

# JavaScript: If you love it, set it free

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`https://libreplanet.org/wiki/User:Johns/Presentations`

Free Software Foundation

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# Our goal

At the FSF and in the GNU Project, we want **all** computer users to be able to do **everything** they need to do on **any** computer, using **only** free software. We have been working toward this goal since it was announced in 1983.



# We have a problem

We have endorsed a full laptop system, the Thinkpad X60 as sold by Gluglug, described on <http://fsf.org/ryf>.



(We've published an update about other Licensing and Compliance Lab activities at <https://u.fsf.org/t2>.)



# “The JavaScript Trap”

Richard Stallman published this article in 2009, and was also given as a talk at LibrePlanet.

The title is drawn from his previous 2004 article, “Free but Shackled: The Java Trap,” in which Stallman said: “Your program, though in itself free, may be restricted by nonfree software that it depends on. Since the problem is most prominent today for Java programs, we call it the Java Trap.”



# JavaScript assumed

Last year, Mozilla Firefox decided to kind of hide the option to disable JavaScript. Too many users were disabling it, then reporting bugs about the resulting chaos.

We don't want to avoid *all* JavaScript anyway. We want to avoid nonfree JavaScript.



# JavaScript programs are generally nonfree

*As distributed to the user*, JavaScript programs are nearly always nonfree. When distributed under a free license, it seems anecdotally that permissive licenses are the most common choice.



# The trap hurts

We should never wait for proprietary software owners to abuse us before switching to free software, but in fact such abuses have been demonstrated in the world of JavaScript.

<http://www.gnu.org/philosophy/proprietary> has a “nice” and unfortunately growing list of abuses of proprietary software in general.



# Painful examples

- Modify copy and paste buffer

<http://thejh.net/misc/website-terminal-copy-paste>





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# Painful examples

- Modify copy and paste buffer  
`http://thejh.net/misc/website-terminal-copy-paste`
- Block browser functions like saving images.
- Record your keystrokes.
- Deliver malware – Tor network exploit  
(`http://resources.infosecinstitute.com/fbi-tor-exploit/`)



# Benefits of free JavaScript

userscripts.org has many examples of great things you can do running your own JavaScripts.



# Basic freedom checklist

- Provide a license notice and possibly a copy of the free license



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- Provide the complete and corresponding source code



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The failure to do these things is why most JavaScript is nonfree.



# My bandwidth is bigger than your freedom

JavaScript is usually minified in order to save on bandwidth and improve page loading speed, and also does not deliver you a copy of the license with every JavaScript file.





# Minified JavaScript

Minified JavaScript is not source code. Source code is the preferred form for modification.



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File Edit View Help

```
entDocument).document.cl.write((f.support.boxModel?"<!doctype html>:"")+ "<html><body>"),cl.close();d=cl.createElement(a),cl.body.appendElement(d);f.event={add:function(a,c,d,e,g){var h,i,j,k,l,m,n,o,p,q,r,s;if(!a.nodeType===3||a.nodeType===8||!c||!d||!(h=f._data(a)))d.handleEvent(a,b){for(var c=0;d=(d=this[c])!=null;c++)if(!a||f.filter(a,[d]).length)!b&&d.nodeType===1&&(f.cleanData(d.getElementsByTagName("*"
```



# Providing source

For references to corresponding source code, we recommend

```
// @source:
```

followed by the URL. This satisfies the GNU GPL's requirement to distribute source code. If the source is on a different site, you must take care to [that properly](#). Source code is necessary for the program to be free.

To indicate the license of the JavaScript code embedded in a page, we recommend putting the license notice between two notes of this form:

```
@licstart The following is the entire license notice for the
JavaScript code in this page.
...
@licend The above is the entire license notice
for the JavaScript code in this page.
```

Of course, all of this should be contained in a multiline comment.



