology and e-learning, IKON teleradiology project using the OpenYaLIM software developed by IDC and supported by IICD, DHIS2/SMS platform (project in development), E-learning for medical staff (OpenYaLIM)
- Sierra Leone: implementation of an Health information System with the help of Oslo University HISP program and HMN, Free software used are DHIS 2 + OpenMRS + OpenHealth .

Moving focus from manual reporting to use of information for better care was the guiding principle of «Lessons learnt from open source HISP health information system» introduced by Nils D. Christophersen of Norway. This bottom up strategy allowed each level, program, agency to do as they wanted, if adhering to "shared" standards. This network of collaboration includes several countries from Norway, South Africa to Malawi and turned around 3 components:

- Health information system,
- Software development, and
- Capacity building.

Lessons highlighted the importance of team and the necessity to balance bottom-up and top-down approach.

Zaheda Borhat presented Google's perspective on FOSS. Google use of Open Source as infrastructure (Linux Kernel and hardware driver, Apache Tomcat and

many other Apache Tools, SSH, and other systems management tools, MySQL, Wine, Programming languages, python, php, perl, ruby, java, C++, Engineering and others running Linux (GooUbuntu), Applications, Firefox, OpenOffice.org +...).The Open Source Programs Office ensures license compliance, provides project hosting services, Sponsors academic research, collects and hosts open data sets, and fosters relationship with the community. The desire to maintain independence from software companies, adaptability, flexibility, and ownership are key values that are driven Google's choice to use Open Standard. She talked about Google Summer Code which is Google's program designed to introduce students to the world of Open Source and appealed Africans to get more involved in Open Standard development worldwide.

THE CLOSING CEREMONY

The closing ceremony of Idlelo was marked by the presence of Mr Moustapha Sourang, Senegalese Minister of Education, Professor Abou Salam Sall, the Rector of the Cheikh Anta Diop University of Dakar, Mr Sada Wane of the Senegalese State Information Development Agency (ADIE) and Amadou Lamine Dial of the State Telecommunications and Postal Regulation Agency (ARTP).

“Commercial access to ICTs is an impediment to knowledge development”, said Moustapha Sourang, Senegalese Minister of Education at the closing ceremony. He reiterated the Government's commitment to provide continuous support to the FOSS movement. IDLELO is essential for raising FOSS awareness in served communities and can foster greater participation in the global knowledge economy.

IDLELO 4

Idlelo4 is scheduled to hold in Accra, Ghana, in May 2010.

PARALLEL SESSIONS @Venue: Campus Numérique de la Francophonie

Session : **FLOSS AND MEDIA**

Reporter : Salamata Fatimata LY

Date : March 18, 2008

Venue : Asie

Speaker(s) : Ken Lohento (PANOS INSTITUTE, Dakar), Ben Akoh (OSIWA, Dakar)

Country of the speaker : Senegal

Number of participants : 10

Summary of key elements of the presentation :

Selected Senegalese media (Sud Quotidien, Joko FM,...) had actively participated in the session. 3 key points were highlighted during discussions:

- Russia case: the Government has revealed to Microsoft that the private press was using pirated software. As a result of this action, the press did sign an agreement and is now paying penalties to the proprietary software company. Such situation is likely to be happening in Africa where Governments always try to control the press. This is an incentive for the press to be engaged in the FOSS movement, migrate to avoid any further pressure and keep its freedom;
- Maintenance is key for FOSS promotion and development. How to train FOSS service providers? Which maintenance program to put in place? E-riders appears to be one solution identified by OSIWA. An E-riders team is composed of 4 tech-savvy individuals with world class capabilities on FOSS and are available and mobile to provide assistance at any time to solve FOSS users' problems.
- It's important to sensitize NGOs to adhere to FOSS movement and migrate. They may be exposed to the same threats because they do not have

enough financial resources to buy licenses. Using FOSS will enable them to reduce their costs.

Session : **DEPLOYMENT OF FOSS PLATFORMS FOR GOVERNMENTS AND ORGANIZATIONS**

Reporter : Alioune FALL

Date : March 18, 2008

Venue : Europe

Speaker(s) : Jerome Santini (OIF)

Country of the speaker : France

Number of participants : 5

Summary of key elements of the presentation :

The focus of the presentation was on FOSS tools for:

- mailing services (Mail_imap, devecot),
- backups (backuppc),
- servers and networks (OpenVZ)
- Debian mirrors and Ubuntu

The content of the presentation is available @ <http://www.wiki.auf.org>

A hands on training on OpenVZ was performed before closing the session.

