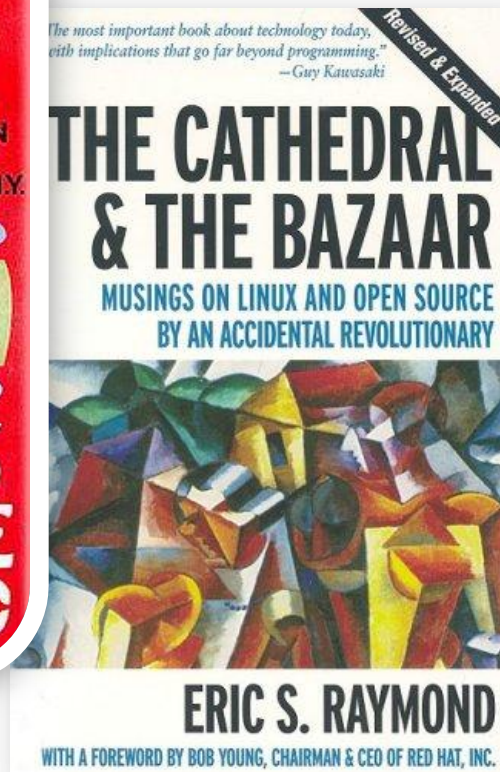
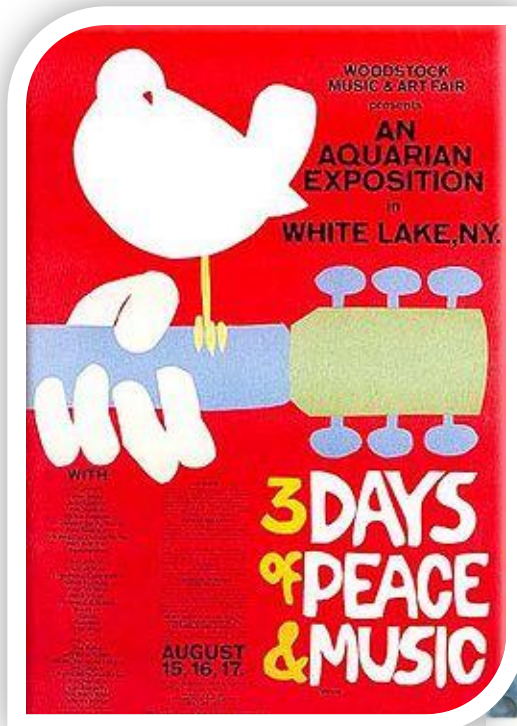


Open Source

Social Movements and
Technology

Open source is a software movement that came out of the 1960s "collaborative process"; the notion that software and information should be free.



To understand open source, you need to know that source code is the human readable programs people write.

If you can get the source code for a program,
then you see how it works,
you can change it,
and you don't have to buy it.

Source Code

```
#!/bin/sh
# Repeat command for each subject.
echo "Enter a command to repeat"
read answer
command=$answer; list=subjectlist.txt
for subject in `cat $list`
do
cd $subject
$command
cd ..
done
```

Commercial companies protect the source code for their programs.

This way, you have to purchase the software to use it.

You have to trust them, because you can't see how the program works.

And, if you don't like the way the program handles something, you can't modify it.

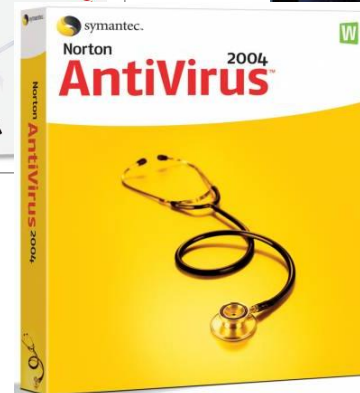
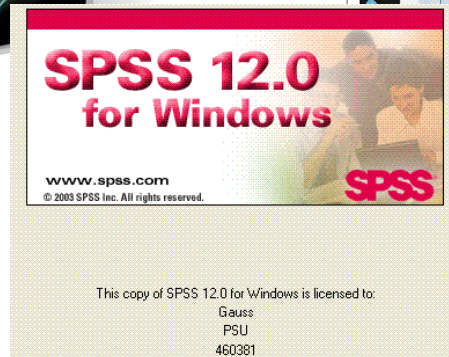
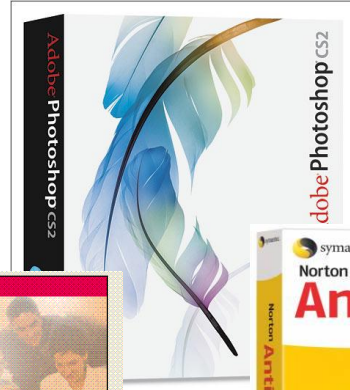
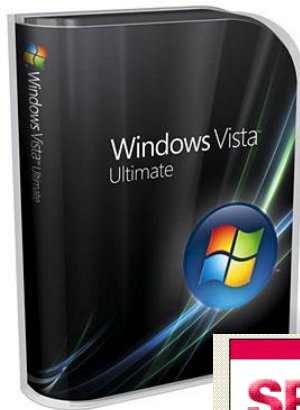
How do commercial companies
protect the source code?

Before it is sold, commercial software is
"compiled" into binaries that only a
machine can read.

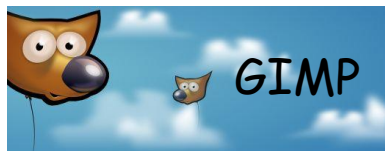
To use the software, you have to purchase the binaries....and the distribution of each copy of the binaries can be tracked and controlled through licensing.

