

Introduktion till FOSS

N. Stenberg

11 april 2018

Free and Open Source Software – FOSS

eller

Free, Libre and Open Source Software – **FLOSS**

“Fri programvara” handlar om frihet, inte pris. För att förstå begreppet, tänk “fri” som i “yttrandefrihet”, inte som i “kostnadsfri/gratis”.

De fyra friheterna

- [frihet 0] Friheten att köra programmet som du önskar, för ett godtyckligt syfte.
- [frihet 1] Friheten att studera hur programmet fungerar och att anpassa det för sina behov. Tillgång till källkoden är ett villkor för detta.
- [frihet 2] Friheten att vidaredistribuera kopior så att användaren kan hjälpa sin nästa.
- [frihet 3] Friheten att förbättra programmet och att ge sina förbättringar till allmänheten så att hela samhället drar nytta. Tillgång till källkoden är ett villkor för detta.

Märk : Inget säger att man inte får tjäna pengar!

Starten: MIT Media Lab



Historia

- [-70th] Source code common way of distribution
- [70-80] Binärer började skickas ut
- [1983] IBM - Object code only
- [1983] Richard Stallman(RMS) : The GNU project
- [1984] GNU Operating System
- [1985] Free Software Foundation FSF och the GNU Manifesto
- [1991] The Linux kernel
- [1998] Open Source Initiative (OSI) was formed
- [2013] Ubuntu Marks 'Bug No. 1' As Fixed. **Bug no. 1:** "Microsoft has a majority market share."
- [2017] FOSS användning uppskattat till 94%

The Open Source Definition (by OSI)

- 1 Free Redistribution
- 2 Source Code
- 3 Derived Works
- 4 Integrity of The Author's Source Code
- 5 No Discrimination Against Persons or Groups
- 6 No Discrimination Against Fields of Endeavor
- 7 Distribution of License
- 8 License Must Not Be Specific to a Product
- 9 License Must Not Restrict Other Software
- 10 License Must Be Technology-Neutral

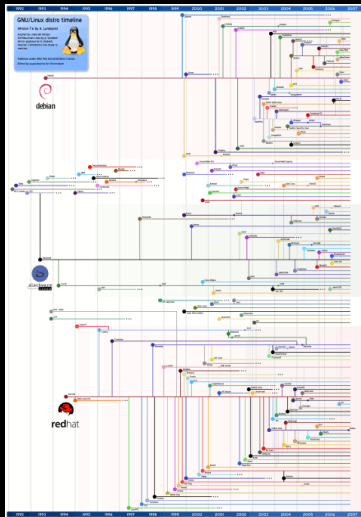
FOSS diskuteras flitigt!

FRI eller ÖPPEN mjukvara?

FOSS är VÄLDIGT vanligt!

- Apache web server
- Content Managment Systems (tex swereas hemsida)
- I princip allt inom Molntjänster
- Nästan all IoT-devices
- Linux (Vanligaste OS-kärnan)
- .NET
- Firefox
- VLC
- MySQL
- MediaWiki (Wikipedia, virtwiki)
- Android

Linux är ett FOSS-projekt och har hållt på ett tag



Vad gör en programvara fritt?

Licensen!

- GNU
 - GPL v2, v3
 - LGPL
- MIT
- BSD
- Apache
- Python
- CC
- Ettiotal andra



Licensen säger hur du får använda programmet

FOSS licenser finns i två typer

- Copyleft
 - typiskt GPL...
- eller
- “Gör vad du vill med texten”
 - typiskt MIT och BSD



utdrag ur EULA : WINDOWS OPERATING SYSTEM July 2017

Restrictions. The manufacturer or installer and Microsoft reserve all rights (such as rights under intellectual property laws) not expressly granted in this agreement. For example, this license does not give you any right to, and you may not:

- 1 use or virtualize features of the software separately;
- 2 publish, copy (other than the permitted backup copy), rent, lease, or lend the software;
- 3 transfer the software (except as permitted by this agreement);
- 4 work around any technical restrictions or limitations in the software;
- 5 use the software as server software, for commercial hosting, make the software available for simultaneous use by multiple users over a network, install the software on a server and allow users to access it remotely, or install the software on a device for use only by remote users;
- 6 reverse engineer, decompile, or disassemble the software, or attempt to do so, except and only to the extent that the foregoing restriction is (a) permitted by applicable law; (b) permitted by licensing terms governing the use of open-source components that may be included with the software; or (c) required to debug changes to any libraries licensed under the GNU Lesser General Public License which are included with and linked to by the software; and
- 7 when using Internet-based features you may not use those features in any way that could interfere with anyone else's use of them, or to try to gain access to or use any service, data, account, or network, in an unauthorized manner.

Utdrag ur GPLv3

2 Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright.

Skillnad GPL och LGPL

GPL

Programmet som byggs med GPL-kod förblir GPL-licensierat

LGPL (Lesser GPL)

Programmet som byggs med LGPL-kod behöver inte vara FOSS. LGPL-koden i sig är dock alltid LGPL.

Samma program kan ha flera licenser

Exempel: **PyQt**

- Normalt **GPLv3**
 - Fritt, öppet, Behöver ej betala något
 - Används för att skapa GPLv3-icensierade program, som *FAME*
- Kan köpa kommersiell licens
 - kostar approx 300 Euro för ett år och en utvecklare
 - Utvecklarlicens ger **LGPL**
 - Kan då skapa slutna program

FOSS som kan vara användbara:

- Octave
- Libre Office
- Python
- GIMP
- Blender
- . . .

Annan viktig FOSS programvara

- gcc
- gfortran
- och väldigt många andra kompilatorer
- GTK, Tk, Qt, ...



Image by Jurgen Appelo -
www.noop.nl

Vi använder mycket FOSS

Denna presentation t.ex. är skapad med FOSS

- emacs
- markdown
- pandoc
- latex/beamer

Swerea KIMAB har utvecklat FOSS

<https://github.com/swerea>

- FAME (GPLv3)
 - använder:
 - CalculiX (GPLv2)
 - PyQt (GPLv3)
 - python3 (python lic)
 - stl-to-voxel (MIT lic)
- SPHgen (GPLv3)
 - använder:
 - python3 (python lic)
 - stl-to-voxel (MIT lic)

Arbete pågår att stärka öppenheten

T.ex:

Red Hat Press release March 19, 2018:

CA Technologies, Cisco, HPE, Microsoft, SAP, and SUSE commit to providing a cure period for correcting license compliance issues in GPLv2 software

Finns konferenser

- Varje större projekt har “sin” konferens
- Universella konferenser:
 - FOSDEM
 - Libre Planet
 - ...

Föredalar med FOSS

- Användning utan förbehåll
 - Installera, kör, använd alla CPUer du har
- Ofta användarutvecklat
 - Snabbt, direkt, enkelt
- Får använda som bas för egna program
 - Snabbare utveckling
- Får skriva om efter eget huvud.
 - Kustomisering
- Ingen försöker aktivt hindra dig

Varför är FOSS SÅ populärt som det är?

- Frihet
- Kontroll
- Kostnad
- “Community”

Varför är FOSS SÅ populärt som det är?

Jim Whitehurst, CEO Red Hat:

"About five or six years ago, something changed. Large corporations, including Google and Facebook, started open sourcing their own projects because they didn't look at some of the infrastructure technologies they opened up as competitive advantages. Instead, having them out in the open allowed them to profit from the ecosystems that formed around that."

Vad är FOSS community?

