

WSIS Thematic Meeting

*Multi-Stakeholder Partnerships
for Bridging the Digital Divide*

***Actions of BYTC and its
partners in fighting digital
divide in Burundi.***

By

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1. ICTs IN BURUNDI

0. THE COUNTRY IN BRIEF

- 27,000 Km² for 6,000,000 inhabitants
- Enclosed country between Democratic Republic of Congo in West, Tanzania in East and Rwanda in North
- civil war since 1993, but now running elections after global peace accord between belligerents.



a. Telecommunications' infrastructure

- ***Fixed Telephony:*** One operator : National Public company
=ONATEL
 - **Lines are being digitalized**
 - **Only 0.46 % of Burundians own a phone line (2001)**
 - **Total number :42,971**
 - **The cost of one minute for local call is: 20 BIF (\$ 0.020)**
 - **The cost of one minute for interurban call is: 100 BIF (\$0.1)**
 - The cost of one minute for international call is: 1200 BIF (\$1)**

Mobile telephony : 3 mobile telephony operators: TELECEL, AFRICELL and SPACETEL.

- The used system is **GSM 900**
- Most of their subscribers are located in Bujumbura, the capital city of Burundi.
- The total number of mobile connection is about 70,000
- some regions of Burundi uncovered by any mobile phone operator.
- All the three operators are interconnected and connected to the fixed telephony operator (ONATEL)

The Mobile radio network :

- **Mostly used by the Police and the Army but some private corporations and NGOs are using it also**
- **1178 VHF mobile radio, 458 HF radio and 22 relay stations.**

b. Computing

- Introduced in Burundi in 1973 by the creation of the Computing National Centre (CNI)
- Computing got more popularity in 1993 by the venue of international organizations at the beginning of the socio political crisis.
- Creation of some firms operating in computing services : training, selling, applications creation,
- Community centres for computer trainings : Ex. Youth Centre of KAMENGE, BYTC,
- 2001: The first computer science faculty at the private university of NGOZI , followed by others later.

c. Internet

- 1998 : CBINET” the first ISP was set up
- Two other ISPs nowadays : USAN BURUNDI and ONATEL INTERNET SERVICE.
- Themselves are provided by the VSAT system
- Together, they have a bandwidth of 6Mbps in upload and 10 Mbps in download.
- Some International organizations are directly connected to Internet by their own VSAT.
- 2000 Internet subscribers and about 30 cyber cafés. Most of them are located in Bujumbura, some are in other biggest cities (NGOZI, GITEGA, ...

- *Types of connection to Internet services* : Dial Up, Digital lines, and Wireless.
- *The costs* : Internet subscription in Burundi is expensive. The monthly charges are as below :
 - For a bandwidth of 16Kbps: \$ 250
 - For a bandwidth of 32Kbps: \$500
 - For a bandwidth of 64Kbps: \$ 900
 - For a bandwidth of 128Kbps: \$ 1800, ...
- In summary, it costs about \$ 60 to download 1 Go (referring to the study carried by the “Independent Observatory of Internet Offers and Service in Africa : (<http://africa.grenouille.com>)
- In cyber café, the cost is \$1 for 1 hour.

d. Media

- ***Radio diffusion*** : the most popular medium. Many radio stations broadcasting in Kirundi, French and Swahili on FM : National Public Radio, RPA (Radio Publique Africaine), RSF BONESHA FM, RENESSANCE FM, ISANGANIRO, CCIB FM+, Note that ISANGANIRO is also broadcasting online (<http://www.isanganiro.org>)
- Some International Radio are broadcasting on FM in Burundi such as RFI and BBC.

Television:

- Only one TV station that is The National Public Television of Burundi.
- Burundian can access international television via TELEDIS (International televisions distributor installed in Bujumbura).
- We can also access International televisions by using parabolic antennae.

Press Agencies and Newspapers:

- Only one press agency: ABP (National Public Agency).
- There are many public and private newspaper editors (LE RENOUVEAU, UBUMWE, NDONGOZI, NET PRESS, ...)

e. Juridical aspects.

- Telecommunication and ICT are considered as an important domain considering the national security. So there are two control organs:
 - The National Council for the Communication
 - The Burundian Telecommunication Authority. The National Council for the Communication's role is to ensure that the media are diffusing safe content for public security. The Burundian Telecommunication Authority main role is to manage the repartition of frequencies for telecommunication operators.
- No special tax system for telecommunications devices and services. The transaction Tax is as high as 17%. Consequently, the final consumer is to pay too much for ICT services and devices.

2. BYTC PROJECTS.

Project 1 : Internet Access Point for Youth.

BYTC is a youth organisation created in 1998. Our aim was to help the poorest Burundian youth to access job market more easily by providing basic computer trainings at low price. Indeed, the great majority of new job offers are requiring at least text process knowledge on computer although there are no IT courses in our schools.

