

mozilla

A new version of Firefox is
available

Rapid Release of Quality Firefox Products

Lukas Blakk & Sylvestre Ledru

Who are we ?

Lukas

- Mozillian since 2006
- Release Engineer for 3 years
- Release Manager for 3 years

Sylvestre

- Has been at Mozilla for a year
- Debian Developer
- LLVM/Clang developer

A Mozilla tradition

Pictures of our children



About:Firefox

- Web browser with ~500 million users
- About 12.5M Lines of code
- Only (major) browser developed by a non-profit
- Support 4 operating systems:
 - Microsoft Windows XP => 8 (32 & ~64 bit)
 - GNU/Linux
 - Mac OS X
 - Android

About: iOS



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BLACK LIVES MATTER **Lukas Blakk**
@lsblakk

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We need to be where our users are so we're going to get Firefox on iOS [#mozlandia](#)

Portland, OR



RETWEETS
155

FAVORITES
90



10:09 AM - 2 Dec 2014

Related headlines

Firefox Could Soon Come To iOS
TechCrunch @TechCrunch

Mozilla wants to put Firefox on iOS
Engadget @engadget

Mozilla bringt Firefox nun doch für iOS
ComputerBase @ComputerBase

Show 6 more

Firefox Releases

- One major release every 6 weeks
- ESR – lock-step with major releases, security focus
- In parallel, 3 other feedback *branches* :
 - Nightly - updated daily with recent code changes
 - Developer Edition (a.k.a Aurora) + aurora on mobile - updated on change
 - Beta – 2 per week Desktop – 1 for Mobile
- Managed by 4 people (3 staff, one volunteer)

More about ESR

Major ESR (Extended Support Release) version is created every 8 months, with two cycles of overlap with the prior version

- Security (high/critical) every 6 weeks (in sync with Firefox)
- Other issues by request from mailing list community
- Used by some GNU/Linux distributions (example: Debian), major companies, university, etc
- Active community mailing list, various sized orgs
- Base for Thunderbird & Seamonkey

Some Lovely Graphs

Healthy open source project?

