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# Introduction to Open Source Software:

How it Works, Why it's Free,  
and How it Might Fit the Needs of Nonprofits

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# Introduction to Open Source Software

## **I. Definition, Philosophy and Evangelism**

- a. What is open source?
- b. Examples of available products
- c. Developing custom open source applications

## **II. Evaluation and Pragmatism**

- a. Benefits of open source
- b. Problems and obstacles to open source
- c. The current status and trends in open source

## **III. Discussion and Q & A (and Open Source Cafe)**

# What is Open Source?

**It's free software!**

**...but what is “free”?**

# What is Free?

- Free as in beer (\$)
- Free as in freedom (gnu.org):
  - Freedom to modify, fix, and redistribute
  - Freedom from corporate control
  - Freedom of expression
  - Plus freedom to integrate, freedom from ads, freedom from vendor lock-in...

**Not all open source software is cost-free, and not all cost-free software is open source.**

# Definition of Open Source

- Technical definition:
  - Source code is available to users
- Functional definition:
  - Usually free (\$) or cheap to acquire and use
  - Primarily developed by volunteers
  - Anyone can modify and customize
  - Users have direct input into development
- License is **much** more fun to read...

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# Examples

Some familiar, some widely used, some recently emerging:

- *Operating systems:* Linux, (Mac OS X)\*
- *Web & email servers:* Apache and Sendmail/Postfix/Qmail
- *Web & db languages:* PHP/Perl and MySQL/PostgreSQL
- *Web content management:* Drupal, Plone, Bricolage
- *Virus & spam protection:* ClamAV, SpamAssassin
- *Desktop apps:* Open Office, Mozilla, gAIM, (eBase)\*\*
- *Security:* GPG

\* OS X is built on open source BSD, but is proprietary and closed

\*\* eBase is open source, but is built on proprietary and closed FileMaker Pro

# Developing Open Source

## Developing open source software can mean:

- Basing it on open source technologies and open standards
- Building on existing open source project(s)
- Open-sourcing your project
- Working collaboratively with other groups

All elements need not be present, but the greatest benefit is derived when they are.

# Why Open Source?

- Why would someone give away valuable software?
- Why would someone work without pay?
- Why would you pick this software?

# Motivation for Developers

## Why give it away?

- Benefit from the previous work of others
- Better software, when others can fix it
- Many hands make light work

## Why work for free?

- The good feelings from any volunteerism
- Respect, fame, pride in one's creation
- Actually, not everyone works for free

# The Practical Appeal

Open source has practical benefits for all:

- “Better”: More stable, secure, interoperable
- *You* can make a difference
- Little or no licensing cost, upgrade costs
- Good community support, direct line to developers
- Lower system requirements
- Freedom to change your mind

# The Philosophical Appeal

Open Source also has particular appeal for the nonprofit and public sectors:

- Mission-driven, not profit-driven
- It's about Family Values
- Of, By and For the People
- Public monies = public resource
- Support local economy

