

# Open Source 101

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Previously:



## For Want of a Printer

<https://www.oreilly.com/openbook/freedom/ch01.html>

In the late 1970s, Richard M. Stallman (RMS) was a staff programmer at MIT. His department, like those at many universities at the time, shared a PDP-10 computer and a single printer. One problem they encountered was that paper would regularly jam in the printer, causing a string of print jobs to pile up in a queue until someone fixed the jam. To get around this problem, the MIT staff came up with a nice social hack: They wrote code for the printer driver so that when it jammed, a message would be sent to everyone who was currently waiting for a print job: "The printer is jammed, please fix it." This way, it was never stuck for long.

In 1980, the lab accepted a donation of a brand-new laser printer. When Stallman asked for the source code for the printer driver, however, so he could reimplement the social hack to have the system notify users on a paper jam, he was told that this was proprietary information. He heard of a researcher in a different university who had the source code for a research project, and when the opportunity arose, he asked this colleague to share it—and was shocked when they refused. They had signed an NDA, which Stallman took as a betrayal of the hacker culture.



Xerox 9700

## Open Source defined: 4 freedoms

1. The freedom to run the program, for any purpose
2. The freedom to study how the program works, and change it so it does your computing as you wish
3. The freedom to redistribute copies
4. The freedom to distribute copies of your modified versions to others

use

study

share

improve

So much choice?



Public Domain



**1986:** Stallman announces the GNU Public License (GPL), the first copyleft, in response to legal threats from James Gosling

