

Free Wikipedia WiFi in Bamako

Abstract

We aim to provide a free WiFi access to an offline version of Wikipedia to inhabitants of Bamako, capital of Mali.

Users will thus benefit from this incredible resource and research will provide exclusive information on users' need for information: what they look at and what they are looking for.

While contributing to defeat the digital divide, it will provide incredibly useful data to Education NGO and Wikimedia community at large in order to adapt Global South strategies.

Problem

Mali, a French-speaking land-locked country in West Africa, is significantly under-developed in terms of ICT access. While its neighbor Senegal has eliminated taxes on IT equipments and offers 1Mb/s DSL connections nationwide for about \$10/mo., Mali suffers 52% taxes on electronics, while the cheapest decent connection in Bamako (128kb/s) is \$40/mo. Moreover, with only one public university in Bamako, the number of books and reading materials available is ridiculously small.

Despite those difficulties, we are seeing two promising phenomena¹:

1. Students are eager for information; they read newspapers and watch the news. Books are popular.
2. Netbooks and mobile Internet are booming this year due to cheaper prices and competition.

Due to the lack of knowledge, training and by mimicry, those Internet neophytes are using at most 10 different Internet websites: Facebook, Youtube, Yahoo, Maliweb (local information) and other chat services. Interviewed, most appear unaware of Wikipedia.

In order to encourage the use of the Internet as a learning tool and connectivity platform, it is urgent to advertise the existence of Wikipedia and other knowledgeable resources to those who are driving the Internet evolution in Mali.

Proposed Solution

Wikimedia outreach in West Africa is challenging but worth: our team learnt it the hard way by making an offline version of Wikipedia, creating a USB-distribution kiosk and contributing to the Wiktionary in Songhay and Bamanakan.

We want to provide access to Wikipedia to an increased number of people through the installation of free devices – Plug Computers – all around the city.

The device is a *Plug Computer*, a very small computer (the size of a camera), which is plugged directly into the wall. Its main purpose is home filing and print sharing. Containing a WiFi card and an USB stick slot, it will provide an open WiFi network and will run a version of Linux as well as a modified version of Kiwix².

This way, anybody using a laptop within the range of the WiFi network will see an open network named “Wikipedia” and will be able to connect for free. Once connected, every web request will redirect users to the local replica of Wikipedia. Users will thus be able to perform search and browse Wikipedia at no cost. A Welcome page will explain what it is (and is not) and invite users to provide census information.



¹ Business Models to increase Internet Access in Mali – USAID / J.E Austin / YELEMAN

² Kiwix is an autonomous offline version of Wikipedia running off USB sticks, hard-drives or over a local network. It is supported by the Wikimedia Foundation – <http://kiwix.org>

The content shared : Wikipedia and beyond

An offline version of Wikipedia in French will be the main resource and the trojan. We also want to foster knowledge and usage of local media and local languages. Additionally to Wikipedia, the *plug* will provide access to other resources.

Local Information.

Local information will be provided through a weekly-updated mirror of partner local media web sites: Maliweb, JournalDuMali, Bamakolive, Jeune Afrique, etc.

Additionally, users will be able to publish Twitter-like messages, which will be uploaded on the Internet weekly on a shared account.

French Wiktionary with advanced features.

1. Dictionary-like browsing interface for Mali languages Bamanakan and Songhay.
2. Offline Edit for adding new words, translations and proverbs in those two languages.

More content in the future based on feedback.

The WiFi network will allow us to update the content frequently by going nearby to upload the data. We would download user feedback and Wiktionary edits the same way.

Major updates (new versions of offline WP – at most twice per year) will happen by refreshing the USB stick content.

Methodology

Project duration: From August 15th to November 15th 2011.

