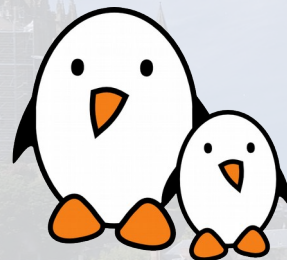


# Linux kernel SoC mainlining : Some success factors

(from a bunch of French people)

*Thomas Petazzoni - CTO, Free Electrons*  
*[thomas.petazzoni@free-electrons.com](mailto:thomas.petazzoni@free-electrons.com)*

9 persons  
6 full-time engineers



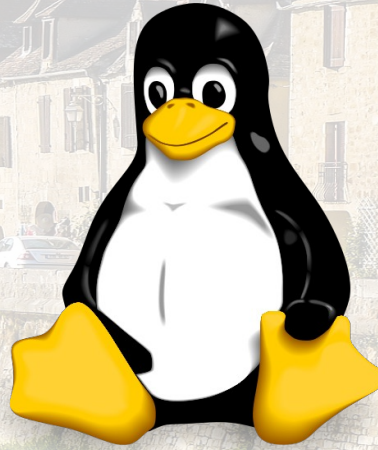
***free electrons***  
Embedded Linux Experts

Engineering services  
Training services

Focus on open-source and  
upstream contribution



# ARM SoC support upstreaming specialization

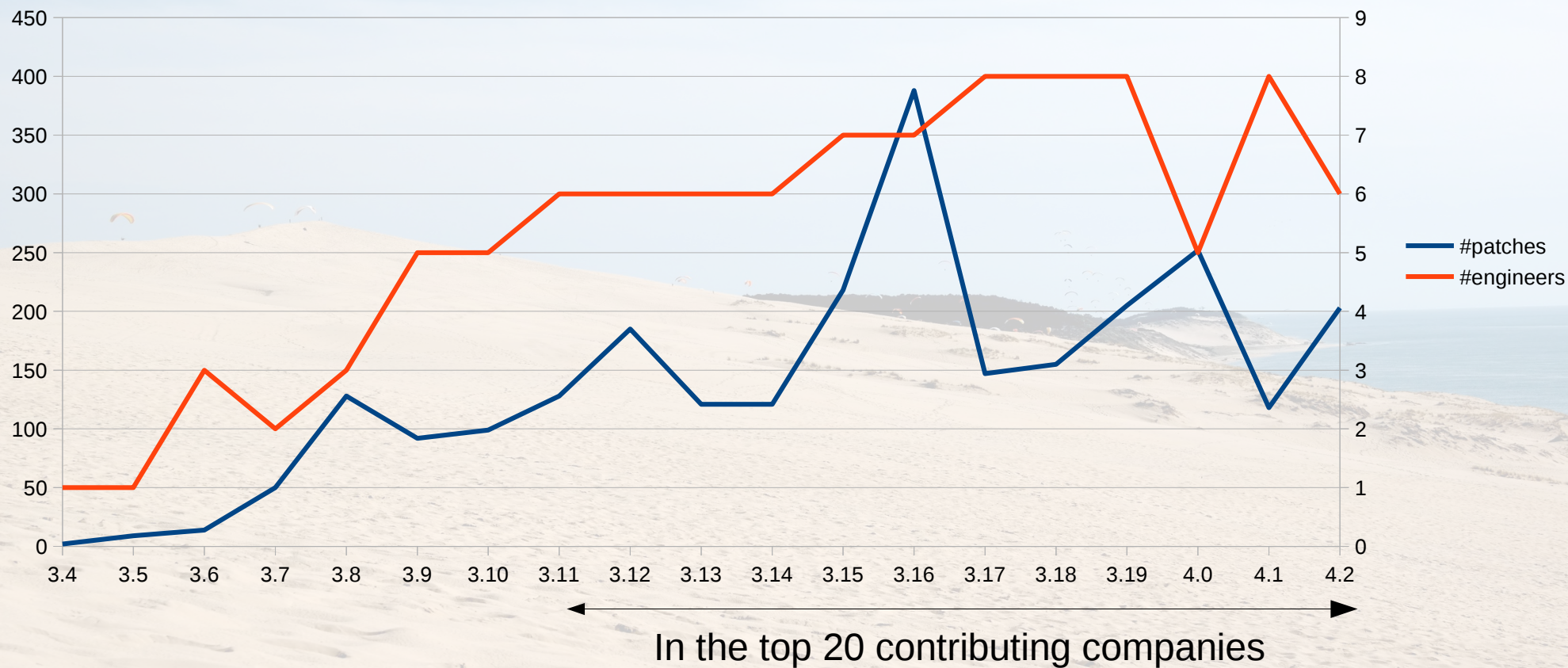


Marvell EBU, Marvell  
Berlin, Atmel and  
Allwinner SoCs

SoC and board  
vendor partnership,  
hobbyist  
involvement



## Free Electrons kernel contributions





*From: Tim Bird <[tim.bird@sonymobile.com](mailto:tim.bird@sonymobile.com)>  
To: Thomas Petazzoni <[thomas@free-electrons.com](mailto:thomas@free-electrons.com)>  
Subject: Up for a keynote?*

**I also looked at free-electron's contributions, and noticed that you are doing more per-developer than any other SoC vendor.**