Activity

30 Day Summary

Dec 9 2014 — Jan 8 2015

3340 Commits

327 Contributors

including 40 new contributors

12 Month Summary

Jan 8 2014 — Jan 8 2015

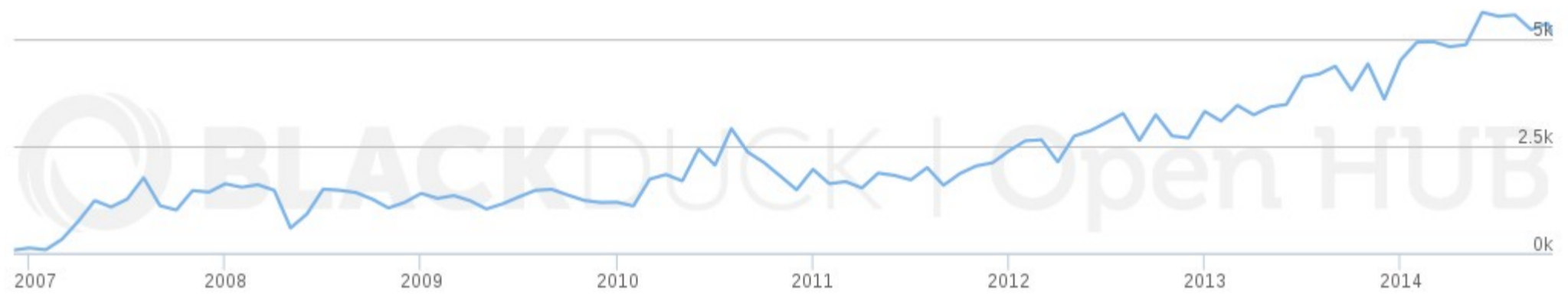
59599 Commits

Up +15113 (33%) from previous 12 months

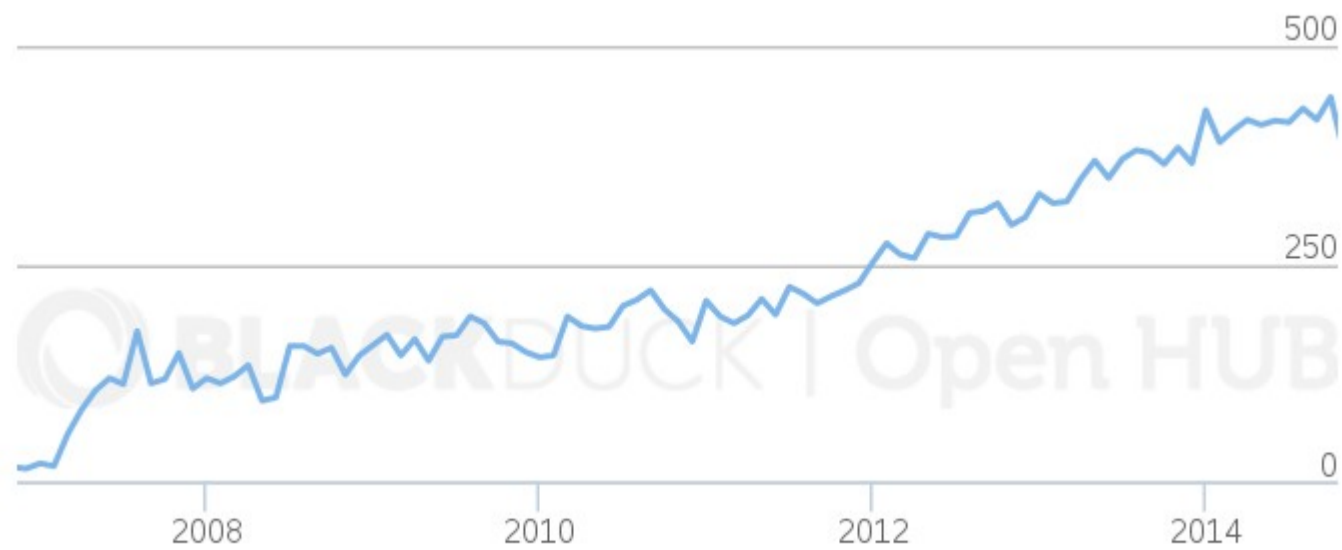
1212 Contributors

Up +180 (17%) from previous 12 months