**1988:** MIT license published

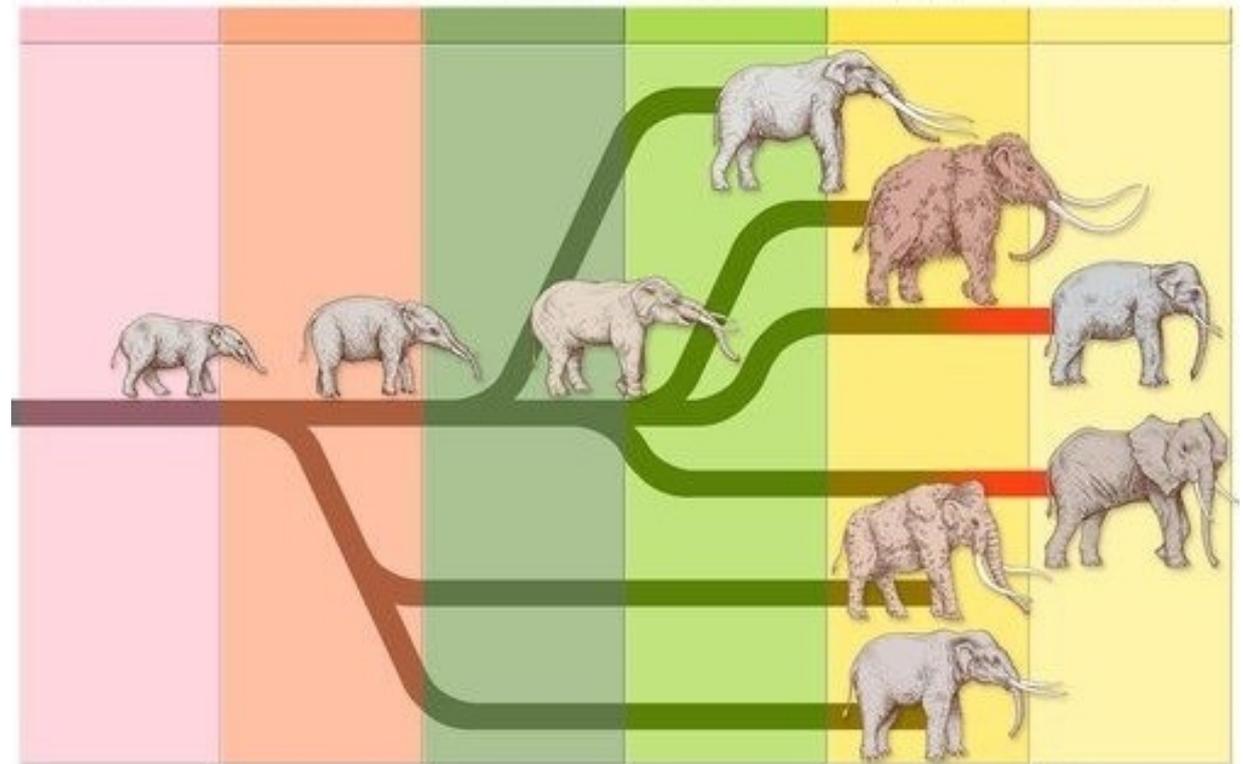
**1989:** BSD license first used

**2002:** Open Software License 1.0 by Lawrence Rosen of Open Source Initiative

**2007:** Microsoft Reciprocal License approved by FSF

**2007:** WTFPL published

**2008:** EUPL published by the European Commission



Benefit	Open Source	Freeware (All rights reserved)
Cost-free (“gratis”)	✓	✓
Use for any purpose	✓	✗
Rights are forever	✓	✗
Right to source code	✓	✗
Right to copy	✓	✗
Right to modify	✓	✗
Right to distribute	✓	?
Must share changes	?	✗

- Inspired by Open Source
- Suitable for creative works (art, music, writing, some data)
- **Not suitable for software**

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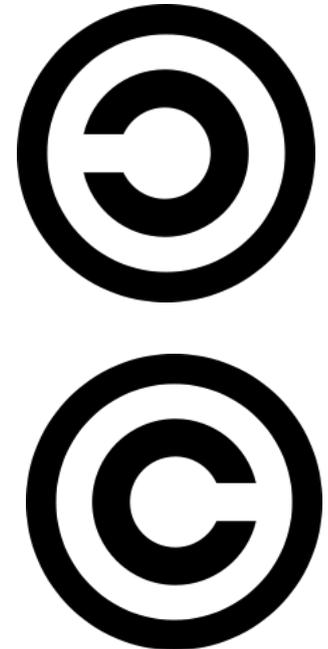
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- **Out of 89 Free Software Foundation certified licenses, 2 are not also certified by the Open Source Initiative**
- **'Free Software' and 'Open Source' refer to the same thing** (excluded: 'NASA Open Source Agreement' and 'Reciprocal Public License')



**VS**



EXPANDING POSSIBILITIES

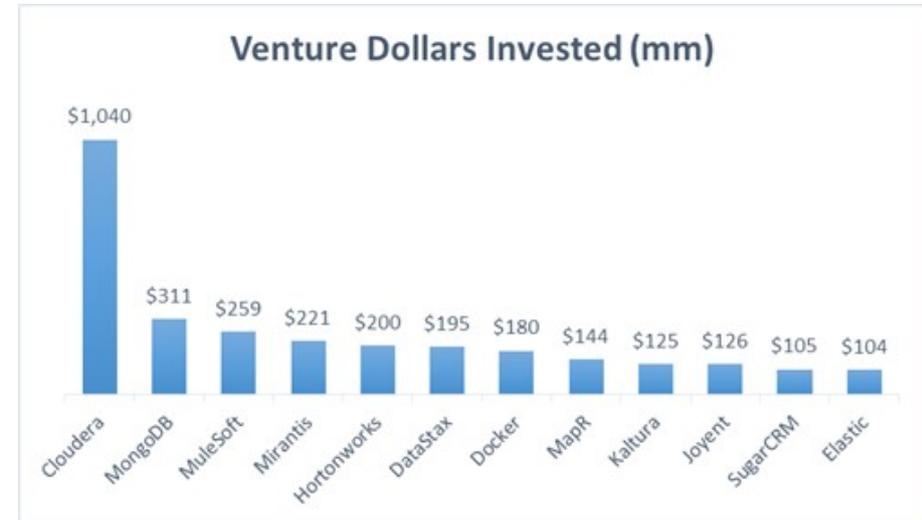
## Options:

- Enforcement models:
  - Centralised copyright, e.g. Contributor License Agreement (CLA)
  - Distributed copyright, e.g. Linux Kernel
  - National law caveats, e.g. Germany

## Landmark Open Source purchases

Target	Aquirer	Valuation	Year
Jboss	Red Hat	\$420	2006
XenSource	Citrix	\$500	2007
Zimbra	Yahoo	\$300	2007
MySQL	Sun	\$1,000	2008
SpringSource	VMware	\$420	2009
Jaspersoft	TIBCO	\$185	2007
Ansible	Red Hat	\$150	2015
CoreOS	Red Hat	\$250	2018

## Major investments in Open Source firms



- 268 \$1bn s/w firms since 2003 – 7 are Open Source  
MongoDB, Elastic, MySQL, Red Hat, Hortonworks, Cloudera

Refs: CBInsights, Tech Crunch, Pitchbook, atomico

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Use, Study, Share, Improve

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