Session : **FOSS DEPLOYMENT IN GOVERNMENT SCHOOLS**

Reporter : Alioune FALL

Date : March 18, 2008

Venue : Europe

Speaker(s) : Paul Scott (University of Western Cape, South Africa)

Country of the speaker : South Africa

Number of participants : 7

Summary of key elements of the presentation :

Chisimba application was the focus of the presentation. Chisimba is a Web 2.0 enabled rapid application development framework for creating web applications that are platform independent, browser independent, XHTML compliant, and can use a number of common databases. Chisimba is written in PHP5 using the model-view-controller paradigm, implemented via a modular architecture. Over 100 modules of functionality are already available and these can be used out of the box to create a Content Management System, a feature-rich e-learning platform, a group-based collaboration platform, a blogging system that allows posting from mobile phones, and many other applications. . Chisimba was developed based on several years of experience in software design and architecture at the University of the Western Cape and partner institutions using its predecessor KEWL.NextGen, and is under active development through the African Virtual Open Initiatives (AVOIR) by a team of developers in 16 African higher education institutions. So far, Senegal is the only francophone country participating in this initiative.

Session : **LINUX SECURITY**

Reporter : Ndèye Marie Touré/Ndèye Fatou Paye

Date : March 18, 2008

Venue : Africa

Speaker(s) : Samer Azmy

Country of the speaker : Egypt

Number of participants : 19

Summary of key elements of the presentation :

The focus was on FOSS and security. The 4 key points of security are:

-
- secured access (physical and logical),
- data availability
- data integrity
- availability of services

Main hardware builders are using open source are Nokia (Free BSD firewall), Oracle, Checkpoint (Red Hat for secure platform), OpenVPN. He pointed out selected open source projects (SNORT, Mozilla PKZ, SQUID, CLAMAV, Bastille Linux, OSVdb, Open Trust, Inventory Tool). Four case studies have been revisited:

- Shorwall, firewall enabling IP tables configuration,
- OpenVPN,
- SQUID, content filtering
- Clamav, email scanning

Session : **BIND-DNS and ROOT SERVERS**

Reporter : Ndèye Marie Touré

Date : March 18, 2008

Venue : Africa

Speaker(s) : Mouhamet Diop (Ceo kheweul)/ Anne-Rachel Inne (ICANN manager)

Country of the speaker : Senegal / Niger

Number of participants : 13

Summary of key elements of the presentation :

Mouhamet Diop introduced the session by presenting O'Reilly reference book "DNS and BIND". He also talked about how to implement BIND and its advantages. Anne-Rachel Inne introduced the Internet and its history (the Arpa Network created in 1969). As of today, there are nearly 200 000 networks but only about 1 thousand are Ipv6 based. $\frac{3}{4}$ of financial transactions take place over the Internet. DNS was introduced in 1984. DNS architecture is made of CCTLDs (country codes) and GTLDs (general top level

domains). DNS port is 53. A brief overview of Internet Corporation for Assigned Names and Numbers (ICANN) was given. ICANN also manages IP addresses allocation globally. The institution has a board of directors on which five continents are represented.

The actual African representative is Kenyan. There were 13 root servers originally worldwide managed by 13 organizations. There are about 141 instances of root servers worldwide and 3 are located in Africa (South Africa, Egypt and Kenya).

Discussions turned around these key points:

- * Software used in DNS
- * Technical organizations around internet in Africa
- * DNS security for servers
- * Internet security in general
- * local African languages introduction in domain names to bolster content from the region

Session : **MIGRATION**

Reporter : Ndèye Fatou Paye:Ndèye Marie Touré

Date : March 18, 2008

Venue : America

Speaker(s) : Mohamadi Zongo / Kassim Assirou

Country of the speaker : Burkina Faso/Cote d'Ivoire

Number of participants : 07

Summary of key elements of the presentation :

This session was dedicated to those who are not familiar with LINUX environment. A guided tour on GNU/LINUX was initiated. The presentation highlighted competitive advantages provided by FOSS. Practical training on UBUNTU was performed, detailed information given on different menus. At the end, participants were able to configure and test the mailing system.