Commits per Month

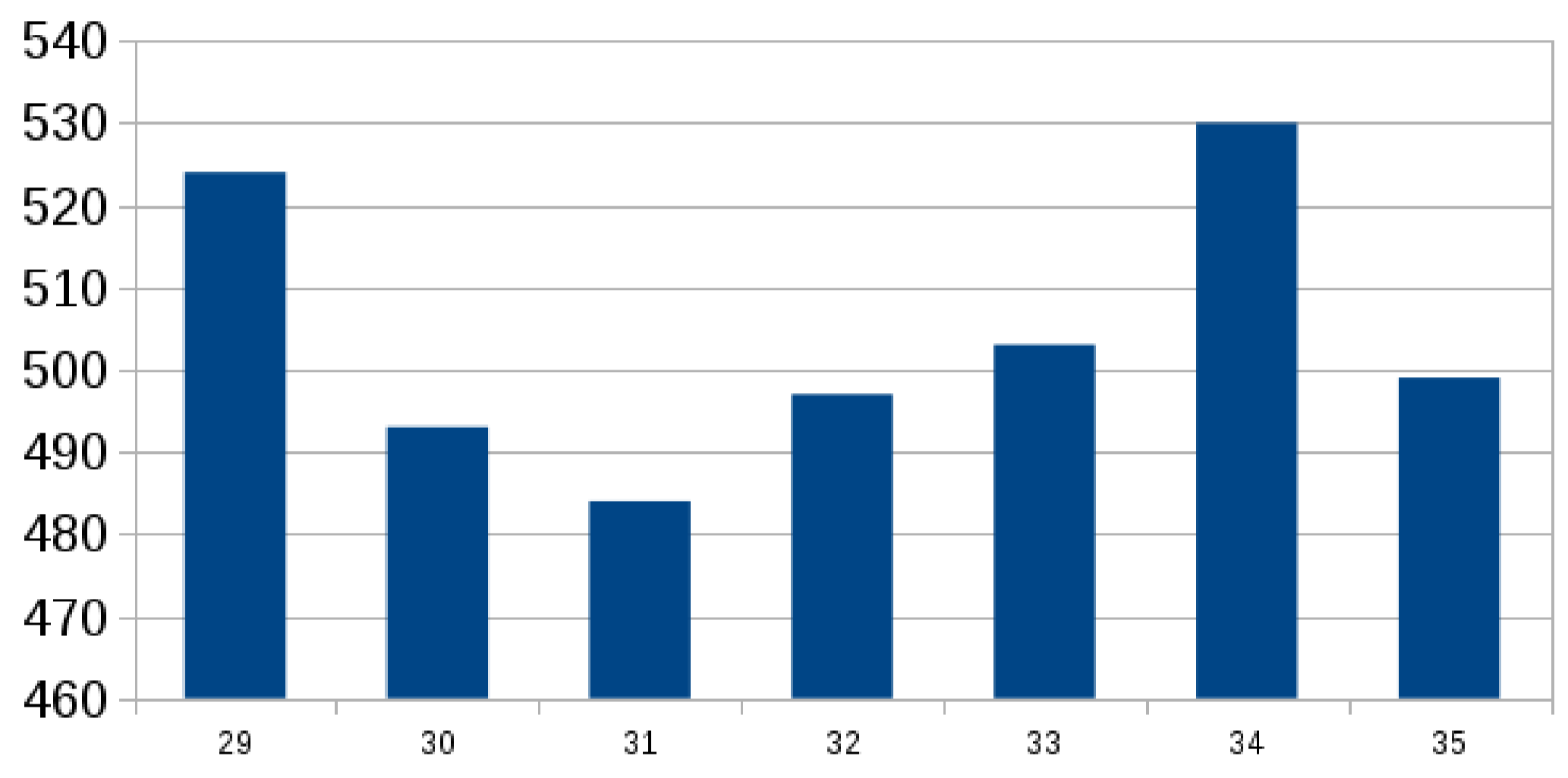


Number of Contributors

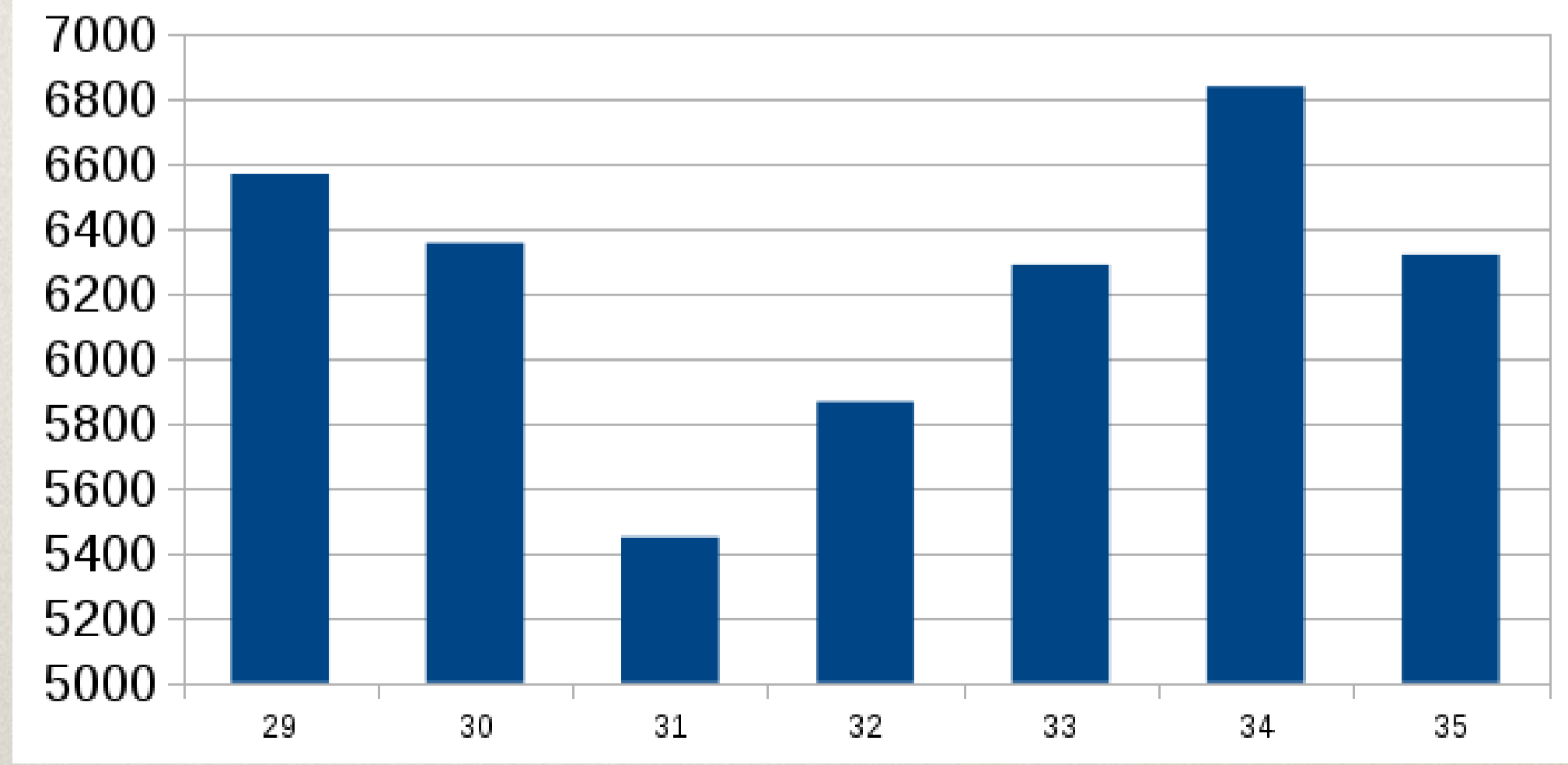


More contribution stats !

