Trying to Explain the "Incomprehensible" Decision Making Process of a Subsystem Maintainer

Wolfram Sang

Consultant / Renesas Upstream Kernel Team

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Overview

1. The root cause
2. What does that mean?
3. What you can do (or shouldn't do)
4. Changes to I2C subsystem workflow

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Maintainer role: different from a developer

What is a maintainer? Trond Myklebust said it nicely[1]:

”Currently, the Linux maintainer appears to be responsible for filling all of the traditional roles of:

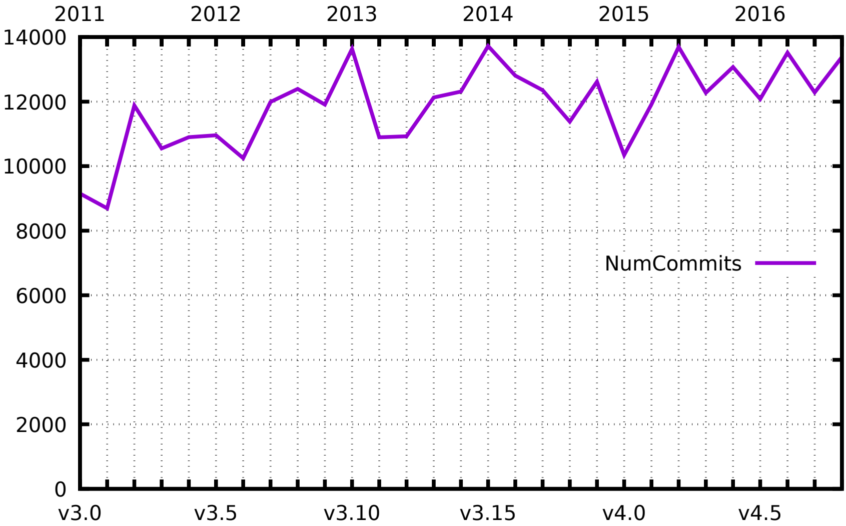
- software architect
- software developer
- patch reviewer
- patch committer
- and software maintainer

.”

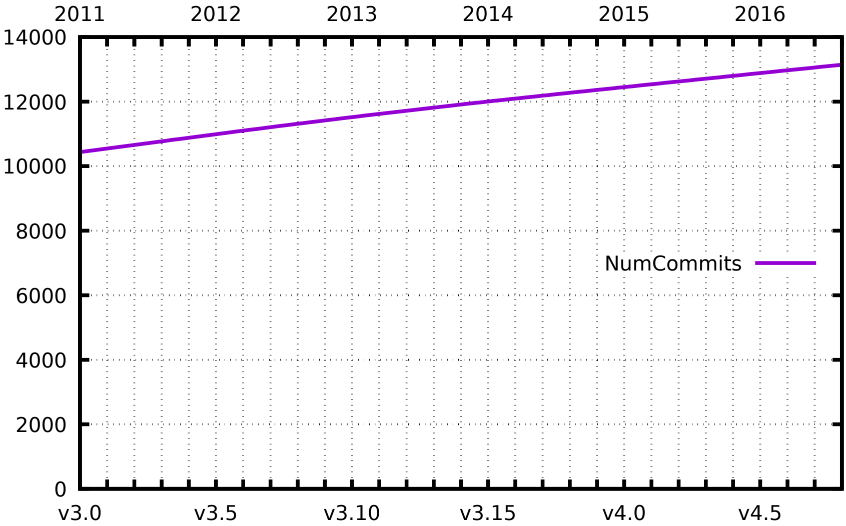
I think at least ”educator” needs to be added, too.

