

Philosophy

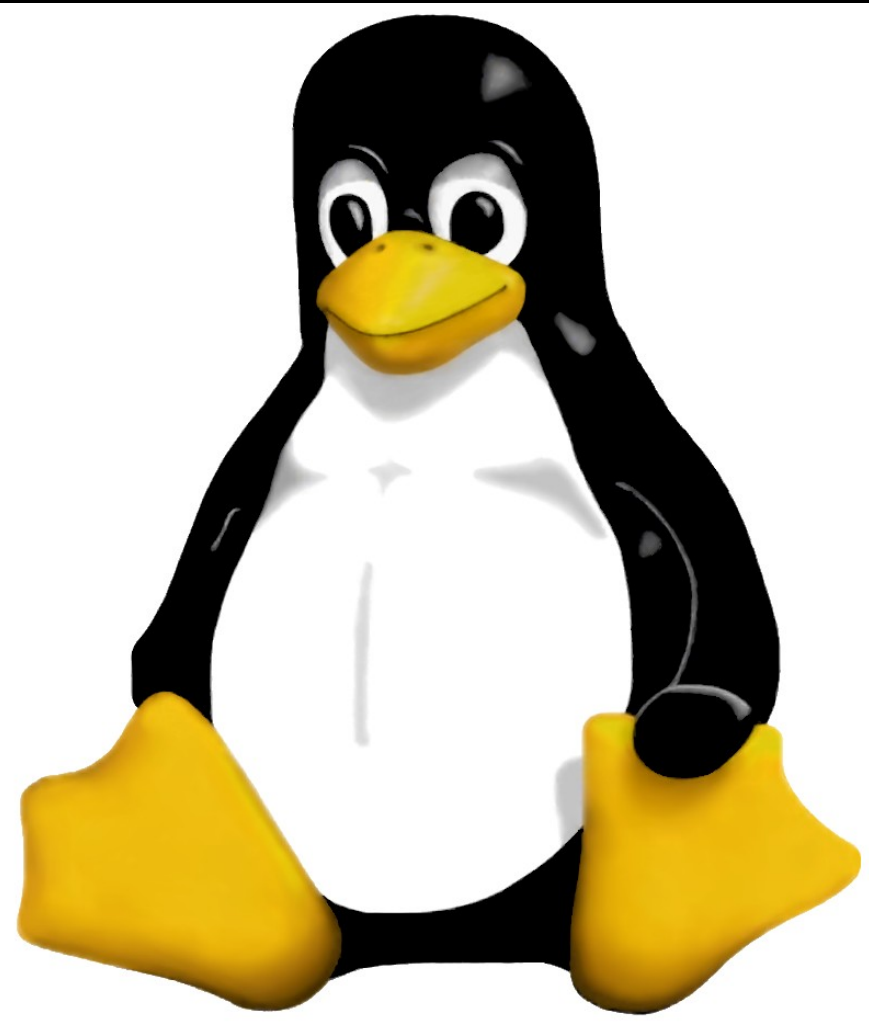
World  
Domination  
through  
Distributed  
Collaboration