# Providing a free license notice

```
@licstart The following is the entire license notice for the  
JavaScript code in this page.
```

```
...
```

```
@licend The above is the entire license notice  
for the JavaScript code in this page.
```



# Providing a copy of the free license

If you are the copyright holder of the JavaScript, you can do this:

```
Copyright (C) YYYY Developer
```

```
The JavaScript code in this page is free software: you can
redistribute it and/or modify it under the terms of the GNU
General Public License (GNU GPL) as published by the Free Software
Foundation, either version 3 of the License, or (at your option)
any later version. The code is distributed WITHOUT ANY WARRANTY;
without even the implied warranty of MERCHANTABILITY or FITNESS
FOR A PARTICULAR PURPOSE. See the GNU GPL for more details.
```

```
As additional permission under GNU GPL version 3 section 7, you
may distribute non-source (e.g., minimized or compacted) forms of
that code without the copy of the GNU GPL normally required by
section 4, provided you include this license notice and a URL
through which recipients can access the Corresponding Source.
```



# Providing a copy of the free license

If you are the copyright holder of the JavaScript, you can do this:

```
Copyright (C) YYYY Developer
```

```
The JavaScript code in this page is free software: you can
redistribute it and/or modify it under the terms of the GNU
General Public License (GNU GPL) as published by the Free Software
Foundation, either version 3 of the License, or (at your option)
any later version. The code is distributed WITHOUT ANY WARRANTY;
without even the implied warranty of MERCHANTABILITY or FITNESS
FOR A PARTICULAR PURPOSE. See the GNU GPL for more details.
```

```
As additional permission under GNU GPL version 3 section 7, you
may distribute non-source (e.g., minimized or compacted) forms of
that code without the copy of the GNU GPL normally required by
section 4, provided you include this license notice and a URL
through which recipients can access the Corresponding Source.
```

But you're probably not the copyright holder.



# Introducing JavaScript Web Labels

JavaScript Web Labels are a structured format to consistently conveniently convey both a copy of the license and the corresponding source code at the same time.

The description lives at

<http://www.gnu.org/licenses/javascript-labels.html>

The format was announced on February 9, 2012 at

<https://www.fsf.org/news/announcing-js-labels>.



# Goal

A Web Label is machine readable, so we can have automated tools to parse this information, but we really wanted to emphasize something that is human readable.





# It starts with a link

The screenshot shows a web browser window with the URL [www.fsf.org](http://www.fsf.org). The page content includes a header with the FSF mission statement, a copyright notice for 2004-2014, and a license notice for Creative Commons Attribution-No Derivative Works 3.0. A navigation menu is displayed with four columns of links. The link 'JavaScript Licenses' in the first column is circled in red. Below the menu, there is a footer with logos for various organizations and a language selection dropdown set to 'English'. At the bottom, there is a feedback link to [campaigns@fsf.org](mailto:campaigns@fsf.org).

The FSF is a charity with a worldwide mission to advance software freedom — [learn about our history and work](#).

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<b>Campaigns</b>	<a href="#">GNU FDL</a>	<b>Free Software Resources</b>	<a href="#">Selling Free Software</a>
<a href="#">GNU Operating System</a>	<a href="#">Licensing FAQ</a>	<b>Patrons</b>	<a href="#">Motives for Writing Free Software</a>
<a href="#">Defective by Design</a>	<a href="#">Compliance</a>	<b>Associate Members</b>	<a href="#">The Right To Read</a>
<a href="#">End Software Patents</a>	<a href="#">How to use GNU licenses for your own software</a>	<b>My Account</b>	<a href="#">Why Open Source Misses the Point of Free Software</a>
<a href="#">PlayOgg — free media formats</a>		<b>Contact Us</b>	
<a href="#">Connect with free software users</a>			<b>Complete Sitemap</b>

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English

Send your feedback on our translations and new translations of pages to [campaigns@fsf.org](mailto:campaigns@fsf.org)