Developer per version



Changeset per version



Many companies & projects contributing

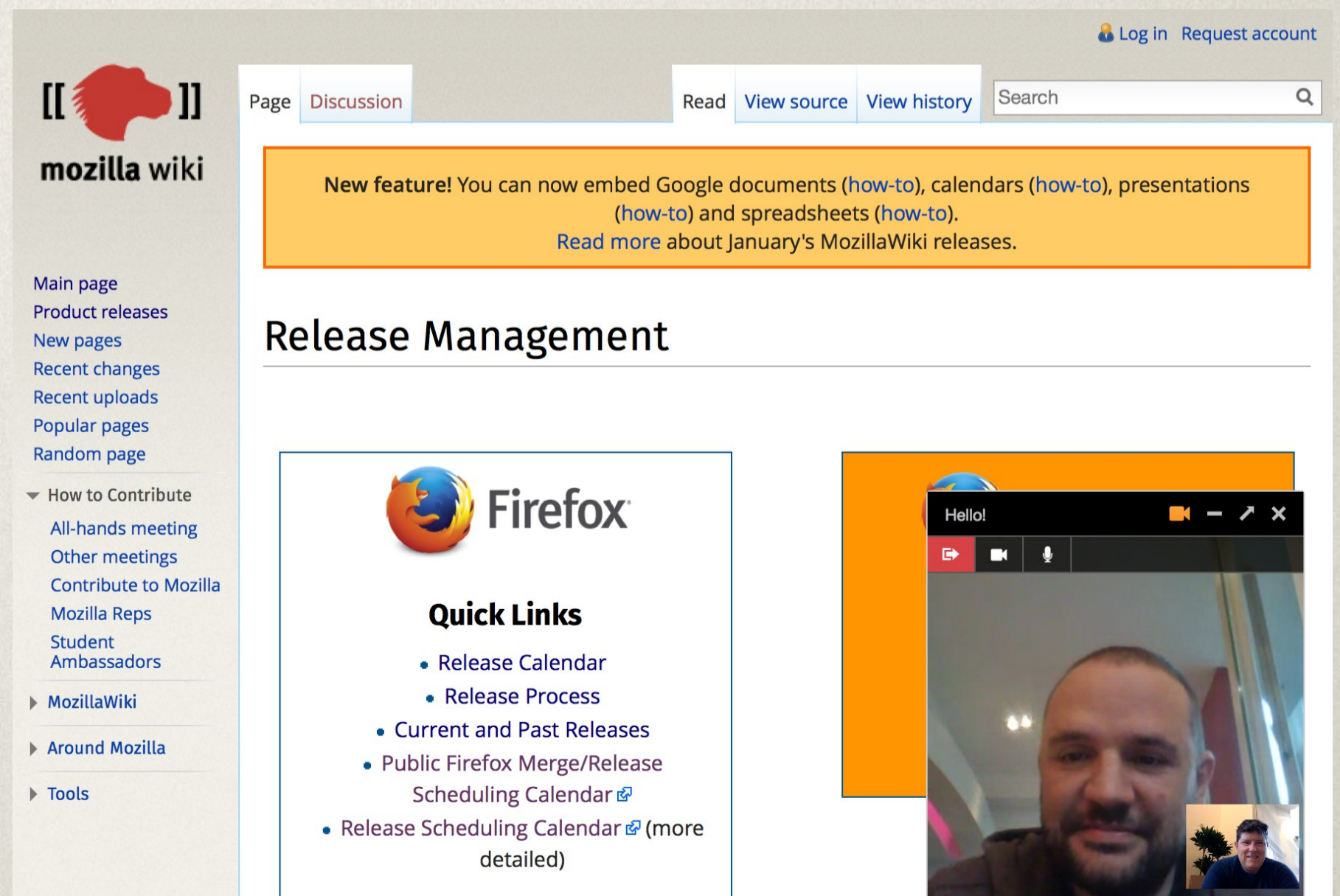
- Tor
- Google
- Microsoft
- Telefonica
- Red Hat
- Cisco
- Adobe
- FreeBSD
- ...


Release management

Making sure that Firefox releases are released in good shape and on time, deciding when to build & when to wait for patches.

Coordinate work between :

- Quality Engineering
- Stability
- Release Engineering
- Firefox Developers
- L10n
- Security
- User Advocacy
- Addons
- Marketing



[[]]

mozilla wiki

Main page
Product releases
New pages
Recent changes
Recent uploads
Popular pages
Random page

▼ How to Contribute
All-hands meeting
Other meetings
Contribute to Mozilla
Mozilla Reps
Student Ambassadors

► MozillaWiki

► Around Mozilla

► Tools


Page Discussion

Read View source View history Search

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New feature! You can now embed Google documents ([how-to](#)), calendars ([how-to](#)), presentations ([how-to](#)) and spreadsheets ([how-to](#)).
[Read more](#) about January's MozillaWiki releases.

Release Management

 **Firefox**

Quick Links

- [Release Calendar](#)
- [Release Process](#)
- [Current and Past Releases](#)
- [Public Firefox Merge/Release Scheduling Calendar](#)
- [Release Scheduling Calendar](#) [\(more detailed\)](#)

Hello!

Train model

Quality

- A web browser is comparable to an OS (network, JIT, video, sound, parallel, etc)
- Complex code base with legacy code
- Hard to test all cases + test suites are time consuming



What's in the release?