Tools

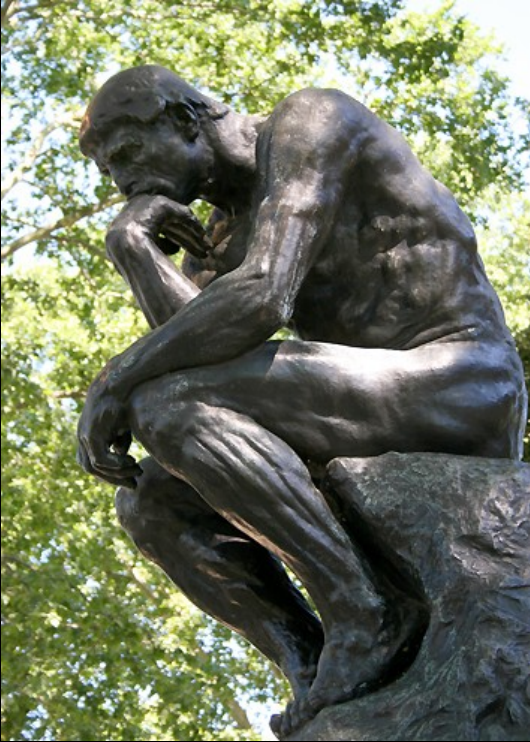


People



# The Linux Kernel

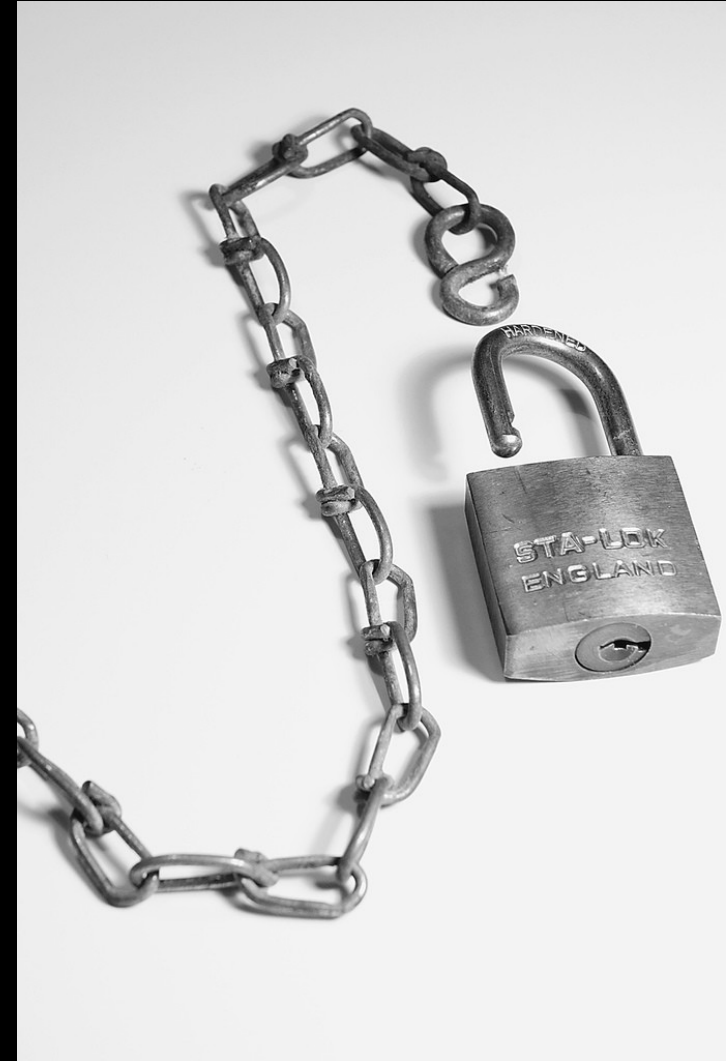
- v2.6.29 released 17<sup>th</sup> March 2009
- 3 months after v2.6.28
- 11,610 changes
- 1,228,000 lines added
- 401,000 lines deleted
- 1166 individual developers

