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& Management
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Free and Open Source Software

& Much More!

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The Code Source

```
if (top !== self) {  
  function calcWidth() {  
    var wW = 0;  
    if (typeof window.innerWidth === 'number') {  
      wW = window.innerWidth;  
    } else if (document.documentElement.clientWidth) {  
      wW = document.documentElement.clientWidth;  
    } else if (document.body.clientWidth) {  
      wW = document.body.clientWidth;  
    }  
    if (sH = document.documentElement.scrollHeight) {  
      var wH = window.innerHeight || document.documentElement.clientHeight || document.body.clientHeight;  
      if (sH > wH) {  
        wW = document.body.clientWidth;  
      }  
    }  
  }  
  calcWidth();  
}
```



Intellectual Property

- Industrial property: Patents



Intellectual Property



- Industrial property: Trade Marks



Intellectual Property

- Copyright



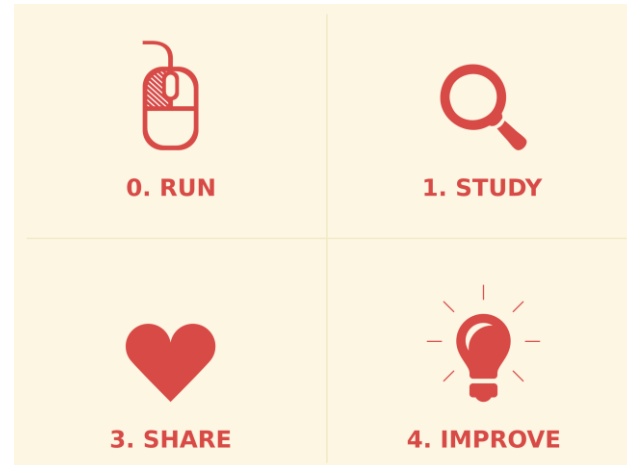
Copyleft

- Copyleft is a general method of making software free and enforcing that all its modified and extended versions are also free.
- Copyleft says that anyone who distributes the software, with or without modifications, must give third parties the freedom to copy and modify the software again.



Free Software

- The **freedom to run** the program as you wish, for any purpose (freedom 0).
- The **freedom to study** how the program works, and change it so it does your computing as you wish (freedom 1). Access to the source code is a precondition for this.
- The **freedom to redistribute** copies so you can help others (freedom 2).
- The freedom to distribute copies of **your modified** versions to others (freedom 3). By doing this you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition for this.



Free Software Foundation

- The Free Software Foundation (FSF) is a non-profit with a worldwide mission to promote computer user freedom.
- Richard Stallman
- Founded: 1985
- <https://www.fsf.org>

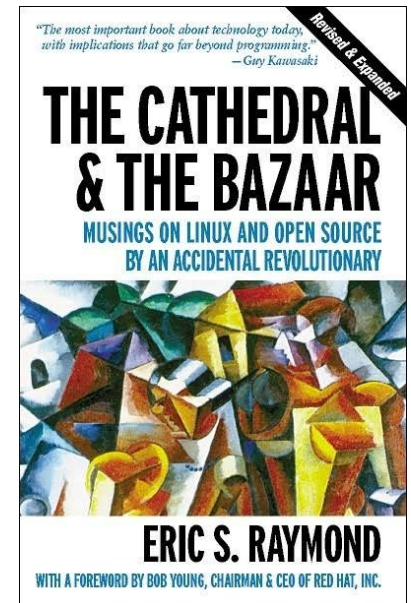


Free Software



Open Source

- More “realistic” approach
- open source software is better than proprietary software.
- Collaborative development:
 - Software engineering tools
 - Business model