**I'm very interested to hear what you think makes your group so successful.**





***« An infinite number of monkeys  
typing into GNU emacs would  
never make a good program »***

**Linus Torvalds, CodingStyle  
documentation, 1995**



# Small team





# Knowledge sharing

Britannica

MICROPEDIA  
Ready  
Reference

1

Britannica

MICROPEDIA  
Ready  
Reference

2

Britannica

MICROPEDIA  
Ready  
Reference

3

Britannica

MICROPEDIA  
Ready  
Reference

4



# Motivation





# Community





# Small company







**Conferences and networking**



**Focus**







**Management  
and customer  
understanding**



# The right tools

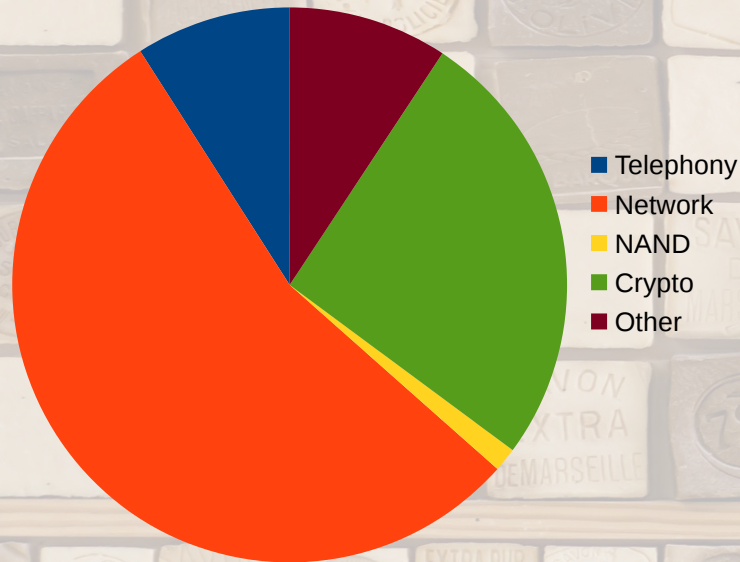




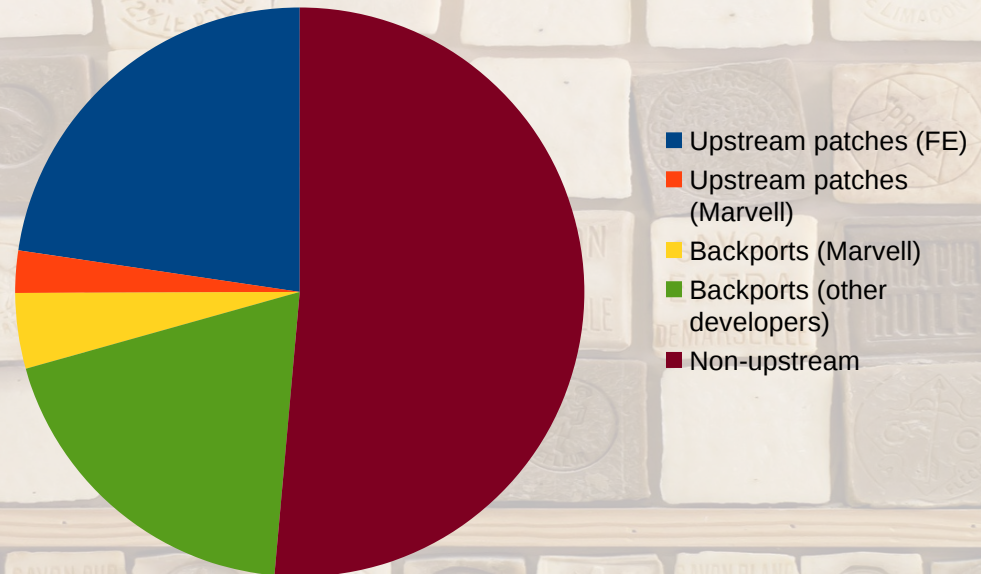
# Results

- Marvell BSP for Armada 375/38x based on 3.10.70
- 1373 patches on top of 3.10.70
- 432434 added lines, 7392 removed

Difference, in lines of code



Difference, in patches



**From:** Arnd Bergmann <arnd@arndb.de>  
**To:** Linus Torvalds <torvalds@linux-foundation.org>  
**Cc:** arm@kernel.org, linux-kernel@vger.kernel.org, linux-arm-kernel@lists.infradead.org  
**Subject:** [GIT PULL 2/8] ARM: SoC: cleanups for 3.15  
**Date:** Sat, 5 Apr 2014 20:03:45 +0100  
**Sender:** "linux-arm-kernel" <linux-arm-kernel-bounces@lists.infradead.org>  
**User-Agent:** KMail/1.12.2 (Linux/3.8.0-22-generic; KDE/4.3.2; x86\_64; ; )

The following changes since commit 6d0abeca3242a88cab8232e4acd7e2bf088f3bc2:

Linux 3.14-rc3 (2014-02-16 13:30:25 -0800)

-----  
ARM: SoC: cleanups for 3.15