Compiled Code (Binaries)

<CA><FE><BA><BE>^@^@^@^B^@^@^@
G^@^@^@^C^@^@^P^@^@^@<C3><90>
^@^@^@^L^@^@^@^R^@^@^@



"Open source" means that the source code is free to use, modify and enhance.



Why would anyone want to give
software away?

Linus's Law: the more widely available the source code is for public testing, scrutiny, and experimentation, the more rapidly all forms of bugs will be discovered

Linus
Torvalds,
inventor of
linux



Open source software
is protected by the
General Public License
and copyleft, both
developed by
Richard Stallman.

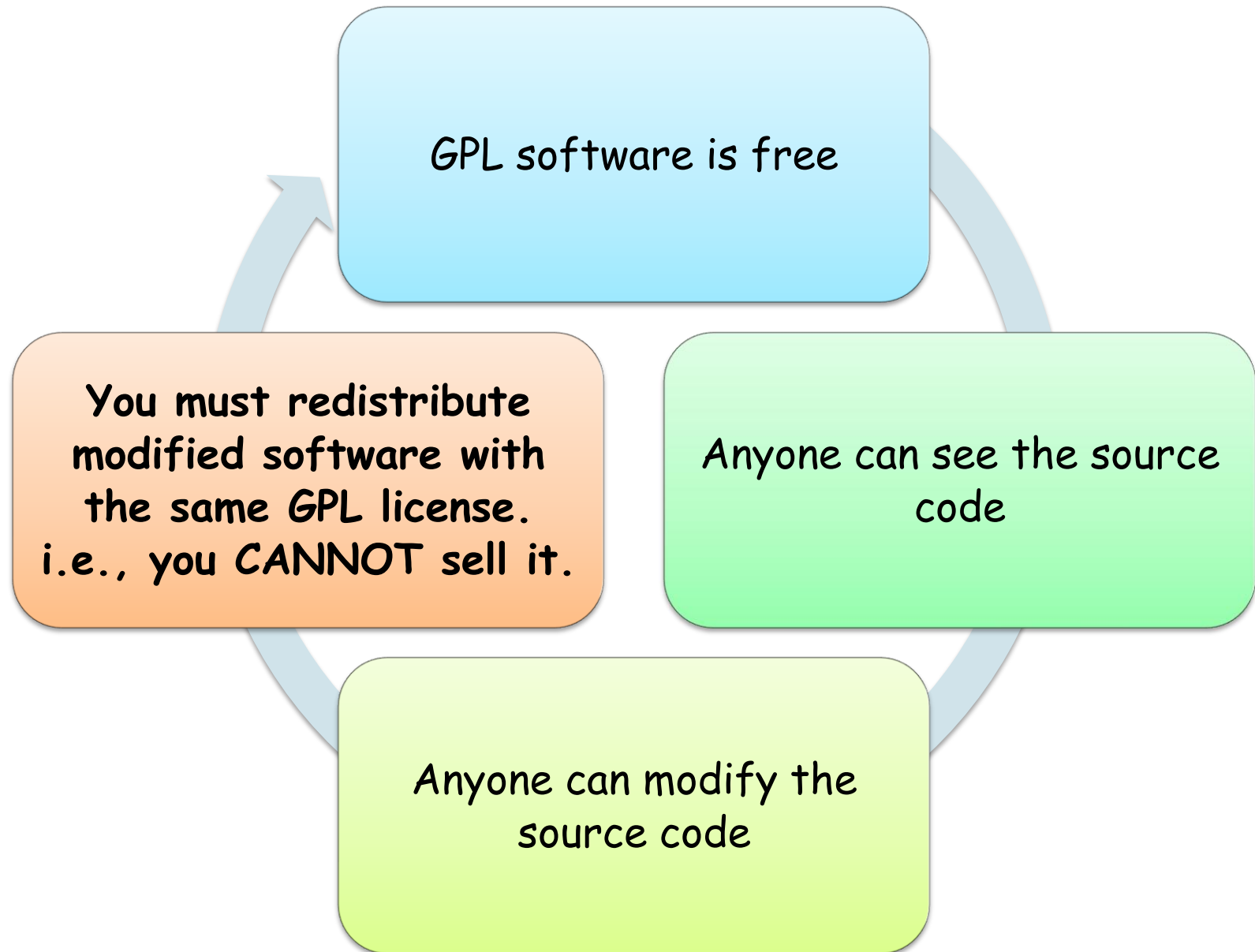
Richard Stallman:
Founder of the Free
Software Movement,
Creator of GPL
(copyleft) and the
GNU tools.



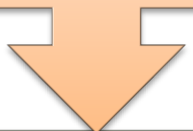
But, it is free, why does it need
to be protected?

Because, if it wasn't protected,
unscrupulous people would try to
sell it...


General Public License & Copyleft




Linux, the GNU tools and most of the image processing programs we depend on, including Afni, SPM and FSL, are open source.




By using open source we guarantee that the software is free, and that the source code can be examined...



Because we have access to the source code, we can understand exactly what the tools do, and we can make modifications...



Go to www.nitrc.org to find more open source neuroimaging tools and resources

A photograph of a group of people sitting on the ground outdoors, possibly in a field or park. They are engaged in a discussion or activity. In the foreground, a man with glasses and a woman with a headband are looking at each other. Other people are visible in the background, some sitting and some standing. The image is slightly faded and has a soft focus.

So, that's
open
source:

- It is free
- It has principles
- It has been extremely successful, especially in the sciences.