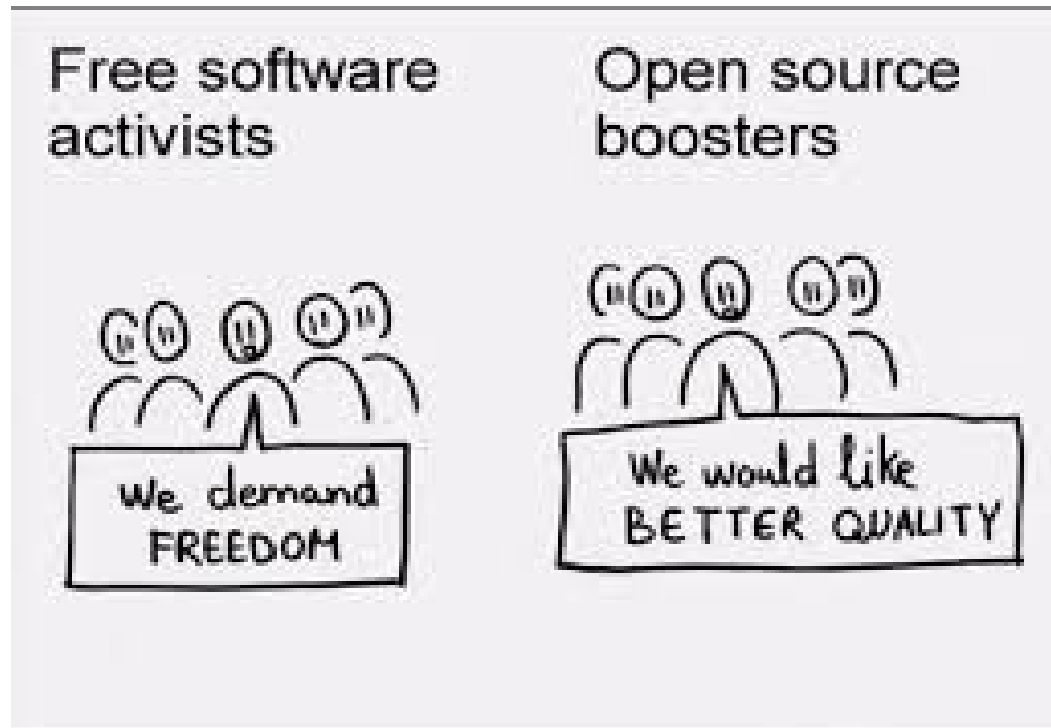


Open Source Initiative

- Non-profit
- Founded 1998
- <https://opensource.org/>
- OSI was jointly founded by Eric Raymond and Bruce Perens in late February 1998, with Raymond as its first president, Perens as vice-president, and an initial Board of Directors including Brian Behlendorf, Ian Murdock, Russ Nelson, and Chip Salzenberg.