These cleanup patches are mainly move stuff around and should all be harmless. They are mainly split out so that other branches can be based on top to avoid conflicts.

Notable changes are:

- \* We finally remove all mach/timex.h, after CLOCK\_TICK\_RATE is no longer used. (Uwe Kleine-König)
- \* The Qualcomm MSM platform is split out into legacy mach-msm and new-style mach-qcom, to allow easier maintainance of the new hardware support without regressions. (Kumar Gala)
- \* A rework of some of the Kconfig logic to simplify multiplatform support (Rob Herring)
- \* Samsung Exynos gets closer to supporting multiplatform (Sachin Kamat and others)
- \* mach-bcm3528 gets merged into mach-bcm (Stephen Warren)
- \* at91 gains some common clock framework support (Alexandre Belloni, Jean-Jacques Hiblot and other French people)





**Linus Torvalds**

Partagé en mode public - 5 avr. 2014



Q: How can you tell when a kernel maintainer is European?

A: He describes some of the changes as written by "Alexandre Belloni, Jean-Jacques Hiblot *and other French people*".

.. because clearly it's too hard to keep track of all those French people that presumable nobody cares about anyway.

Heh.

[Traduire](#)

+752

↪ 54





**Olof Johansson**

Partagé en mode public - 28 avr. 2014

A bunch of French people.

Traduire



**San Jose Marriott** 301 South Market Street, San Jose, CA, United States



+16







**Thanks !**

and BTW, we're hiring :  
*[jobs@free-electrons.com](mailto:jobs@free-electrons.com)*