[1] link here

Statistics: # of patches



Statistics: # of patches (linearized)



Additional info

- Merges not counted

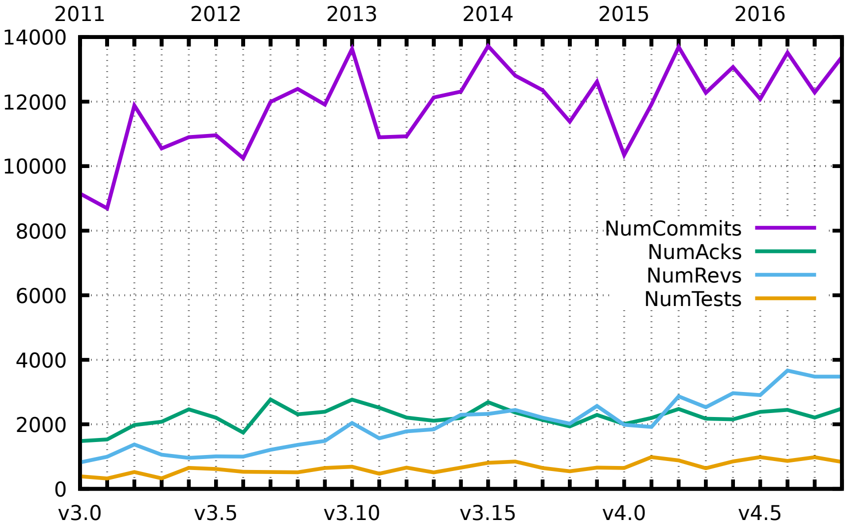
  But they are work, too

- Stats only based on accepted patches

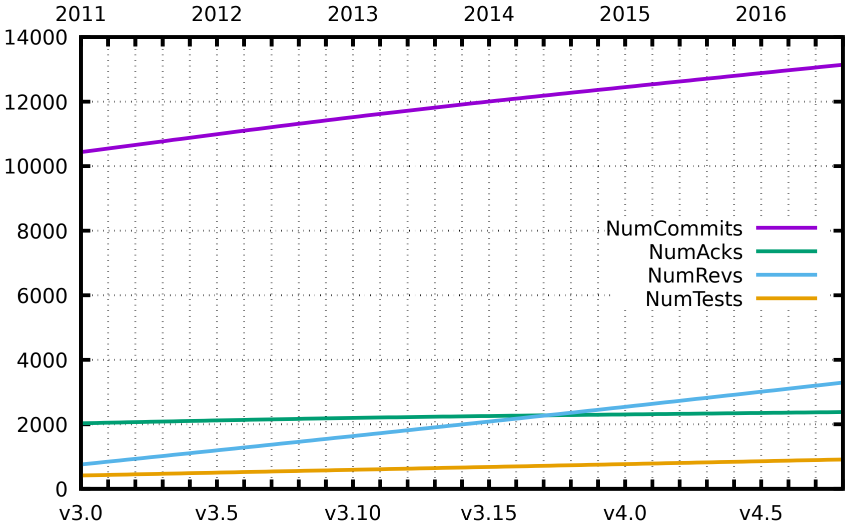
  There are also superseded and rejected patches, teaching new authors...