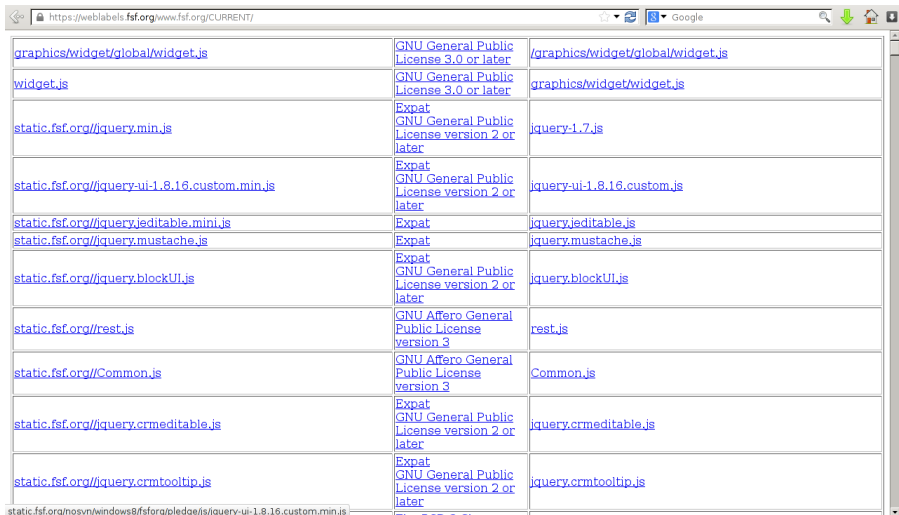
# Under the hood

On each page that uses JavaScript, include a link that points to a labels page. Mark this link with the attribute `rel="jslicense"`, so that automated tools can find it. For example, your final link might look like this:

```
<a href="/about/javascript" rel="jslicense">JavaScript license information</a>
```



# Web Labels



The screenshot shows a web browser window with the address bar displaying `https://weblabels.fsf.org/www.fsf.org/CURRENT/`. The browser's search bar contains the text "Google". The main content area displays a table with three columns: file paths, licenses, and labels. The table contains the following rows:

<a href="#">graphics/widget/global/widget.js</a>	<a href="#">GNU General Public License 3.0 or later</a>	<a href="#">/graphics/widget/global/widget.js</a>
<a href="#">widget.js</a>	<a href="#">GNU General Public License 3.0 or later</a>	<a href="#">graphics/widget/widget.js</a>
<a href="#">static.fsf.org/jquery.min.js</a>	<a href="#">Expat GNU General Public License version 2 or later</a>	<a href="#">jquery-1.7.js</a>
<a href="#">static.fsf.org/jquery-ui-1.8.16.custom.min.js</a>	<a href="#">Expat GNU General Public License version 2 or later</a>	<a href="#">jquery-ui-1.8.16.custom.js</a>
<a href="#">static.fsf.org/jquery.jeditable.mini.js</a>	<a href="#">Expat</a>	<a href="#">jquery.jeditable.js</a>
<a href="#">static.fsf.org/jquery.mustache.js</a>	<a href="#">Expat</a>	<a href="#">jquery.mustache.js</a>
<a href="#">static.fsf.org/jquery.blockUI.js</a>	<a href="#">Expat GNU General Public License version 2 or later</a>	<a href="#">jquery.blockUI.js</a>
<a href="#">static.fsf.org/rest.js</a>	<a href="#">GNU Affero General Public License version 3</a>	<a href="#">rest.js</a>
<a href="#">static.fsf.org/Common.js</a>	<a href="#">GNU Affero General Public License version 3</a>	<a href="#">Common.js</a>
<a href="#">static.fsf.org/jquery.crmeditable.js</a>	<a href="#">Expat GNU General Public License version 2 or later</a>	<a href="#">jquery.crmeditable.js</a>
<a href="#">static.fsf.org/jquery.crmtooltip.js</a>	<a href="#">Expat GNU General Public License version 2 or later</a>	<a href="#">jquery.crmtooltip.js</a>
<a href="#">static.fsf.org/nosvn/windows8/fsforg/pledge/js/jquery-ui-1.8.16.custom.min.js</a>	<a href="#">The BSD 3-Clause</a>	

# Under the hood


The cell might look like this:

```
<table id="jslicense-labels1">
  <tr>
    <td><a href="/js/jquery-1.7.min.js">jquery-1.7.min.js</a></td>
    <td><a href="http://www.jclark.com/xml/copying.txt">Expat</a></td>
    <td><a href="/js/jquery-1.7.tar.gz">jquery-1.7.tar.gz</a></td>
  </tr>
</table>
```