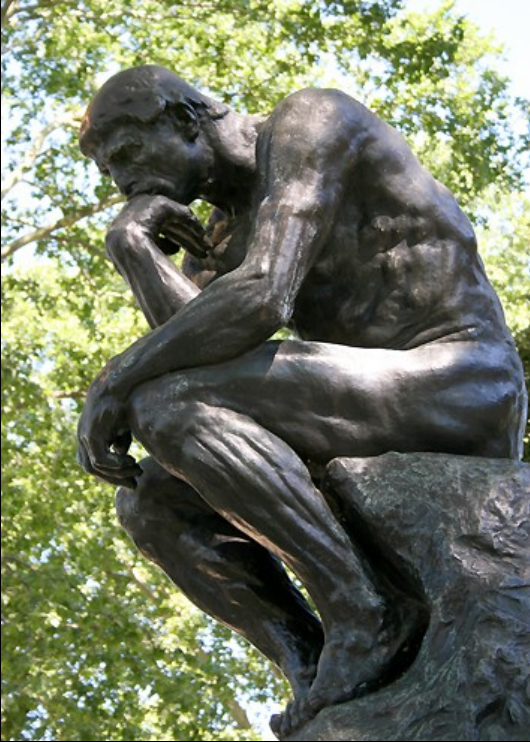


Philosophy

• Floss

Free  
Libre  
Open  
Source  
Software





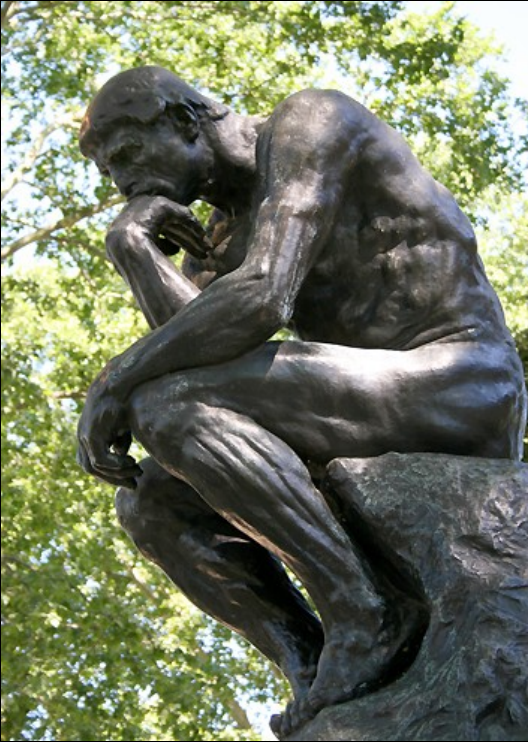
Philosophy

- Floss
- GNU GPL

# GNU General Public License



*Free as in Freedom*



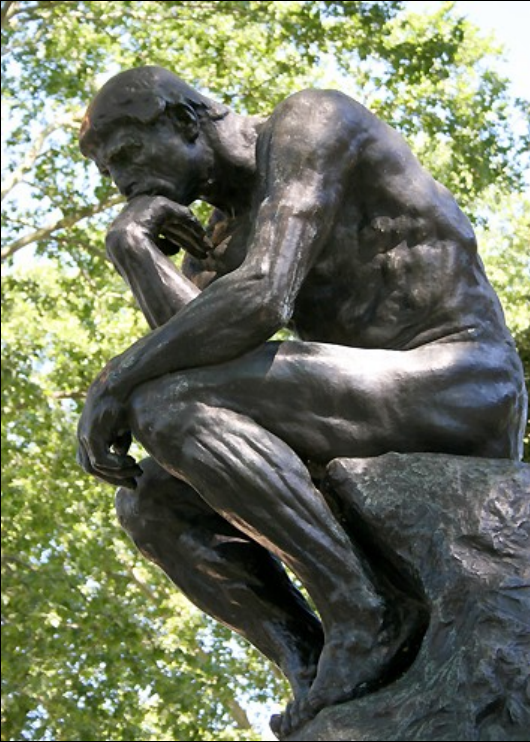
Design discussions can be fun, but working code speaks louder and silences the nay-sayers.

## Philosophy

- Floss
- GNU GPL
- Code is King



```
18042.c
File Edit View Search Tools Documents
New Open Save Print... Undo Redo
18042.c
/*
 * 18042_check_aux() applies as much paranoia as it can at detecting
 * the presence of an AUX interface.
 */
static int __devinit 18042_check_aux(void)
{
    unsigned char param;
    static int 18042_check_aux_cookie;
    return 0;
}
/*
 * Check if AUX irq is available. If it isn't, then there is no point
 * in trying to detect AUX presence.
 */
if (request_irq(18042_ports[18042_AUX_PORT_NO].irq, 18042_interrupt,
    SA_SHIRQ, "18042", &18042_check_aux_cookie))
    return -1;
free_irq(18042_ports[18042_AUX_PORT_NO].irq, &18042_check_aux_cookie);
/*
 * Get rid of bytes in the queue.
 */
18042_flush();
(Ln 608) Col 1 INS
```



## Philosophy

- Floss
- GNU GPL
- Code is King
- **Maintainability Matters**



“It works” isn't enough.  
It must also be  
maintainable!

Having tools that suite your workflow, instead of fighting against it make collaboration so much easier.



## Tools

- Fit your workflow



“GIT” is a source code revision tracker

It:

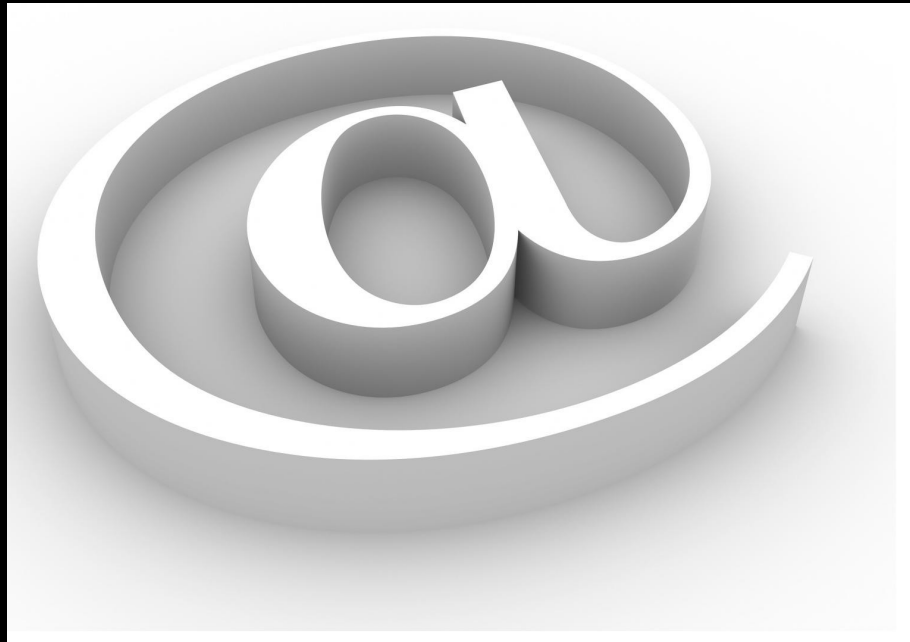
- Allows independent work on independent sections.
- Records complete change history, with comments.
- Support hierarchical distributed collaboration.