- Situation at v3.0 was already far from ideal

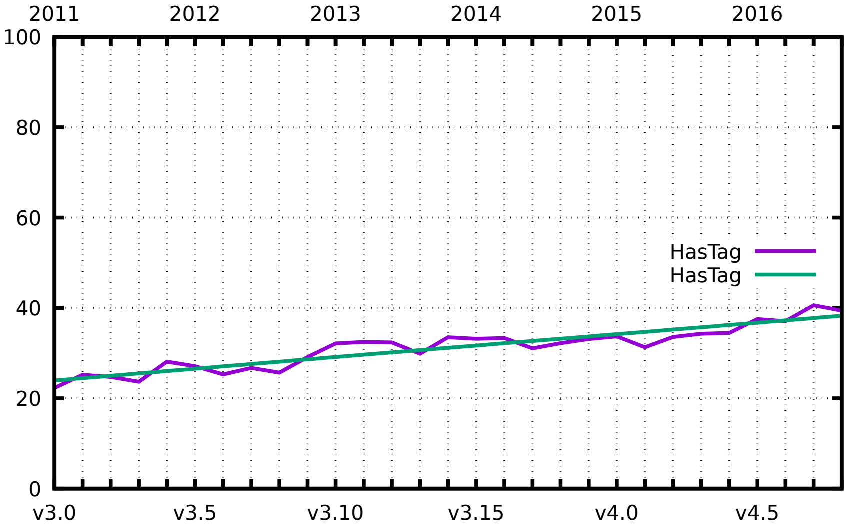
Statistics: # of tags



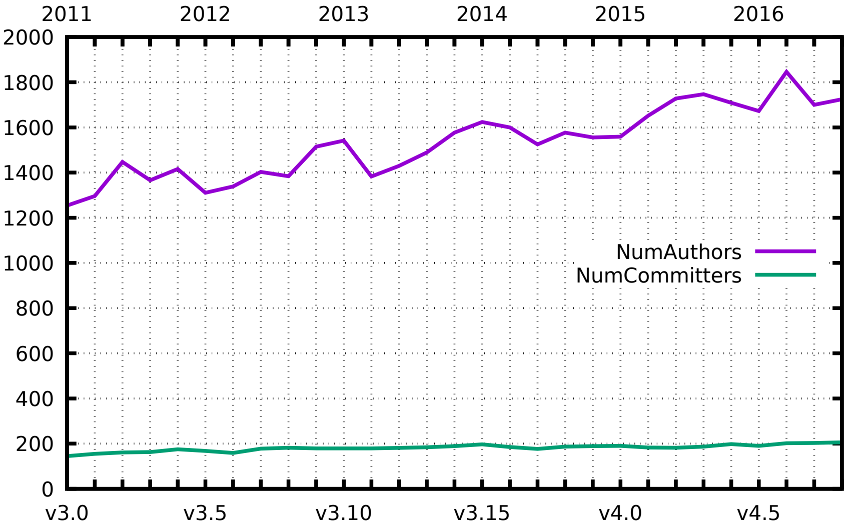
Statistics: # of tags (linearized)



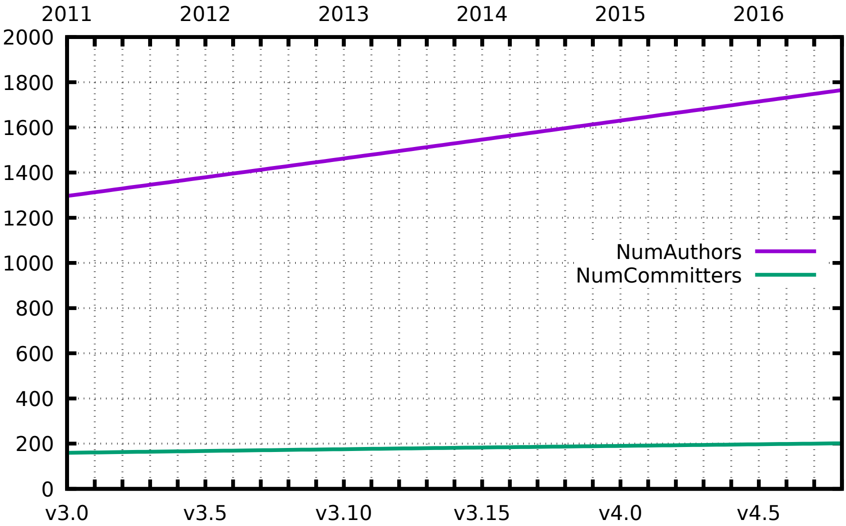
Statistics: commits with tags (percentage)