- The Internet Access Point for youth was opened in early 2003, with the financial support of French Speaking Family Agency : 6 new computers, one colour printer, one black and white laser printer, one scanner, and an internet subscription for a initial period for 24 months.

Objectives/Goals :

- To give a chance of Internet access even to the poorest part of the youths living in Bujumbura (business cyber café are too expensive for them)
- Allow the youth living or studying in the neighbouring quarters to get computer training (Office sotware, web content production, Those services are to be offered at low price in order to allow the poorest youth to benefit them.
- To promote international exchanges between youths so that they can work together and share project and initiatives for development.
- To sensitise the Burundian youth on the importance of ICTs for development

Note that the Access point is daily run by five volunteers member of BYTC without any salary. They are only given transportation fees. The money got from those activities is used to allow the project to go on.



Achievements

The Internet Access Point is well known and frequented by many young persons. First because our services are twice cheaper than in most commercial business centres in Burundi ; secondly because we provide high quality services.

- We daily receive about 120 persons (As they are coming in a big number, some of them even go back without accessing the service.)
- Every year, we are training about 300 young persons to office software.

The greatest problem at our centre is the high cost BYTC must pay for the connection. We are monthly charged \$300 for a bandwidth of 16Kbps. We are also limited because we can't connect more than 10 computers to this bandwidth without lowing the quality of the service.

Project 2 : Independent observatory for Internet offers and Service in Africa

This project is still at its first step of execution. It is to be conducted in : Benin, Burkina, Burundi, Cameroon, Ivory Coast, Guinea, Niger, and Senegal. It got the financial support from the French Fund for ICTs for their first 24 months. This project is expected to be the solution for measuring the real quality of Internet offers in Africa. It's known that they are often expensive in spite of the low quality.

Objectives/Goals

- Fight the invisibility of Internet offers at national levels by creating African ISP's directory.
- Measure the performance of each ISP by using qualitative measurement.

The expected outcomes for the project are :

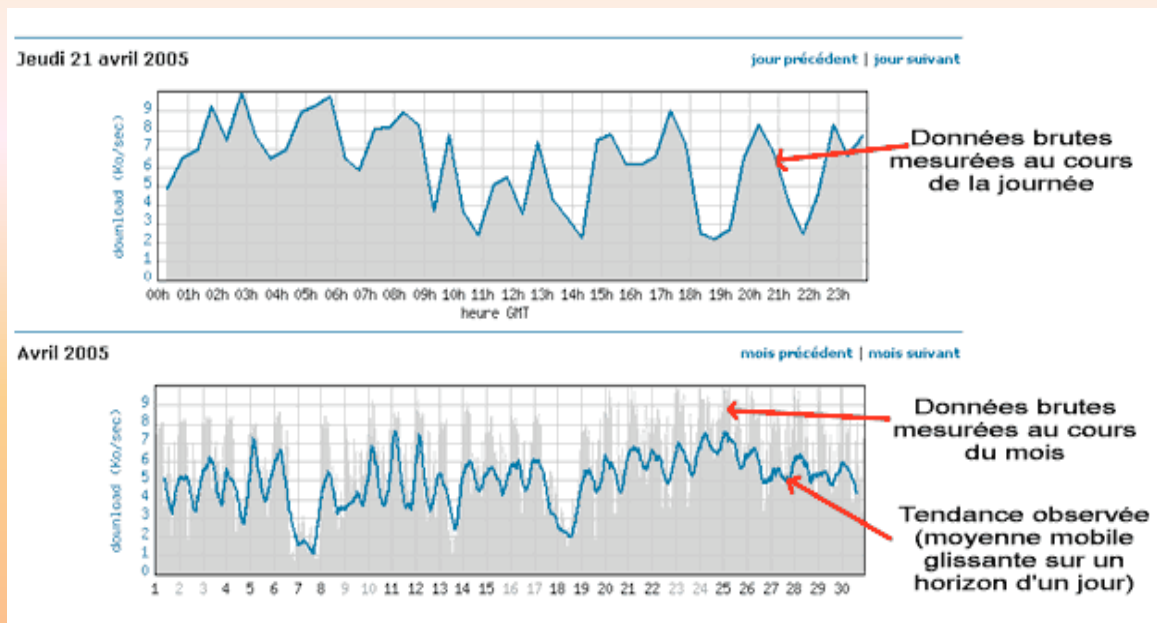
- Allow the end users to choose correctly the best providers.
- For the provider, they will be receiving feedback from their customers about the quality of their services
- Raise up the quality of inter African connectivity.

How this project is going to work ?

Creation of an online directory of ISP. This is already achieved.

Meanwhile, AFRICACOMPUTING, GRENOUILLE TEAM from FRANCE developed a measurement tool allowing every user to know exactly the quality of the connection he received.