# The Downsides

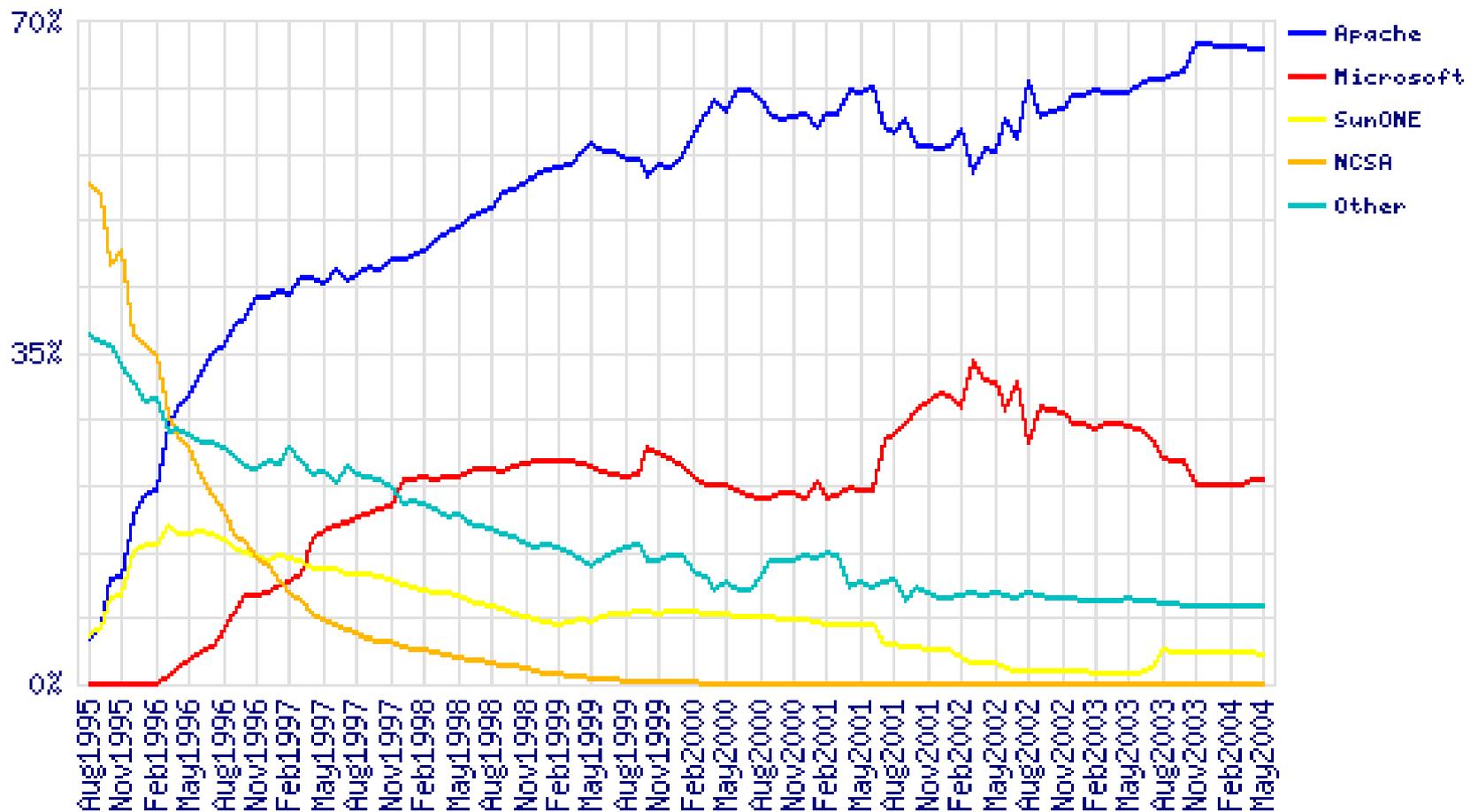
There are problems with going Open Source:

- Rough user interfaces, documentation
- Compatibility: It's hard being different
- Transition requires work/time/energy/money
- Support: Where does the buck stop?
- Bill Gates says: Open Source software will destroy your emerging capitalist economy.

# Progress of Open Source

- Dominant in its traditional realm of Internet services (see Web server stats)
- Growing as a LAN server
- Moving towards the desktop
  - Eg. Xandros desktop Linux (xandros.org) with Crossover Office to run Windows applications
  - Open source is not “all or nothing”, and migration for most users is gradual

# Web Server Usage



Source: Netcraft.com automated survey of live Web hosts

# A Few Open Source Projects

## Linux Terminal Server Project ([ltsp.org](http://ltsp.org))

- Continue using or recycle obsolete hardware (save \$\$\$)

## OpenGroupware ([opengroupware.org](http://opengroupware.org))

- Eventual MS Exchange-killer?

## Jhai Foundation ([jhaifoundation.org](http://jhaifoundation.org))

- Wireless footcrank-powered solid-state Linux computers, bringing telephony and Internet to rural Laos

# Current Sector Trends

## Government mandates:

- Massachusetts: Enterprise Open Standards and Open Source Policy (<http://tinyurl.com/33u5q>)

“The state isn't looking to shake up its entire enterprise infrastructure, but to approach IT more logically.”

- Many national governments, in developed and developing world (<http://ltsp.org/OpenSourceSoftware.pdf>)

## Nonprofit sector initiatives:

- Nonprofit Open Source Initiative (NOSI.net)
- Aspiration ([aspirationtech.org](http://aspirationtech.org))

# References

- Free Software Foundation: [gnu.org](http://gnu.org)
- Xandros desktop Linux: [xandros.org](http://xandros.org)
- Linux Terminal Server Project: [ltsp.org](http://ltsp.org)
- Jhai Foundation: [jhaifoundation.org](http://jhaifoundation.org)
- Nonprofit Open Source Initiative, with Primer for nonprofits: [NOSI.net](http://NOSI.net)
- Aspiration software incubation: [aspirationtech.org](http://aspirationtech.org)
- “Open Source Software: Perspectives for Development”:  
[ltsp.org/OpenSourceSoftware.pdf](http://ltsp.org/OpenSourceSoftware.pdf)
- “The Open Road: Massachusetts drafts a statewide policy...”:  
[govtech.net/magazine/story.print.php?id=87471](http://govtech.net/magazine/story.print.php?id=87471)
- Tech Underground consultants: [techunderground.org](http://techunderground.org)
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