

Open Source Project Ethiopia

February 2004

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1. Summary

Information Technology is currently a major concern of developing countries. It is vital for development and offers big chances since it does not much depend on proximity to classical production places.

It is no surprise that a recent development is attracting much interest, especially in developing countries: that of open source software, and the Linux operating system in particular.

We want to set up a project that may support Ethiopian people to connect to these new possibilities and to make use of them in a sustainable way.

Our project aims are:

- provide technological infrastructure (i.e. computers and related equipment)
- provide knowledge on open source technologies
- initiate a project that may work as a blueprint for similar future projects in Ethiopia or other African countries.
- understand and gather knowledge on culture specific usage of technology

2. Background: Open Source

The Linux operating system, as well as other so called "Open Source" software applications, assures that all users may copy and/or modify the software, and that the source code, the nuts and bolts of the software, are publicly available. This, in turn, means that people can legally acquire a copy of the software for free, copy it themselves or install it on multiple machines and make changes to either suit their needs or fix bugs.

As opposed to proprietary software, the code of open-source software and operating systems is generally available and can be modified and enriched by practically any user. The open-source movement has been growing over time, the number of people using and contributing to the movement has increased to a significant level, and an expanding number of enterprises and administrations are implementing the software and operating system.

While the initial interest in open source to developing countries may stem from its lower cost, they also should be aware of the longer term benefit of increased choice to consumers, as the emergence of open source creates more information technology options.



Working with open source is empowering. It builds skills, is more affordable than private commercial software packages and programs, and it encourages innovation at the local level.

The main advantages of Open Source Software for developing countries:

Low Cost:

Open Source Software saves financial means because it can extend the lifespan of computer hardware without compromising on functionality. Even complex applications do not rely on expensive modern hardware, but are able to run on 5 - 10 year old computers.

Besides hardware, also no financial investments are necessary for providing and developing software, as most Open Source Software is available for free. This is true not only for the running application, but also for the underlying source code, which can be modified, adapted and enhanced by everybody capable of programming.

Last but not least, Open Source Software reduces costs arising from software licenses. It comes under the GNU Public License (GPL, <http://www.gnu.org/copyleft/gpl.html>), which imposes no fee to the licensee, as proprietary licenses do.

Adaptability to personal/cultural needs, localization, translation:

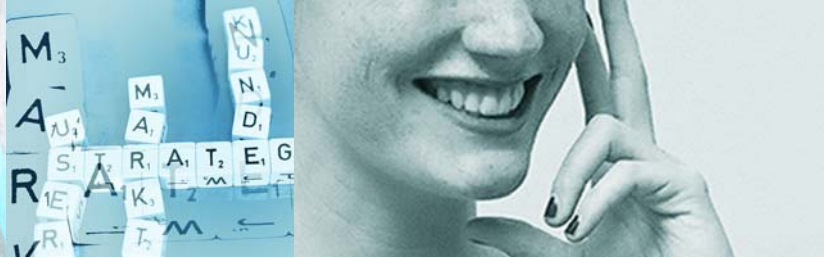
Most computer users in Ethiopia today know English, and their machines use this language. However, if basic software were available in local languages (e.g. amharic) more people would be given the chance to use computers even without English language skills.

Open Source Software can easily be adapted to address localization and translation issues.

Autonomy:

The very nature of Open Source lends itself to providing an information technology environment premised on local autonomy and ownership, while introducing more flexibility and independence to the software development process.

It brings a significant change in the technological relationship between the North and the South as it reduces dependency on technical expertise from North. Thus it should be possible to bridge the digital gap by building local competence, to empower local organisations and stakeholders to make effective use of technologies on their own terms and plant the seed for an autonomous community.



There are many examples of the advantages of Open Source Projects to developing countries:

- India: The Simputer Project
- Namibia: SchoolNet
- Uganda: Translation Project Luganda, Replacement of Proprietary Software at Uganda Martyrs University
- Brazil: Government policies favouring or mandating the use of Open Source software
- South Africa: Government policies favouring or mandating the use of Open Source software
- China: Red Flag Linux

3. Culture Specific Technology Usage and Interface Design

In addition to providing technical infrastructure and to help in establishing computer knowledge, we have a strong interest in understanding human-computer interaction in different cultural settings. The computer's user interface enables the user to communicate with the underlying technology, or simply spoken: to use it. The more usable the interface (i.e. the more it fits to the user's needs, competence and expectations), the easier the using and learning of the software. Thus, by investigating and understanding how people use computers we develop strategies for making computers easier to use and for making them more suitable for individual and cultural circumstances. Take e.g. computer metaphors like "Desktop", "Folder", "Menu". Are these metaphors cross-culturally recognizable? How do Ethiopians of different educational background make sense of them? Could or should these metaphors and correspondingly the computer interfaces be adapted to local needs - as to enable people new to these technologies in a much more natural way? If so, how can this be achieved?

These are questions we would like to address in the course of our project.

Furthermore, we want to evaluate Open Source Software and its aforementioned adaptability regarding these issues.

4. Project Phases

a) Evaluation Phase

- Check out current status of ICT (Information and Communication Technology) in Ethiopia (Addis Ababa) regarding hardware, software, networking and knowledge.
- Identify, contact and interview prospective local project participants and supporters.