Since it was a discovery session, basic technical questions were asked by the audience to better understand the environment.

Session : **ASTERISK**

Reporter : Ndèye Fatou Paye

Date : March 18, 2008

Venue : Africa

Speaker(s) : Samuel Uya

Country of the speaker : Senegal

Number of participants : 20

Summary of key elements of the presentation :

Asterisk is the world's leading open source PBXi, telephony engine, and telephony applications tool kit. Offering flexibility unheard of in the world of proprietary communications, Asterisk empowers developers and integrators to create advanced communication solutions for free. Asterisk is released as open source under the GNU General Public License (GPL). The presentation highlighted Asterisk's functionalities as:

- a switch,
- a gateway,
- a media server,
- in the call centre,
- in the network.

Voice services of a bank were simulated using Asterisk and presented to participants to enable them to better understand how the system operates.

ANNEX 1

IDLELO3 AGENDA

Third African Conference on FOSS and the Digital Commons – Idlelo 3

Making the Knowledge Economy Work for Africa

Cheikh Anta Diop University, March 16 - 20, 2008
Program

Sunday, 16

0830 – 1100: End of registration and badging
1100 – 1200: Briefing Session
1200 – 1300: Welcome cocktail
1430 – 1600: Media session
1630 – 1800: Africa FOSS Agenda

Monday 17

1000 – 1100: **Conference opening ceremony**
1130 – 1300: Conference Track 1 – Governance and Policy
FLOSS and ICT Innovation in Support of Government
Services (*South Africa*)
E-Administration and Governance in Senegal (*Tidiane Seck, Government ICT, Office*)
E-Administration and Governance in Cote d'Ivoire (*Mme Anne Marie Konan-Payne, Centre d'Information et de Communication Gouvernemental (CICG)*)
E-Administration and Governance within the Department of Science and Technology (*Aslam Raffee – South Africa*)
E-Administration and Governance country perspectives (*Souyhahebou Coulibaly – AGETIC, Mali*)

1430 – 1700: Conference Track 2 - Human Capacities, capabilities and competencies (*Co- organized with InWent – German Capacity building International*) Chair – *Prof. Derek Keats (University of Western Cape, South Africa)*

Organisation Internationale de la Francophonie: FOSS capacity building. (*Pierre OUEDRAOGO, Responsable de Programmes Société de l'Information. Institut de la Francophonie Numérique, Organisation International de la Francophonie, Paris, France*)
Open Society Initiative perspectives in FOSS (*OSIWA, OSISA*)
Capacity building, support and reinforcement: our Policy - AUF. (*Abdelkader Galy, Coordinator Campus Numérique de la*

Francophonie, Dakar, AUF)

Launch of InWent's new programme ict@innovation –
Introduction to the programme on "Capacity Building in
Information and Communication Technologies through FOSS in
Southern and East Africa"

FOSS training experiences of efoosnet (*Solomon Gizaw,
efoosnet*)

Importance of FOSS for Sustainable African Development
(*Kim Tucker, CSIR/Meraka*)

1730 – 1900: Africa FOSS Agenda

Tuesday 18

0830 – 1300: Conference Track 3 - Business models and community
development (*Co-organized with InWent – German Capacity
building International*) Chair – *James Wire Lunghabo, Linux Solutions
Uganda, General Secretary, FOSSFA*

Free Software for a Free Africa (*John 'Maddog' Hall, The
Linux Institute, USA*)

International discourse of FOSS business models (*Rishab
Ghosh, The United Nations University's Maastricht Economic and Social
Research and Training Centre on Innovation and Technology (UNU-
MERIT) The Netherlands*)

Presentation and discussion: African FOSS Business Models
and Skills for ICT-based SME to develop and deliver innovative
and appropriate FOSS products, services, and training. (*InWent Experts'
Panel*)

Connecting and sustaining linkages between technical
communities and business (*Alex Gakuru, Kenya*)

Business through FOSS - Open Source bundle for SME in
Ethiopia (*Thomas Rolf, GTZ, Project Leader on-e, ecbp, Addis
Ababa, Ethiopia*)

Accessibility in the Virtual Workplace: Opportunities and
Challenges for students, employees and business owners. (*Glenn Mcknight,
Canada*)

Taking care of today with offline. (*Renaud Gaudin,
Netherlands*)

1430 – 1630: Conference Track 4. Open Standards (*co-organized
with OSIWA, IBM and Google*)

Mini conference.