Bug tracking

For us - Everything happens on
bugzilla.mozilla.org

Cunning use of FLAGS:

- 1) Tracking
- 2) Status
- 3) Per-Patch approval
- 4) Release note
- 5) Need-Info
- 6) Blocking (not by us, but informs us)

Version Specific Status flags

1) Allow the triangulate needs of a bug across several releases in parallel

2) Possible values :

- ?
- Unaffected
- Affected
- Wontfix
- Verified
- Fixed
- Disabled
- Verified Disabled

status-firefox35:	wontfix
tracking-firefox36:	+
status-firefox36:	affected
tracking-firefox37:	---
status-firefox37:	?
tracking-firefox38:	unaffected
status-firefox38:	affected
tracking-firefox-esr31:	fixed
status-firefox-esr31:	wontfix
tracking-firefox-esr38:	verified
status-firefox-esr31:	disabled
tracking-firefox-esr38:	verified disabled

Tracking → Fixed

- 1) Developers, project managers, users, QE, etc request tracking « ? » for a XX version
- 2) Release manager triage and accept « + » / reject « - ».
- 3) Criteria:
 - Top crash
 - Security
 - Regression (recent)
 - Impact to users
- 4) Release managers coordinate with engineers to get the bug fixed before the release

Uplift requests

- 1) Formal request to have patch(es) uplifted to aurora, beta, esr, or release
- 2) A form auto-populates when request is made

Approval Request Comment

[Feature/regressing bug #]: **dunno**

[User impact if declined]: we will be unable to run jsapi-tests on beta because failures will be masked by this test and **we will accidentally introduce a critical bug** resulting in the complete destruction of Firefox's reputation and the Web will turn away from open solutions and stagnate again, preventing the creation of better worldwide communication mechanisms that turn out to be critical

[Describe test coverage new/current, TreeHerder]: This has been in m-c for a day and tested locally.

[Risks and why]: There's a chance this **could break video decoding on Windows completely.**

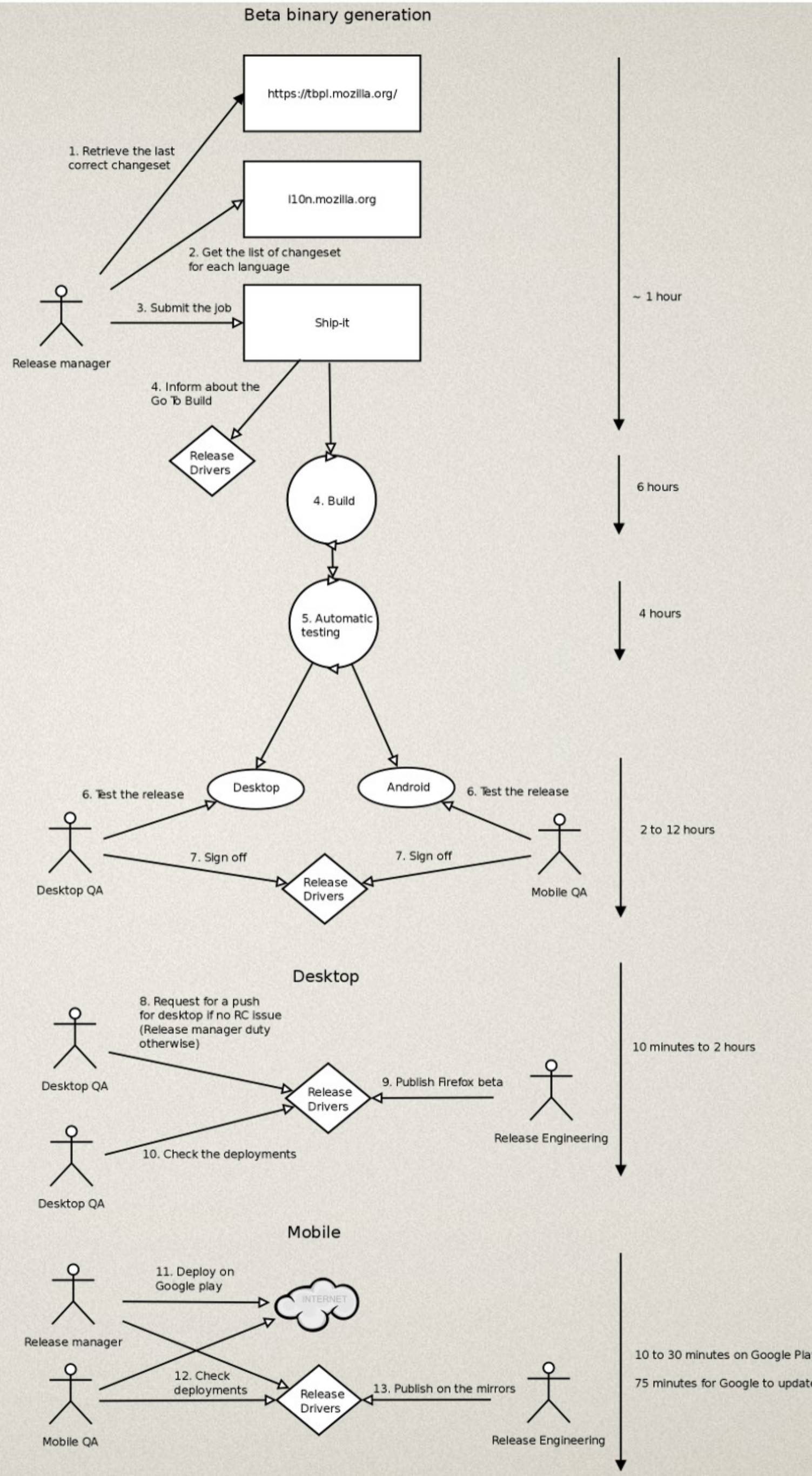
[String/UUID change made/needed]: None.