# Web label in the wild

https://www.eff.org/librejs/license



**ELECTRONIC FRONTIER FOUNDATION**  
DEFENDING YOUR RIGHTS IN THE DIGITAL WORLD

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Script	License	Source
js_0gj6QcprRH2jzTbCQqf7kEkM4MXY0UA_sRhwPc8jC1o.js	GNU-GPL-3.0-or-later	See below
js_BREHwrtOffVeor_1Bh1zMpVZ9rRox5vxpovPrJhY2U1.js	GNU-GPL-3.0-or-later	See below
js_YZQu6mj9yG4XLfqJWkVY48Ug9tqHQBqrUWt-SNf0qA.js	GNU-GPL-3.0-or-later	See below
js_aRe4mjwNkrq0UugCuQDnvErzI6bmOFX_DLCKe_FfyYc.js	GNU-GPL-3.0-or-later	See below
js_SlnkhMDgW01LU7-LXsk3u2QY9PwWnvlUOyewAtDwx8c.js	GNU-GPL-3.0-or-later	See below
js_VLT3qONpLHKn6bQyqF_dzzyvR8_-XxYw48ZWDJ97VI.js	GNU-GPL-3.0-or-later	See below
js_uoy8-mz5cLdRCMTF7FhVDbWjWYmsVAXyU-sdUaXJug.js	GNU-GPL-3.0-or-later	See below
js_Ez2bhalBN69HpHowZcUO_xdAmc6w8v_ej9gwJT8Lj_s.js	GNU-GPL-3.0-or-later	See below
js_0oKYWo2sHB5Sk331B82N4DFDpgevMYBYIObt-_PmlWk.js	GNU-GPL-3.0-or-later	See below
js_TWzxOGF4tsHmMPivfqZSxaF0oS5POsMbi6mpEJmcYM.js	GNU-GPL-3.0-or-later	See below
js_vXZ5EsLq51Zzd9RjksbWjyq9nUJF93fsVp15Wn5zqE.js	GNU-GPL-3.0-or-later	See below
js_K-BDN_DGad7jaFGixkN-bd_IN#6S8H-WLPKIOEgYT8.js	GNU-GPL-3.0-or-later	See below
js_BHDAYoofWeV482G5XWQIOwYyZuTQOpzmpMmQqKonKc.js	GNU-GPL-3.0-or-later	See below
js_4dtGUP_kUPomT4jDF7CbFW7jKT-BTx_QnrxYmDuSAuE.js	GNU-GPL-3.0-or-later	See below
js_OCI_L_B4lmmSy3mlc5wv3AXHURtEcj8RPpmlN9qp18A9w.js	GNU-GPL-3.0-or-later	See below
js_upi-PYPONWh3v0Biv0NqbQ0-UncEbDFQzffc7Pqoqg.js	GNU-GPL-3.0-or-later	See below

# Introducing GNU LibreJS

GNU LibreJS (<https://gnu.org/s/librejs>) is an extension for Mozilla-based browsers.



# Why didn't you do it some other way

We don't claim this to be the one true method. Other methods that satisfy the criteria could work. Some have proposed using RDF, some have suggested using HTTP headers. LibreJS can be extended to support multiple schemas.



## How do we close the trap?

The “Java Trap” was essentially solved through a combination of hard work by free software hackers to create a free version of the Java platform, and Sun’s wise decision to relicense the official platform as free.





## Next steps: Software

- LibreJS improvements



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- LibreJS improvements
- LibreJS for mobile devices



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## Next steps: Software

- LibreJS improvements
- LibreJS for mobile devices
- Command line / automated testing
- Modify minifiers to have option for adding copyright notices
- Submitting patches to upstream free software projects that do intend for their JavaScript to be freely licensed – starter bugs?



## Next steps: Public awareness campaigns

- Encourage sites to free their JavaScript – diplomatically, because in so many cases right now, people just aren't aware of the problem.



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- Encourage sites to free their JavaScript – diplomatically, because in so many cases right now, people just aren't aware of the problem.
- Currently working with Greenpeace.org.
- Trying to work with reddit.com – you can help by contacting Reddit and asking them to carry out the rest of their commitment to free software.





# Support Freedom

Our work is funded primarily by grassroots contributions from thousands of individual members.

- Join our JavaScript Developer Task Force: email [campaigns@fsf.org](mailto:campaigns@fsf.org).
- Join the FSF at <http://www.fsf.org/join> (use referrer #8096 if you like me).
- Submit patches to free software projects, or to Web sites, that use JavaScript, to fix licensing information.
- Participate by subscribing to our JavaScript campaign announcement list at <http://www.fsf.org/campaigns/freejs>.

