

Introduction

Define Open Source

Open Content, needed for Education.

Open Software, needed to boost software sector.

Define West Africa

Define “We”

Importance of Wikipedia in Africa

- Education system poorly developed
 - (1) public university in Mali
 - Limited curriculum available (no ICT/Programming)
 - Teachers are low ; salaries are low.
 - Limited # of schools (mostly big cities).
 - Most schools have no library.
 - Books are very expensive ; almost no public library.
- Internet is in expansion right now.
 - Only in big cities.
 - Low speed ; especially outside capital cities (mobile).
 - Leap frog from nothing to Internet: no reading culture, no keyword thinking.
 - No knowledge of capabilities and resources:
 - Beside P2P, Web is 100%.
 - No info expect operator marketing.
 - Only entertainment: chat, porn, youtube, facebook.
 - Telescope experiment: device to monitor & analyze + interviews + observation.
Reuse last browser request.
Lie about doing research.
Browse randomly with no purpose.
Very sensitive to scams. Especially VISA ones.

→ Great need for a **digital** (cheap & easy) free resources, including educational like Wikipedia.

→ Need for Open content from Africa, especially in Wikipedia.

→ Need for contributors.

Programming & Open Source in West Africa

- Software market is just starting.
- Not an industry, mostly data processing.

For General Public

- Unaware. Suspicious about anything that's free.
- No piracy policy. Tons of Windows computer donated by Microsoft.

For Programmers (or wanna-be)

- (freeness) Reuse a lot to skip coding. Don't respect licenses. Don't advertise it.
- No contribution. Feels disconnected. Contribution requires quality.

For deciders (employers, clients, etc)

- NGOs and Governments (main market) starts to require Open Source.
- Corruption: developers/providers are not based on quality/skills.

Programmer Profile

- Learn by copy, just like carpentry or car car electricity.
- Code monkeys, not hackers.
- Open Source requires skills to overcome freeness.
- Shyness ; lack of ambition.
- Don't believe in open. Knowledge is competing advantage.

Experiments & Findings

All domains: Access to content, content creation, contribution, programming.

Moulin: Creation & Deployment of offline Wikipedia distribution in Mali

- Created in 2006 for offline-yet-connected kiosk and radio stations.
- Realized it was more useful than expected: radio stations organizing polls, learning sessions.
- Tons of computers with no content (thus unused) donated by NGO.
- Distributed hundreds of CDs.
- Expanded to arabic world.

Wikipedia trainings in Mali

- Students & teachers. Great interest, especially local topics & Wiktionary.
- Difficulties with Wiki syntax.
- Only a couple continued: equipments + edit target + difficulties.

Ubuntu LUG in Mali

- Promote Ubuntu to build up skills. Share downloads & tips.
- Few enthusiasts. Lack of leadership.
- Now a monthly discussion group.

La Source: Creation and animation of a Free Software/Content kiosk

- More computers (laptops) than Internet connexion (one time vs periodic cost).
- One in Bamako market, 7 in school labs across Mali, one in France + replicas.
- Good success.
- Income generator.
- Lack of animation.

MVP: Deployment of Ubuntu + Kiwix in hundreds of computers

- Free allows large scale-up.
- Wikipedia is not enough.
- Free games are great.
- Need for a Free Content package: System + Contents + Games + Teacher's manual.

Wikipedia & Wiktionary contributions: Kunnafofi Center

- Thousands of words in French/Bamanakan/Sonay.
- Script to generate PDF from Wiktionary.
- Facebook + downloads is great compensation.
- Difficulties finding what-to-fix.
- Lack of feedback & encouragement. Need for goals.

Open Street Map contributions

- Google Map has no street names.
- Few sessions with Walking papers.
- 120,000m² mapped with street names and some point of interest.
- Motivation is very high to map own neighborhood. Fades outside.
- Encourages tourists to add details.

Afripedia: Creation & Deployment of a Wikipedia HotSpot in Mali University

- Free Wikipedia access to anyone with laptop + WiFi.
- Ability to download Kiwix software + ZIM file.
- Logs web pages access and search requests for analysis.
- Deployment in 20 universities this fall.

Contributions to Free software packages

- Translations on Launchpad.
- Minor fixes to python softwares + mobile operator.
- Mali keyboard.
- **Very** rewarding. Main motivation is pride.
- Hard to find bugs that are easy to fix.
- Ubuntu models makes it difficult to bug fix for non-permanent developers (Versions of software you use are old).

Professional-oriented Approaches

- No hobby programmers.
- IT as a mean to make money. LaSource.

FLOSS Development workshop in Senegal

- 3 days intensive Python/Django training for Programming students.
- Theory unknown ; tied to language or tools. No general ICT mastering.
- Need follow-up exercises and documentation.
- Similar to what Google does.

Year-long FLOSS Development training in Mali

- Students at end of 2 years C.S/Programming school.
- English level very poor. Can't understand error message nor documentation.
- Programing skill = 0. Great opportunity to learn best practice from scratch.
- Good results. Hard to replicate (costly).

FLOSS Development presentation sessions

- Spread Open values in universities and school.
- Shows that school curriculum are outdated, programming not as hard.
- Creates a community, builds reputation and fight shyness.

Running an all-open-source company in Mali

- Government & NGOs love it.
- 100% transparency makes you look good.
- Proof that open is compatible with money.
- Clients trust is very high.

Next? What could we do?

- Dispense a **lot** of outreach presentations at high schools and universities: Existence of free content, Open values, communities, contribution, programming, free softwares, etc.
- Jokkolabs.
- Animate, animate, animate.
- Need for community leaders. Today, they are mostly foreigners.

Access to Information

- Education Bundle:
 - System & Software (Linux, Kiwix, Games)
 - Lot of content in multiple languages.
 - Step-by-step lesson manual for teacher (write).

Improve local contributions

- Organize Trainings days at places with equipments (Wikipedia Campus)
- Reservoir of inactive educated youth ; Contributor algorithm.

Foster Open Source in/& Programming

- Encourage best practices. Success will be replicated.
- French StackOverflow with social/community additions.
- Development Bundle:
 - Development documentation in multiple languages (collect).
 - Exercises & step-by-steps.
 - Resources: references, examples, links.
- Showcase successes.

Enemy of Open Source in (West) Africa?

- Google
- Great products that just works.
- Lots of tools to help developers.
- Use crowd-sourcing for free without freeing data.
- Regular events on Google technologies with Google prices.