Open Source vs. Free Software



- Stallman, 2016

Free and Open Source Software

- Law - Licences



Free and Open Source Software Law - Licences

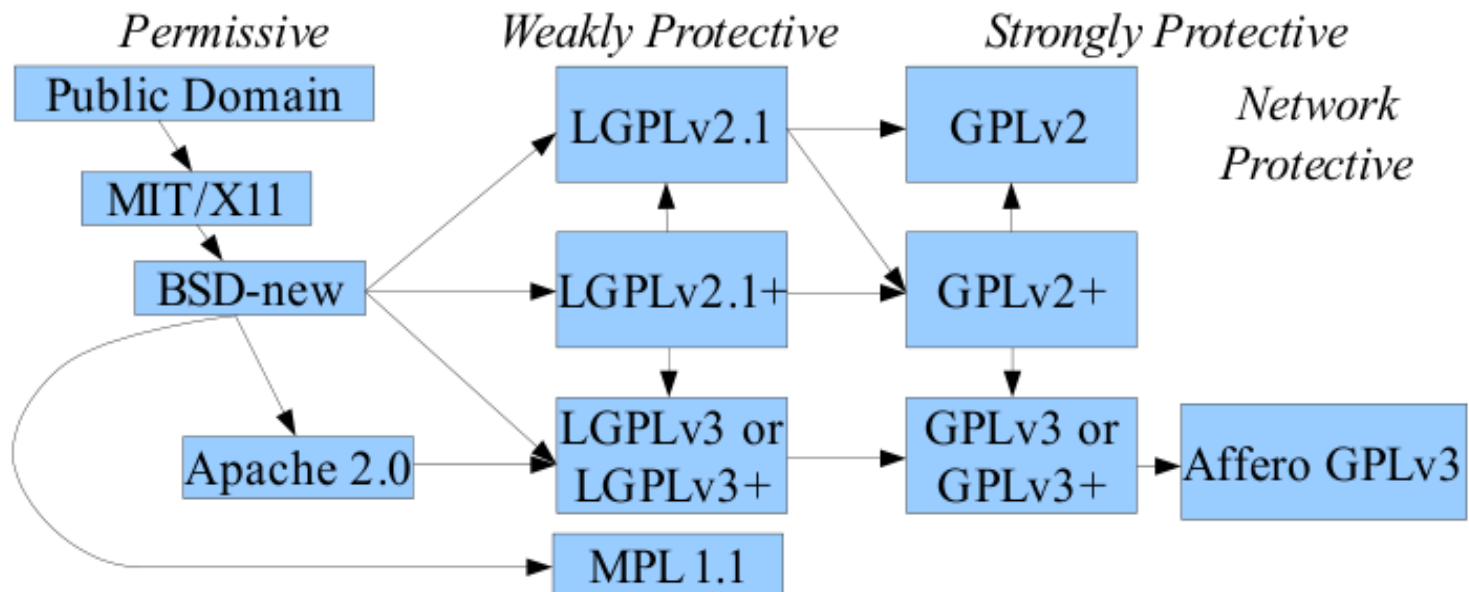
	GPL	LGPL	MPL	Apache	BSD-3	MIT
Use	X	X	X	X	X	X
Modification	X	X	X	X	X	X
Distribution	X	X	X	X	X	X
Provide source code in distribution	X	X	X			
Show license on distribution	X	X	X	X	X	X
Identify changes in distribution	X	X	X	X		
Modifications in the same work with the same license (weak copyleft) in the distribution	X	X	X			
Derivatives must have the same license (strong copyleft) in the distribution	X	X				
Prohibited to disclose trademark of the original entity without prior authorization				X	X	

Free and Open Source Software

- Law – Licences
 - <http://choosealicense.com/>
 - <https://www.gnu.org/licenses/license-list.html>
 - <https://tldrlegal.com/>
 - <https://opensource.org/licenses/>

