



# Free and Open Source Software

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# Free and Open Source Software

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- FOSS is Here to Stay...Ummm....What is it?
- How Does FOSS Work?
- Using FOSS Concepts Outside of Source Code
- Benefits For You...Benefits For NC State University
- NC State University Embraces FOSS
  - OIT Open Source Initiative

# What is FOSS?

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- Free and Open Source Software is software which is liberally licensed to grant the right of users to study, change, and improve its design through the availability of its source code.
- You may see FOSS written as:
  - F/OSS
  - FLOSS – Free-Libre Open / Source Software
  - OSS/FS
  - Libre Software
- FOSS brings together the Free Software and Open Source communities that have slightly differing cultures and philosophies.
  - FS: Focus on Freedom
  - OSS: Focus on Development Model
- All made popular by the emergence of many Linux distributions.

# Definitions in the FOSS Communities

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- Free Software movement has the Free Software Definition.
- Open Source Software movement uses the Open Source Definition as published by the Open Source Initiative(tm).
- In general FOSS licenses grant permission to:
  - Run the program(s) for any purpose
  - Study and modify
  - Freely redistribute original source
  - Modify and release your modifications to the public

# Copyright and Licenses

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- FOSS is based on Copyright and Licensing.
- You, or your business, owns your code.
  - This presentation is (C) Copyright 2008 NC State University
- Code is released under a specific license(s) that grant others explicit permissions regarding your code.
  - Parts of this presentation are licensed under the GNU General Public License 2.0 or, at your option, any later version.
- Recommended Licenses:
  - GNU GPL 2+
  - GNU Lesser GPL 2+
  - BSD Style Licenses: MIT

# FOSS Communities

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- What do you use that is FOSS?
  - Firefox / Thunderbird / Mozilla
  - Apache
  - OpenOffice
  - Linux distribution of choice
  - Pidgin
  - Audacity
  - Firezilla
  - Blender
  - TrueCrypt

# Books, Presentations, Images...Oh My!

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- FOSS Concepts
  - Sharing of Ideas
  - Collaboration in a World Wide Community
  - Open Standards
  - Choice
- Apply to Books, Movies, Images, Scientific Papers, and Other Media Formats
  - Creative Commons
  - [creativecommons.org](http://creativecommons.org)

# FOSS Benefits

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- Software Quality
- Security and Code Auditing
- Scalability
- Innovation
- Communication and Community
- Costs
  - Software
  - Vendor Support
  - Development Time
- Users, Programmers, SysAdmins All Participate in Development Model

# FOSS Inside OIT

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- Many Services Based on FOSS:

- Web / PHP Services
- OIT Outreach Web Services
- Cyrus IMAP, Sendmail
- LDAP/Hesiod Name Services
- DNS, DHCP
- MySQL
- Printing
- Realm Linux
- Web-Kickstart
- OpenAFS
- PuTTY

- Subversion, CVS, Mercurial
- Mailing Lists (MJ2)
- RHN Satellite (Space Walk)
- Nagios, Cacti, Monitoring Tools
- LVS/Keepalived Load Balancers
- Xen Virtualization
- PXE Boot Services
- Shibboleth
- Kerberos
- Webmail (Squirrel Mail)
- Argus, Wireshark
- Drupal

# OIT Open Source Initiative

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- Support and Promote NCSU's Local FOSS Community
- Promote NCSU as an Open Source University
  - Work With Red Hat
  - Attract the Best Students, Staff, and Faculty
- Offer Tools
  - Email Forum
  - Version Control Systems (SVN, HG)
  - Email Lists
  - Wiki Space
- [opensource.ncsu.edu](http://opensource.ncsu.edu)

# OIT FOSS Plans

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- Offer More Software Engineering Tools (ie: Trac)
- FOSS Fair
  - In Cooperation with Red Hat, CSC
  - Allow NCSU Community To Show FOSS Projects
  - Informal Breakout Sessions Lead By Community Members
  - Speakers from Red Hat
  - Encourage Community Building, Collaboration
  - Early February

# References, Attributions

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- Wikipedia
  - FOSS
  - Free Software
  - Open Source
- David A. Wheeler (Including TCO Analysis)
  - [http://www.dwheeler.com/oss\\_fs\\_why.html](http://www.dwheeler.com/oss_fs_why.html)
  - <http://www.dwheeler.com/numbers/>
- Brad Fitzpatrick
  - <http://brad.livejournal.com/2164124.html>
- <http://opensource.ncsu.edu>
- <http://creativecommons.org>

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