1700 – 1900: Africa FOSS Agenda

2000 – 2230 Cultural Dinner offered by ARTP

Wednesday 19

- 0830 – 1030: Conference Track 5 - FOSS in Education
Libre Knowledge and African Opportunity (*Kim Turker – South Africa*)
FLOSS4EDU and WikiEducator (*Commonwealth of Learning*)
UCAD : FOSS education experiences in Senegal (*UCAD*)
Réussir son diplôme à distance avec du Libre ((*Abdelkader Galy, Coordinator Campus Numérique de la Francophonie, Dakar, AUF*)
African Virtual Open Initiatives and ressources – AVOIR
(*Paul Scott, University of Western Cape, South Africa*)
OLPC – One Laptop per Child (*Fatimata Seye Sylla - OLPC*)
- 1100 – 1300: Conference Track 6 - FOSS experiences
Mail in the Open Source Flavour. (*Samer Azmy - Egypt*)
The Polles Project (*Mouna Abakarim - Morocco, Sefrioui Nabil -Morocco, Pr. Mokhtar Sellami - Algeria*)
Promoting Free/Open Source Software (FOSS) - Possibilities and experiences from Germany, Uganda and Senegal (*Andrea Goetzke – Germany/SENELOGIC*)
- 1430 – 1630: Global FOSS perspectives (*Perspectives from outside Africa*)
Open Medical Records System in Uganda (*Paul Bagyenda, Uganda*)
Telemedicine – Advances and Challenges (*Dr Romain Tohouri, Mali*)
Lessons learnt from open source HISP health information system. (*Nils Damm Christophersen, Norway*)
Google and Open Source (*Zaheda Bhorat*)
Other FOSS perspectives (*Perspectives from other African countries*)
- 1700 – 1900: Africa FOSS Agenda

Thursday 20

- 0830 – 1000: Wrap up and way forward
1000 – 1100: Official closing ceremony
1300 - 1630: Dakar Tour

ANNEX II

WORKSHOPS PROGRAM

Monday - Lundi 17

	0900 - 1045	1100 - 1300	1500 - 1700
Senghor		Opening Ceremony Cérémonie d'ouverture @ UCAD 11	
America			Migration (F/E) (Mohamadi Zongo/ Kassim Assirou)
Africa			BSD (Alioune B Diop)
Europa			Web Semantics (Abdoulaye Guissé)
Centre de Ressources			Gestion et Comptabilité (Eric Kouam)

Mardi - Tuesday 18

	0900 - 1045	1100 - 1300	1500 - 1700
Senghor	FLOSS and Media (Panos Institute) F/E		TICs, Technologies Libres et Communication (Association for Progressive Communications)
America	Migration (Mohamadi Zongo/ Kassim Assirou)		
Africa	BIND - DNS and Root Servers (Kheweul/ ICANN)		Linux Security (Samer Azmy)
Europa	Deployment de plateforme en Logiciel Libre - Deployment of FOSS platforms for governments and organizations (F/E) (Jerome Santini)		FOSS deployment in government schools(F/E) (Joris Komen/Paul Scott)
Centre de Ressources	Python (F/E) (Ousmane Wilane/COL)		ZEND (Nguido Ardo)

Wednesday - Mercredi 19

	0900 - 1045	1100 - 1300	1500 - 1700
Senghor	Making and Saving Money with FOSS (F/E) (John Maddog Hall / Kristian Kielhofner)		Video Conference: E- Learning
America	Migration (F/E) (Mohamadi Zongo/ Kassim Assirou)		PyDADL (Pr Mokhtar Sellami)
Africa	Asterix (Abdoulaye Sall/Dr. Samuel Uya)		UML (Eric Kouam)

Europa	<p style="text-align: center;">Learning4Content (F/E) (Nicholas Kimolo, Jibril Touzi, Kafui Prebbie)</p>		
Centre de Ressources	<p style="text-align: center;">HEARTBEAT and DRBD (Mohameth F. Sy)</p>	<p style="text-align: center;">SVN (Moustapha Cissé)</p>	<p style="text-align: center;">ETL (Gaoussou Camara)</p>