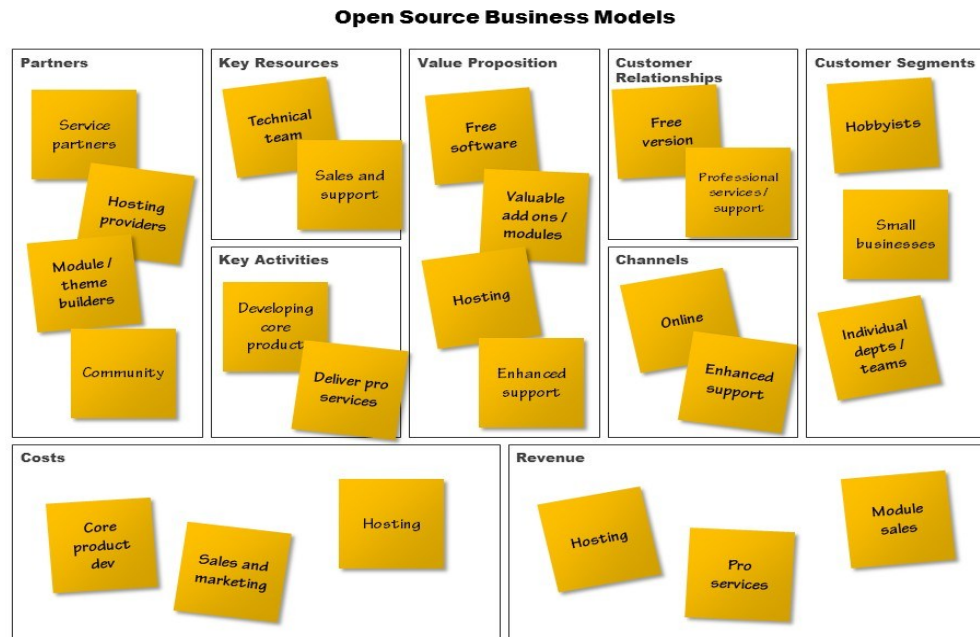
Free and Open Source Software

Law – Licences



Free and Open Source Software

- Management: New Business Models



Free and Open Source Software

- Software Engineering



Free and Open Source Software

- Informatics and End Using



Free and Open Source Software

- Economics and Social Approaches



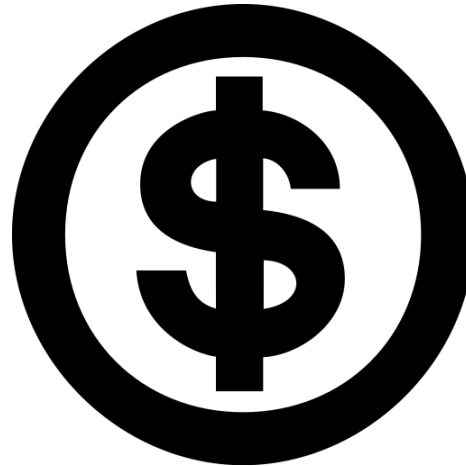
Free and Open Source Software

- Motivations

Love



Money

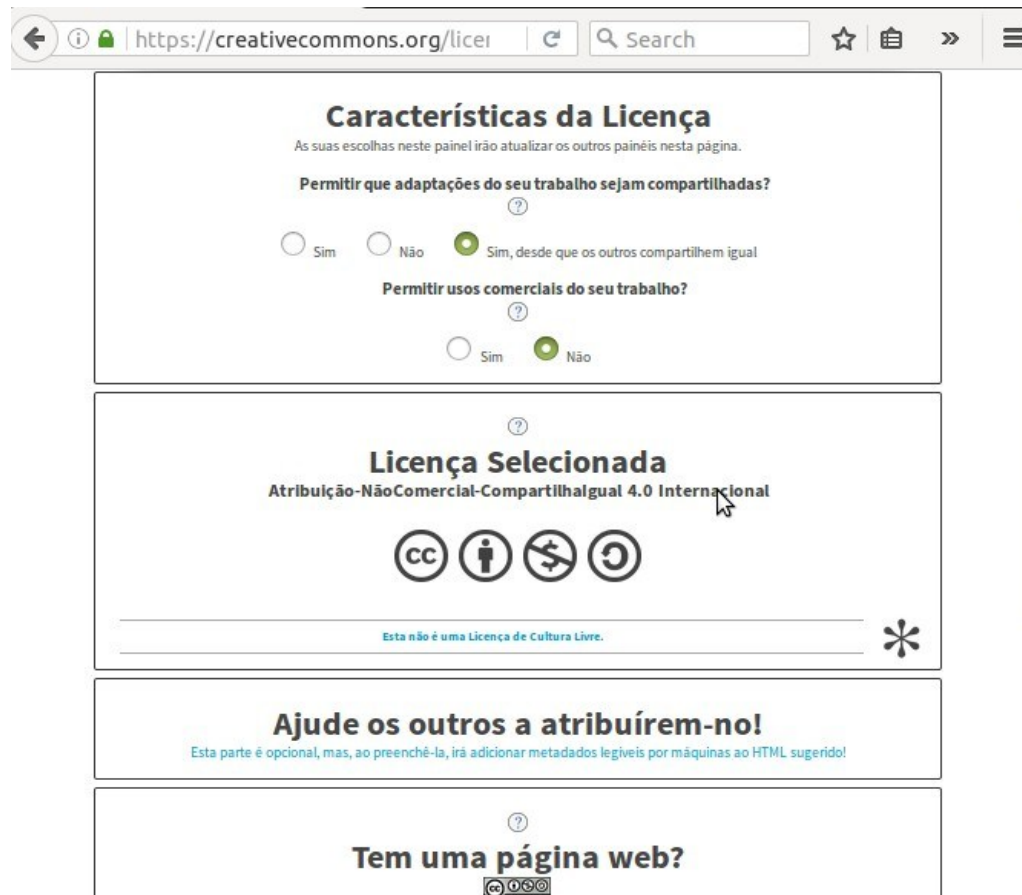


Glory



Creative Commons

<https://creativecommons.org/license/>



The screenshot shows the Creative Commons license selection interface. The browser address bar displays <https://creativecommons.org/licei>. The page is titled "Características da Licença" (License Characteristics) and includes a sub-header "As suas escolhas neste painel irão atualizar os outros painéis nesta página." (Your choices in this panel will update the other panels on this page).