- Develop a specific concept fitting the local needs and the overall project rationale.
- Understand the relevance of technology in Ethiopia, inquire on special needs regarding the cultural and economic circumstances/background.

b) Project Funding Phase

- Infrastructure (10-15 computer systems), Shipping
→ Technology partners in Germany (e.g. IBM, Sun, HP, Siemens, Novell)
- Basic financial means for the project realisation
→ Academic sponsoring, government, foundations...
- Rooms, Equipment, ...
→ Local Supporters (e.g. University of Addis Ababa)
- Intellectual Support/Funding
→ Open Source Community, International Networking

c) Project Rollout Phase

Based on the first two phases, we are planning to spend two to three months in Addis Ababa/Ethiopia. The aim of our stay will be to lay the foundations of an Open Source project and to enable local participants to run the project on their own afterwards. Possible project ideas:

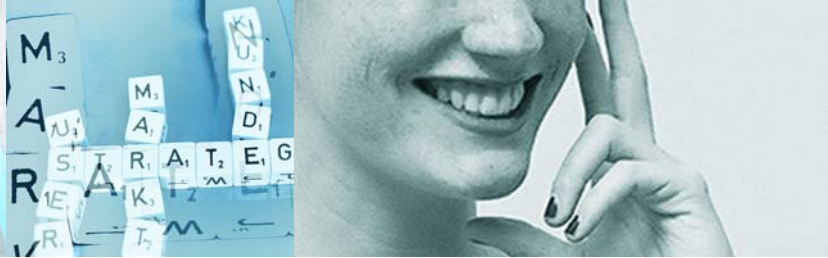
- provide computer infrastructure to schools
- special computer courses for women
- establish a Linux User Group Ethiopia
- support the University of Addis Ababa with infrastructure/know-how
- give talks to local businesses on Open Source
- establish an Amharic Translation Project for Open Source Software
- establish an Open Source Information Center for pooling resources

d) Project Documentation Phase

- Documentation and generalization of the project's findings to further use worldwide
- Catalyse lessons learning and knowledge sharing on ICTs by local organisations and the international community



relevantive
user experience architecture



5. About relevantive AG

relevantive AG is an internationally renowned Usability/User Experience Architecture consultancy firm based in Berlin, Germany.

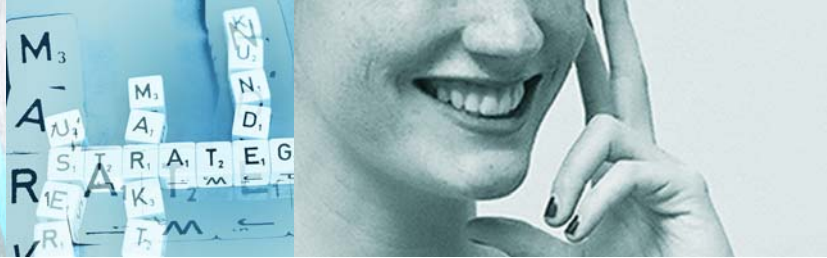
relevantive supports clients in the conception, evaluation, improvement and deployment of user interfaces. The company published the internationally acclaimed Linux Usability Study (www.relevantive.de/Linux-Usabilitystudy_e.html).

Jan Muehlig is CEO and Co-Founder of the relevantive AG. His focus is on usability projects, and research on the integration of usability into the development process, especially of Open Source projects.

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Jutta Horstmann is IT expert and technical consultant to relevantive AG.

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6. References

Open Source and Developing Countries

Paul Dravis: Open Source Software Perspectives for Development

<http://www.infodev.org/symp2003/publications/OpenSourceSoftware.pdf>

International Institute for Communication and Development (IICD)

<http://www.iicd.org/about/>

Examples for Open Source Projects worldwide

The Simputer Project (India)

<http://www.simputer.org/>

Linux spreading rapidly in Latin America

<http://www.itworld.com/Comp/2362/LWD010424latinlinux/>

Guyana Linux Users Group: Open source, Linux and their importance for developing countries: a very brief introduction

<http://www.sdn.org.gy/whyopen.html>

Red Flag Linux (China)

<http://www.redflag-linux.com/eindex.html>

Brazil's Telecenters (Sao Paulo)

<http://www.telecentros.sp.gov.br/english/index.php>

Open Source in Africa

Free Software and Open Source Foundation for Africa

<http://www.fossfa.org/>

<http://osfa.allafrica.com/>

SchoolNet Namibia

<http://www.schoolnet.na/>

Women of Uganda Network

<http://www.wougnet.org/>

Open Source Initiatives in Uganda

<http://www.wougnet.org/ICTpolicy/ug/fosiug.html>

Translation Project Luganda

http://www.kizito.uklinux.net/en_index.html

Africa ICT Policy Monitor

<http://africa.rights.apc.org/?-1-%27Open+Source%27>

Open source to leapfrog the digital divide in Tanzania

http://www.developmentgateway.org/node/285491/news/item?item_id=761336

Victor van Rijswoud (Uganda Martyrs University): Open Source Software - The Alternative for Africa

<http://www.wougnet.org/ICTpolicy/docs/oss+in+africa.pdf>