1. Develop the software which will run on the device:
 - a. Automatic WiFi network creation and captive portal
 - b. Kiwix web server improvements and monitoring feature.
 - c. Local web sites mirrors & Wiktionary Interface.
 - d. Update system.
2. Acquire the equipments (unavailable on the local market)
3. Deploy 25 equipments, approx. 5 per *Commune* of the City (Bamako is 267km²)
We will ask small businesses (ideally complementary ones like Copy/Print services) or community leaders to host it and give them a small compensation for the price of the electricity needed to keep the *plug* on. Hosting is as difficult as plugging it into a wall plug.
4. Advertise the *service* by distributing flyers and posters.
Contacts have been made to feature the project on the monthly *CyberNTIC* TV show.
5. Let it live for 3 months
6. Gather the monitoring data and analyses usage
WiFi network will allow easy, restricted, download of the statistical data: all requests from the users.
7. Share findings publicly on the Internet.
8. Keep it running for a year.
Depending on finding, we will try to keep it running and update it for a year.

Outcomes

Project outcomes are of two kinds: direct benefits to the target audience and research data which will help other organizations understand the state of IT and information in Bamako.

- (Direct) Estimated 5,000+ people accessing Wikipedia and other content.
- (Direct) Increased awareness of educational resources & local media available online.
- (Direct) Low cost updatable content distribution platform across the city.

- Research:
 - [Opt-in] Survey data of target audience, Willingness to publish original content.
 - Equipment's statistics (# of computers used with localization)
 - Detailed statistics of Wikipedia usage and topics.

Budget

The budget is composed of Programming work (to write the software needed), equipment, deployment work and analysis work.

Item	Unit Price (USD)	Quantity	Total
Programming of the system (days)	\$300	20	\$6,000
Equipments			
<i>Server Plug</i>	\$140	25	\$3,500
<i>USB Stick</i>	\$30	25	\$750
<i>Taxes</i>	\$102	25	\$2,550
<i>Electricity compensation (40KW)</i>	\$12	25	\$300
<i>Shipping</i>	\$1,000	1	\$1,000
<i>Sub total</i>	\$8,100		
Outreach Materials	\$500	1	\$500
Deployment & Supervision (days)	\$150	20	\$3,000
Analysis (days) ** Could be deferred to Internews	\$250	10	\$2,500
			\$20,100

Team

Yeleman s.à.r.l is a private Malian software and IT company based in Bamako. They are experienced in rural IT/radio stations systems and mobile platform development.

Their customers include the USAID, the University of Columbia in NYC and the University of North Carolina Chapel Hill.

The project will be lead and developed by **Renaud Gaudin** and **Ali Touré** who have been involved in ICT4D in Mali for 6 years. They created *moulin* (2007), the first offline Wikipedia in French & Arabic which has been successfully and widely distributed in West & North Africa¹; *La Source* (2008), a software+content distribution kiosk over USB and organized a 4,000+ word contribution to Wiktionary in local languages of Mali (2010).

The pilot will be conducted under the supervision of **Emmanuel Engelhart**, Kiwix's founder to ensure its duplicability and its integration into the Kiwix platform.

Support

The non-profit behind the various Wikimedia projects – the Wikimedia Foundation – has expressed its formal support to this application through its Project Manager Jessie Wild:

“We are in full support of the efforts of Yeleman in seeking to extend the reach of Wikipedia & Wiktionary in Bamako. Such efforts facilitating knowledge-sharing, connectivity, and collaboration are critical for the future development of Mali among other countries, and we are honored to have members of our community dedicated to reaching those who have not yet been touched.”

Yeleman s.à.r.l – Hippodrome, Rue 240 Porte 1068 BPE. 3712 Bamako, Mali
 Renaud Gaudin – (223) 73 12 08 96 – reg@yeleman.com – http://yeleman.com

¹ Renaud and Emmanuel also worked with Internews on Kiwix and distribution of thousands of offline Wikipedia DVDs in Farsi (Iran & Afghanistan), Burmese (Myanmar) and English (Zimbabwe).