The first section, "Permitir que adaptações do seu trabalho sejam compartilhadas?" (Allow your work to be adapted and shared?), has three radio button options: "Sim" (selected), "Não", and "Sim, desde que os outros compartilhem igual" (selected).

The second section, "Permitir usos comerciais do seu trabalho?" (Allow commercial use of your work?), has two radio button options: "Sim" (selected) and "Não".

The third section, "Licença Seleccionada" (Selected License), displays the chosen license: "Atribuição-NãoComercial-CompartilhaIgual 4.0 Internacional" (CC BY-NC-SA 4.0 International). Below the text are the Creative Commons icons: CC, BY (person), NC (no dollar sign), and SA (circular arrow). A note at the bottom of this section states: "Esta não é uma Licença de Cultura Livre." (This is not a Free Culture License).

The fourth section, "Ajude os outros a atribuírem-no!" (Help others attribute to you!), includes a sub-header: "Esta parte é opcional, mas, ao preenchê-la, irá adicionar metadados legíveis por máquinas ao HTML sugerido!" (This part is optional, but, by filling it out, you will add machine-readable metadata to the suggested HTML!).

The fifth section, "Tem uma página web?" (Do you have a website?), is partially visible at the bottom.

Open Access



Open Access

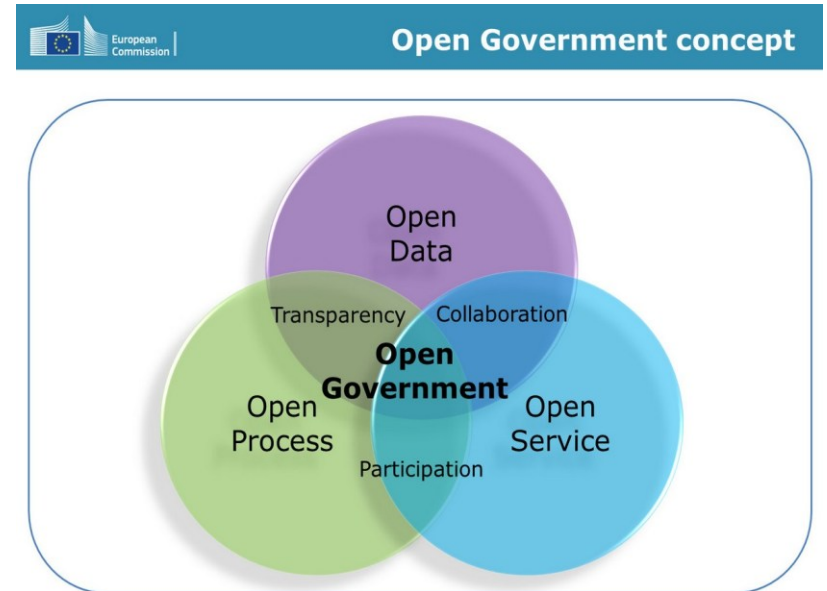


Open Data



- <https://www.pordata.pt/>
- <https://dados.gov.pt/pt/>
- <https://data.europa.eu/euodp/en/home>
- <https://data.europa.eu/euodp/en/data/group>
- <https://www.europeandataportal.eu/>
- <http://lisboaaberta.cm-lisboa.pt/index.php/pt/>

Open



Vision Paper: <http://ec.europa.eu/digital-agenda/en/news/vision-public-services>

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<https://doi.org/10.23919/CISTI.2019.8760695>
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Webgraphy

- <http://www.oreilly.com/openbook/opensources/book/>
- <http://choosealicense.com/>
- <https://www.gnu.org/licenses/license-list.html>
- <https://tldrlegal.com/>
- <https://opensource.org/licenses/>
- <http://dcti.iscte.pt>