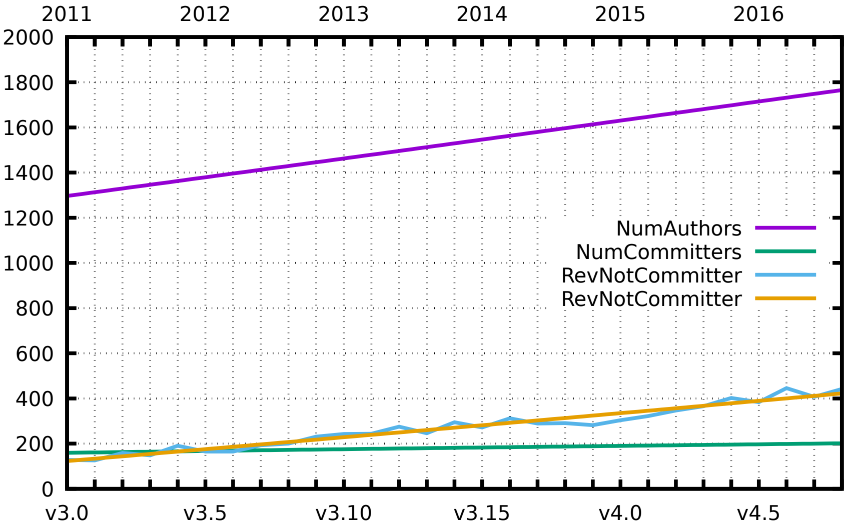
Statistics: # of people



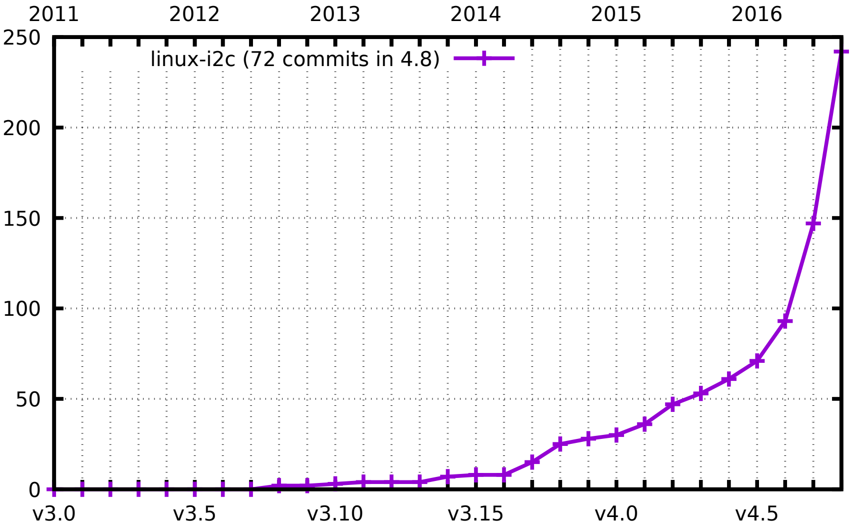
Statistics: # of people (linearized)



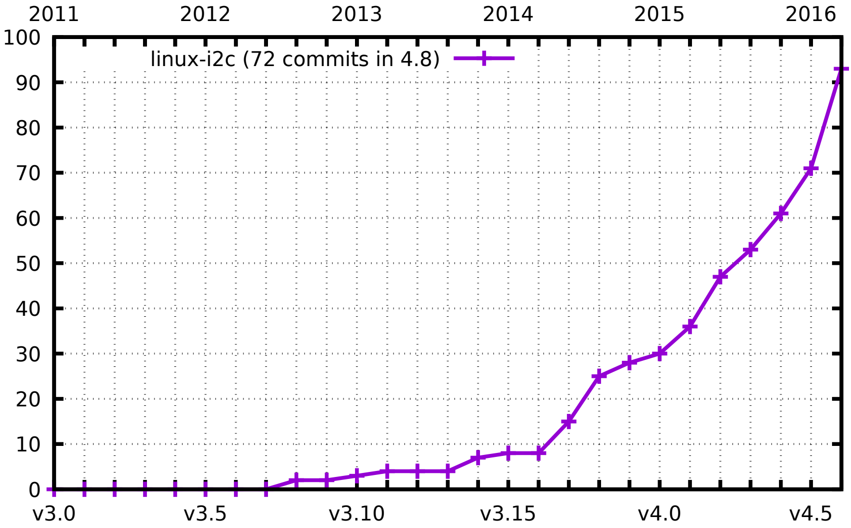
Statistics: more # of people (mostly linearized)