- 3) Approved patch gets uplifted to the branch(es), CI rebuilds + tests to confirm merge safe
- 4) If possible, QE verifies the fix before release



Time to release

About: Beta Reliable Process Works



Release Week

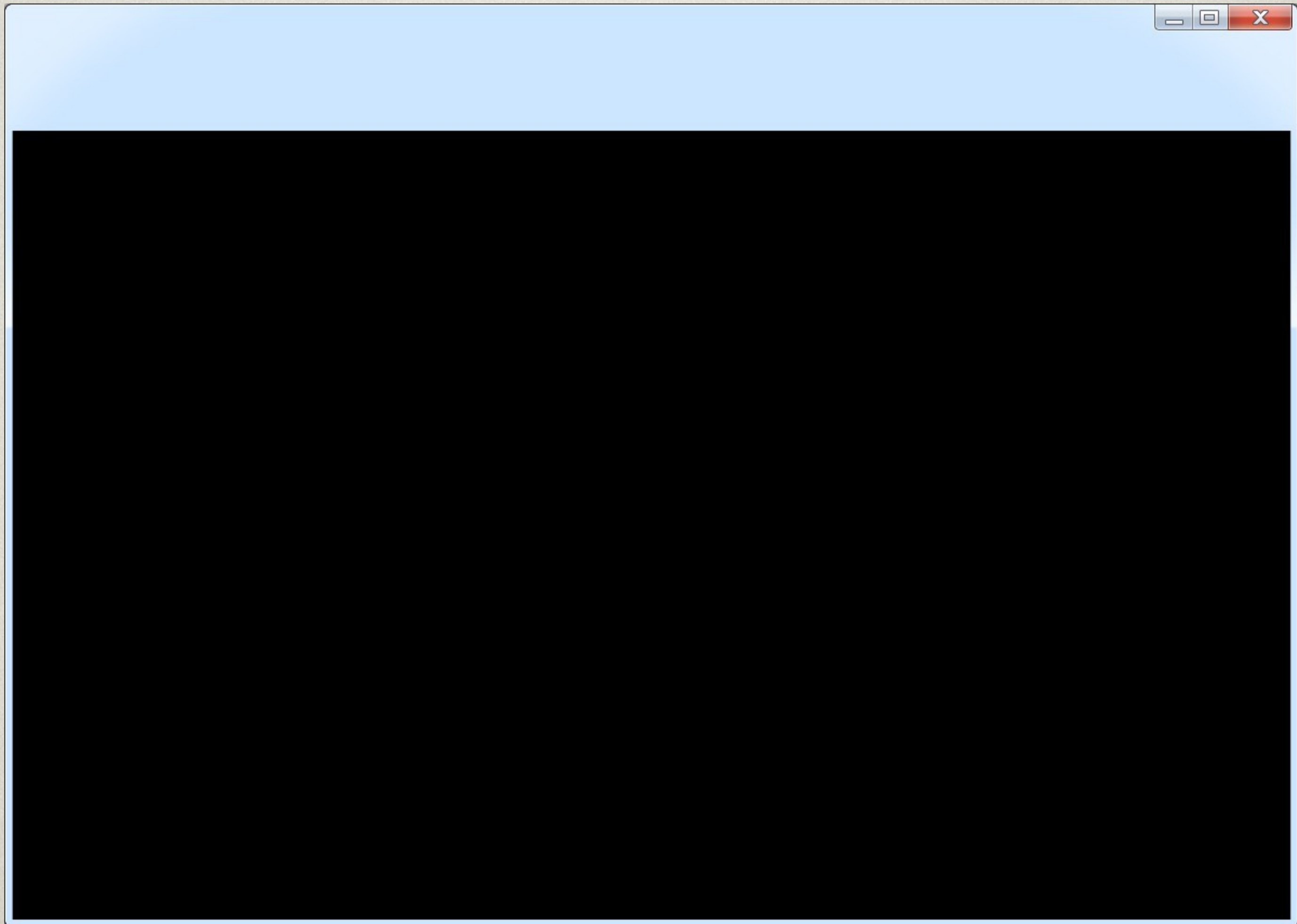
- Our final RC has shipped to Beta pop
- Collect feedback from users, crash data
- Checking for ADP crash or other last-minute risk
- Sign off for release
- Release notes prepared and reviews
- Merge branches, kick off Beta 1 of version.next
- DevEd updates disabled for the week