This tool is a piece of software, which provides continuously graphics showing the client's bandwidth at download, at upload and the ping time daily and monthly.



PROJECT PARTNERS

AFRICACOMPUTING : France

GRENOUILLE TEAM : France

LINUX CENTER, OPEN AND FREE SOFTWARE (C3LD),

CHEIK ANTA DIOP UNIVESITY : Senegal

NTBF : Burkina Faso

JEDD : Niger

LINUX AFRICA (LINA): Ivory Coast

LAF: Guinea Conakry

Cyber centers association of Cameroon : Cameroon

Project 3 : Computing caravan for secondary schools in Burundi.

That project is not yet begun. BYTC volunteers plan to bring successively ten computers in different rural schools in Burundi, where we shall be initiating students and teachers to the use of computers. For each chosen school, the trainings will take a period of 4 weeks. After the training session, we hope provide each visited school with 10 computers so that the trainee extend their skills to other. In order to sensitise the teachers and student on the importance of digital media in improving the quality of education, BYTC team will have created an interactive CDs for some courses traditionally provided in those schools. Those CDs shall be duplicated and given to the school staff.

3. OUR PARTNERS.

AFRICACOMPUTING

This organisation is located in Marseille (France)

- First contact : in 2001 through e.mail exchange. (we got many technical IT skills that allowed us to improve the quality of the trainings provided by the volunteers of BYTC)
- In 2002, AFRICACOMPUTING helped us to refine our project of Internet Access Point for Youth before submission at the French Institute of ICT.
- In July 2004, BYTC, AFRICACOMPUTING and the French Agency for Universities ran a training session of two weeks in Bujumbura on web content publication and computer repairing and network.
- AFRICACOMPUTING collected and brought second hand computers and laptops to BYTC. This was done in order to extend the Internet Access Point.(<http://www.africacomputing.org>)

FRENCH INSTITUTE OF ICT

It is an international organisation based in Bordeaux (FRANCE). Thanks to its financial support, BYTC set up the Internet Access Point for Youth in 2003 as described above.

FRENCH FOUND FOR ICT

Thanks to its financial support, the Independent Observatory of Internet Service and Offers in Africa was launched in 2004.

The GRENOUILLE TEAM

Based in France, They provided technical support to the Independent observatory for Internet offers and Service in Africa by developing the software used for connection test. They also provided the test server.

(<http://www.grenouille.com>)

WEBVOLCANS:

An organisation located in Auvergne (FRANCE). By the partnership with WEBVOLCAN, BYTC got 10 second hand computers in January 2005. Those computers shall be used to start a project named “Computer training caravan in secondary schools of Burundi”. (<http://www.webvolcans.fr>)

Other potential partners

- World Computer Exchange that is based in USA
- E. ICT based in RWANDA
- COMPUTER AID INTERNATIONAL based in London U.K

**4. SOME ISSUES RELATING
TO THE USE OF MSP IN
BRIDGING THE DIGITAL
DIVIDE**

Our partnership for achieving those actions sometimes encountered some problems:

1. Our partners can easily collect second hand computers, but the great bottle neck is shipping them to us. The transportation fees are too high for little organisations. We sometimes are obliged to contact private persons travelling from Europe to help us by transporting one or two computers.
2. We are obliged to pay high Transaction Taxes like commercial organisations.

As a matter of fact, setting up really relevant projects for closing the digital gap needs permanent exchanges between all the partners. For example, BYTC is gaining continuously more technical skills in ICT domain, while our partners are getting more knowledge about the real problems of ICTs in Burundi and in Africa in general.

**5. THE NECESSITY OF
EXTENDING SUCH
PROJECTS IN OTHER
AREAS.**

If we consider the popularity of “Internet Access Point for Youth” at BYTC, we can plead for the multiplications of such centres in all cities of Burundi. This because we saw that the youths are very interested by ICTs but are unable to afford the commercial training centres. For the Observatory of Internet offers and service in Africa, we are sure that it will improve the quality of Internet service in Africa. Regarding the impact of such a project driven in France before the venue of high speed Internet service (www.grenouille.com), we hope that Internet providers in concerned countries are going to improve the quality of their service. No doubt that its extension into other African countries shall have similar results. Finally, just by speaking about the project of Computing Caravan in school with headmasters and even with the students, everyone wants us to begin quickly by his school. Indeed, computer training in formal public schools is inexistent.

6. CONCLUSIONS

In this presentation, I described the situation of ICTs in Burundi. Those ICTs are expensive for the end user in spite of their bad quality.

After that, described projects aiming to close the digital divide in which BYTC is involved.

All those projects are involving different kinds of partners. Some are providing finance, others are providing technical support, and other are directly acting on the local areas.

Those from the haves and those from have-not of the information society. Achieving the end of digital divide must be considered as common fight for everybody.