- **Personerna som hjälper utvecklingen**

- Programmerare
- Dokumentatörer

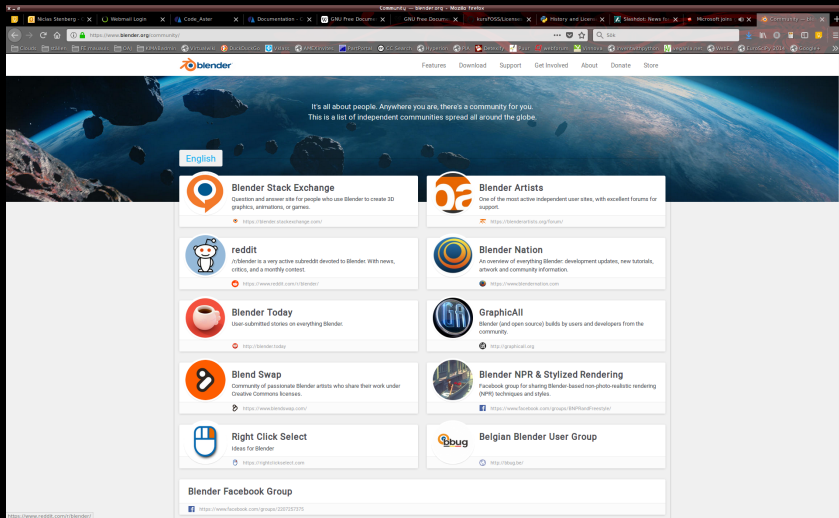
De förbättrar hela tiden

- **Användare**

- Bugg-rapportörer
- Feedback

De svarar på användarfrågor

Som exempel: Blender communities



Mer Blender : Utveckling

Get Involved — blender.org — Mozilla Firefox

https://www.blender.org/get-involved

blender

Features Download Support **Get Involved** About Donate Store

Get Involved

Development Documentation Blender Conference

Blender is being made by hundreds of contributors from around the world, by studios and individual artists, professionals and hobbyists, scientists and students, VFX experts and animators, and so on. All of them are united by the desire to have access to a fully free/open source 3D creation pipeline.

The Blender Foundation supports and facilitates these goals. Using donations and the Blender Institute projects we can enable a handful of people to work full-time on Blender. For the rest we depend on volunteers from the online community to achieve this goal. More help is always welcome!

Development

Blender is an open source project licensed under the GNU GPL. All code is written in C, C++ and Python.

Volunteers and professionals alike contribute to the official Blender release. This includes developers, scripters, technical documenters (for wiki), translators, designers and users testing the software and giving feedback.

Read on to find out how to get involved, report bugs, see what's happening, and discover resources and documentation.

[Read more »](#)

Documentation

A large number of people are helping with the [Blender Manual](#) to organize and write our complete and freely available end-user documentation.

Volunteers interested in documentation translations can contact the team as well.

[Read more »](#)

Website

People who would like to help with building this website are invited to join the [bf-wecontent mailing list](#).

Education

The Blender Foundation considers education and training projects crucial for a successful Open Source project.

We are currently coordinating knowledge in this area, sharing experiences, and evaluating proposals for [official \(certified\) training programs](#) on the [bf-education mailing list](#). Everyone interested in the topic is free to join.

Here you find more information about the [Blender Foundation Certified Trainer](#) program.

Donations and Sponsors

The [Blender Foundation](#) is an independent public-benefit corporation, to facilitate the open source Blender projects. Individuals or companies interested in supporting this financially can contact the foundation or visit the [donations](#) page.

We also run an e-shop where documentation and Blender goodies are sold. The profits from the shop are used to cover Foundation expenses and support Blender Institute projects.

Blender Conference 2013 - "Ask the coders" session

blender.org

Follow Blender

Blender
Download
Features
Source
License

Organization
Foundation
Institute
Conference
Blender Network

Get Involved
Donations
Community
Manual
Tutorials
Python API

Support
Community
Manual
Tutorials
Python API

blender.org
News
Jobs
Contact
Logo & Trademark

YouTube Facebook Twitter

Tankarna bakom FOSS

- Jag behöver denna funktion
- kanske andra också behöver den?
- Med FOSS-licens kan jag dela med mig och få ta del av andras tillägg
- Vi hjälper varandra

Använd FOSS!

Använd **INTE** *Freeware!* - Ofta skadliga program!

Tack för att ni lyssnade



Ett tips: lägg till *gpl* när ni söker program för att hitta FOSS