



# Information Technology and Development - Connecting Ethiopia to the Internet Age by Free and Open Source Software



## In this presentation, you will learn ...

- what Open Source / Linux is
- what the advantages over commercial software are
- what Open Source Programs look like
- why Open Source / Linux is a big chance for Ethiopia
- where you can get Linux, more resources and further information.



## Introduction

- About us: German Company relevantive AG specialized in making software more usable for non-technical users
- What we do: Consulting German administrations and companies in migrating from Windows to Linux
- Why are we here: Promoting the opportunities of Linux and Open Source Software for Ethiopia



## What is Linux?

- Operating System
- Server Applications (Web, Mail, File, SSH, FTP, Databases...)
- Development Tools (IDEs, Compilers, Interpreters...)
- Server Applications (Web, Mail, File, SSH, FTP, Databases...)
- Desktop Applications (Office, Mailclient, Webbrowser, Multimedia, Personal Information Management...)
- Free Software
- Open Source Software



## What is Open Source Software?

- Software is made of code (the source code)
- Code may be closed (as in proprietary software like Microsoft Windows)
- Open Source Software: Everybody can read the code, copy the code, change the code, adapt it to one's needs (if one is able of programming)



## What is Free Software?

- Free of Cost
- Nobody „owns“ it
- Free to copy and distribute



## Why is proprietary software closed?

- Companies invest money in programmers to produce software
- Companies want to sell their software products
- Companies do not want others to know about business secrets in the code



## Why is Open Source Software open?

- Programmers
  - Learn about good programming from each other by looking into the code
  - Join a large international community that contributes to their software
  - Gain knowledge and tools in sharing them with others
- Security holes get fixed very fast because everybody can check the code for exploits
- Very fast development





## The GNU Public License (GPL)

- Assures that Open Source Software stays open
- You may sell Open Source Software, but there always has to be a free copy of its code on the internet



## You are already using Linux / Open Source!

- The Internet: More than 60% of all Webservers are powered by Linux and the Apache Webserver
- addistribune.com and ethiopiaonline.net are running on Linux and Apache Webservers
- Google Search Engine: powered by a cluster of more than 10,000 Linux machines
- Yahoo is running on FreeBSD-Servers (another Open Source Operating System)
- More than 70% of all mails worldwide are sent by the Open Source mailserver software „Sendmail“

## Where does Linux come from?

- 1991: the Finnish student Linus Torvalds wants to learn something about operating systems
- As he cannot learn from the UNIX sources (since they are closed), he starts writing his own operating system
- He announces this on an Internet newsgroup and invites people to join his efforts



## Where is Linux / Open Source today?

- Worldwide developer community of more than 15.000 people
- More than 6.000 applications available
- Available in about 100 languages
- Used in business critical contexts
- Used in embeded devices, as digital VCRs, mobile phones, ...



## Why are developers doing this?

- Programming for free in their spare time: Because they are interested in good software, they can learn from each other.
- They gain reputation in the open source community by developing good code and innovative software



## Why are companies doing this?

- Paying programmers to develop open source software (which they have to give away for free):
- They get the power of the whole community
- They get very good, motivated developers
- „open-sourcing“ their already developed software (SUN: Open Office, AOL: Mozilla)
- They gain market shares by giving their software for free
- They get new innovations from the community



## Who is using Open Source Software?

- Companies: UniLever, IBM, DaimlerChrysler, McDonalds, ...
- Countries: Germany, Brazil, China, Japan, India, France, ...
- Open Source Projects in Africa:
  - SchoolNet Namibia
  - Luganda Translation Project
  - Women of Uganda Network
  - South African Linux Distribution (impi)



## How to make money with Linux

- As the software is free, there is no point in selling it
- Distributions (Red Hat, SuSE, Mandrake...): packaging thousands of Open Source applications on CDs or DVDs, selling them with manuals and support
- Hardware Vendors and System Integrators (IBM, SUN, HP...): gaining market shares from Microsoft by selling their products on a Linux platform
- Support companies: Selling Services around Linux: Administrating, adapting and configuring systems, teaching users






## What are the advantages for Ethiopia?

- Free of cost
- Reuse of older hardware possible
- Localization, Translation, Adaption
- Knowledge stays inside the country
- Security



## Why is Linux more secure?

- **Advanced Multi-User System:** nobody can execute programs with administrator rights
- **Nothing is executed automatically,** the user is always asked
- **The applications inform the user about possible security risks of his/her actions**
- **Open source code:** everybody can identify security risks by looking inside the code – and lots of people do this, and also fix the security holes!



Thank you for your  
attention!