Release Day

- Published Tuesday at 15:00 European time
- Updates only enabled for 25% users for 24 hrs
- Start watching Bugzilla, Input, crash data

Post-Release Feedback

- Even with all that, we have had failures



Post-Mortem: OMTC

- Example : OMTC « Off-main-thread compositing »
 - Enabled on Mac OS X for a while (Firefox 24)
 - Enabled on Windows during the 33 cycle
 - A few top crashers fixed during the aurora & beta cycle
 - Sign off of all teams for the 33 release
 - For some users, black screen instead of Firefox

What Happened: OMTC

- Some graphic drivers are older, not supported
- We can't test on all devices/systems
- Our telemetry didn't catch any issues
- Our aurora/beta users probably update their graphic drivers and/or user newer ones
- Hard identifying the signal from the noise
- Some users who had the bug think « it is so big that someone will already have reported this »

Lessons Learned: OMTC

- Potential solutions :
 - Do more testing on older devices
 - Get more data of users configurations (graphic cards, drivers versions, etc)
 - Could there be an automated test for a black screen?

Big Picture – Train model

- A feature « foo » lands in nightly
- Natural conflict :
 - Push new feature to advance the web
 - VS
 - More time developing and iterating on quality
- Nightly and DevEd do not have as many users as beta
- Features really get tested in beta first
 - Best case : The developer debugs code he/she wrote 6 weeks ago
 - Worst case : 18 weeks ago

What works - Train model

- Releases are no longer a “big deal”
- Missing a train is also not a “big deal”, less pressure to push features that aren't ready
- Flags for enabling/disabling help get test coverage over a few cycles on any release channel
- Small changes can have impact - shorten update throttling, push out more betas
- Successfully slows the incoming changes before release



More ?

Don't miss the Mozilla devroom tomorrow

Room UD2.218A - 9:00 to 17:00

- What's new in Firefox?
- The Future of JavaScript
- Servo (the parallel web browser) and YOU!
- Privacy features for Firefox for Android
- And other cool talks

mozilla

Questions ?

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