## Tools

- Fit your workflow
- **GIT**





- Open mailing lists
- Archived on the web
- Searchable by Google etc

Allow everyone to use their tool of choice for communication.

The vast majority of collaboration on the Linux Kernel happen via Email.



## Tools

- Fit your workflow
- GIT
- Email



Bugzilla

phpBB™  
creating communities

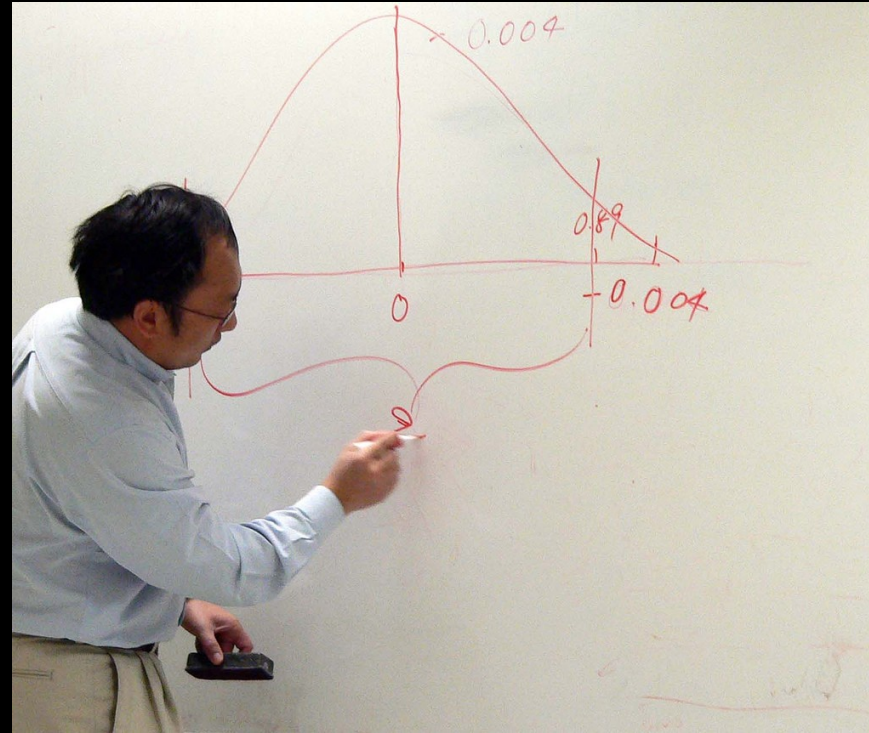
Some people like web based forums, but I am one of many who find them to be more trouble than they are worth. Use them if everyone in your community find them effective.



## Tools

- Fit your workflow
- GIT
- Email
- Forums and web based issue trackers

Those who do the work, call the shots.



•Merit



People

Choose to maintain  
high professional  
standards for long  
term quality.



- Merit
- Care



People

One cannot  
overstate the  
importance of  
listening attentively  
and communicating  
clearly.

Politeness is, surprisingly, secondary.



- Merit
- Care
- Communicate



People

When you value someone's first steps, they are more likely to try bigger steps next time.



- Merit
- Care
- Communicate
- Value all contributions.



People

# Challenges

## Maintaining Quality

- Making new things is more fun than fixing old things.
- Beginners make more mistakes.
- Avoid 'ego' problems
- Automatic error detection.

## Continuing to Scale

- Building trust webs
- Avoiding bottlenecks
- Education



# Questions?

Slides available from  
<http://neil.brown.name/blog/collaboration>

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