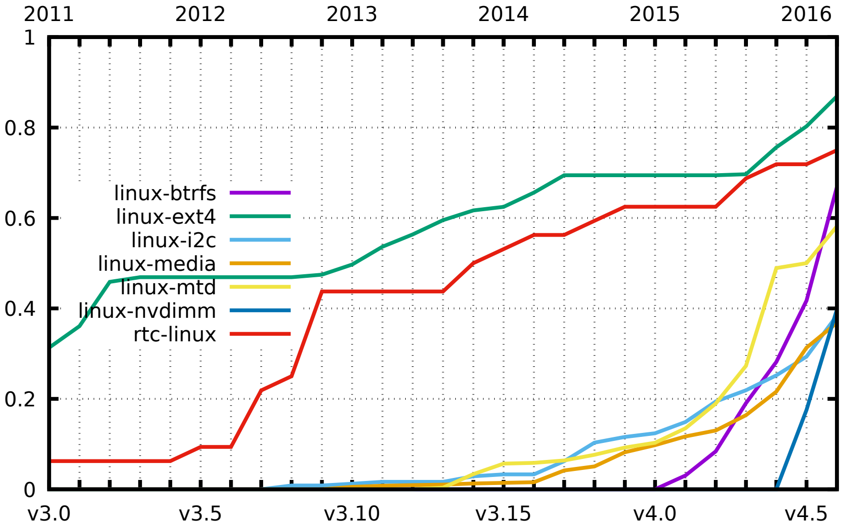
Unprocessed patches (up to now)



Unprocessed patches (skipping last cycles)



Unprocessed patches (normalized): a trend?



I dare to disagree

LWN on May 11th, 2016

Quote:
"The overall picture ... is one of a development process that continues to function like a relatively well-tuned machine. The number of contributors continues to increase, the patch flow is steady, and there do not appear to be many process-scalability issues in sight."

- I think there *is* a scalability problem
- I am neither a machine nor part of a machine

  actually I am full of human factors ;)

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In what order patches are processed?

Factors affecting when a patch is processed

- You help me, I help you

  typical human factor, I'd assume

- Kernel-wide or cross-subsystem effort

  if I2C is only one part of it

- number of affected users
- regression?

In what order patches are processed?

Factors affecting when a patch is processed

- complexity
- polished or not
- chronological order

  a lot less important than I'd like to
- new driver?

  rc1 rule might apply

This needs to be done, too

Things mainly maintainers care about

- removal of obsolete features from 2.4 times

  largely means messing with PowerMac drivers
- refactoring the I2C core to ease maintenance
- split up the core into parts which can be maintained seperately
- give users better testing tools
- update documentation & wiki page

Most of that is currently delayed for *years*!

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What you can do: Users[2]

Give feedback

- give comments about patches

  show interest, tell about issues, ...

- give tags

  Tested-by! Very important one, no need to be a coder for that

[2] as in "users of patches"

What you can do: Developers

Always give your best shot

- missing experience is no problem
- sloppiness *is* a problem
- be honest, give reasons for suboptimal solutions
- for companies, look for in-house knowledge

have your tools ready

- identify repititive tasks, automize them

  Keyboard shortcuts!
- run (& understand) those code checkers! Always!

  checkpatch, sparse, smatch, cocciscript

What you can do: Developers

review your own patches

- don't just send a ping
- If you didn't touch the patch for a while and have some distance, you are a potential reviewer as well
- → big credit boost

take part in further reviewing

- review
- discuss
- clean up, consolidate
- if you are interested, become a (sub-)maintainer

What you shouldn't do

ping considered harmful

- "ping after 2 weeks" is outdated

  "ping after 2 month" would be closer to reality
- largely not needed

  all people I know have patch tracking systems in place
- I won't reply anyway

  I could review patches in that time...
- Human factor: they still add to frustration

  although I do know the latency is not my fault
- Private pings are especially bad

  reviewing should be a community effort
- If you still need to ping, try to think if you can help somehow

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Maintainer role: "old"

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"educator"

[3] link here

Maintainer role: new

What is a maintainer[4] in the future?

- ~~software architect~~
  one of the software architects
- ~~software developer~~
  one of the software developers
- ~~patch reviewer~~
  one of the patch reviewers
- patch committer
- software maintainer
- (new focus!) advertiser for distributed community efforts

[4] well, at least the I2C maintainer

Changes to I2C

Disadvantages

- expect bigger latencies

Advantages

- I keep sane

  ...because I am neither a machine nor part of a machine

- can spend more time fixing this issue on higer levels

Thank you for your attention!

Let's work together

Questions?

- Right here, right now...
- Later at the conference
- wsa@the-dreams.de

Breaking news

- at the GPL BoF lunch today

  meeting at the lobby