

From Chaos to Order (and back!):  
How thousands of people  
collaborate on a global scale to  
create Firefox

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Mozilla Europe



Mozilla  
**Firefox**<sup>™</sup>

# What is Mozilla?



# The Mozilla project

- We build software
  - Firefox, anyone?
- We build communities
  - 75 languages for Firefox 3.5.
  - 800,000 Beta testers
  - 300 million active users
- **We have a vision of the Internet**



**Firefox**<sup>®</sup> 3.5





This isn't it





nor this...

# The Mozilla Manifesto 1/2

- The Internet is an **integral part of modern life** – a key component in education, communication, collaboration, business, entertainment and society as a whole.
- The Internet is a **global public resource** that must remain **open and accessible**.
- The Internet should **enrich** the lives of individual human beings.
- Individuals' **security** on the Internet is **fundamental** and cannot be treated as optional.
- Individuals must have the ability to **shape their own experiences** on the Internet.



# The Mozilla Manifesto 2/2

- The effectiveness of the Internet as a public resource depends upon **interoperability** (protocols, data formats, content), **innovation** and **decentralized participation** worldwide.
- **Free and open source software** promotes the development of the Internet as a public resource.
- Commercial involvement in the development of the Internet brings many benefits; a **balance between commercial goals and public benefit** is critical.
- Magnifying the public benefit aspects of the Internet is an important goal, worthy of time, attention and commitment

<http://www.mozilla.org/about/manifesto>

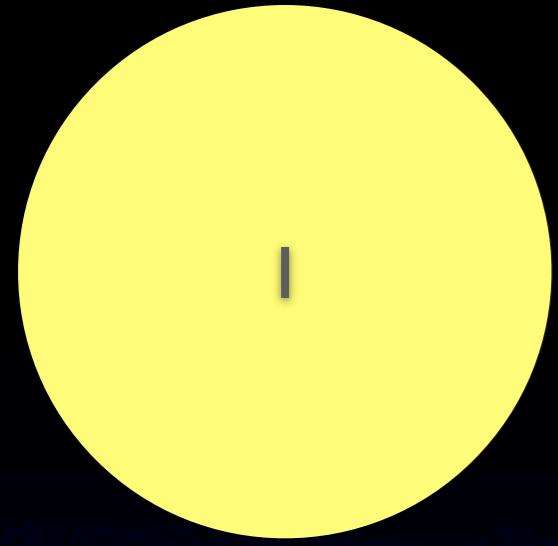
What I'll focus on  
today:

**Decentralized  
Participation**



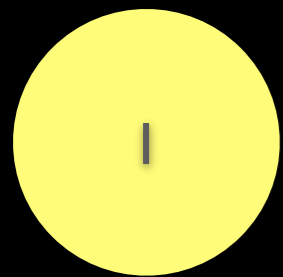
How does the Mozilla  
project work?  
*Mass participation*





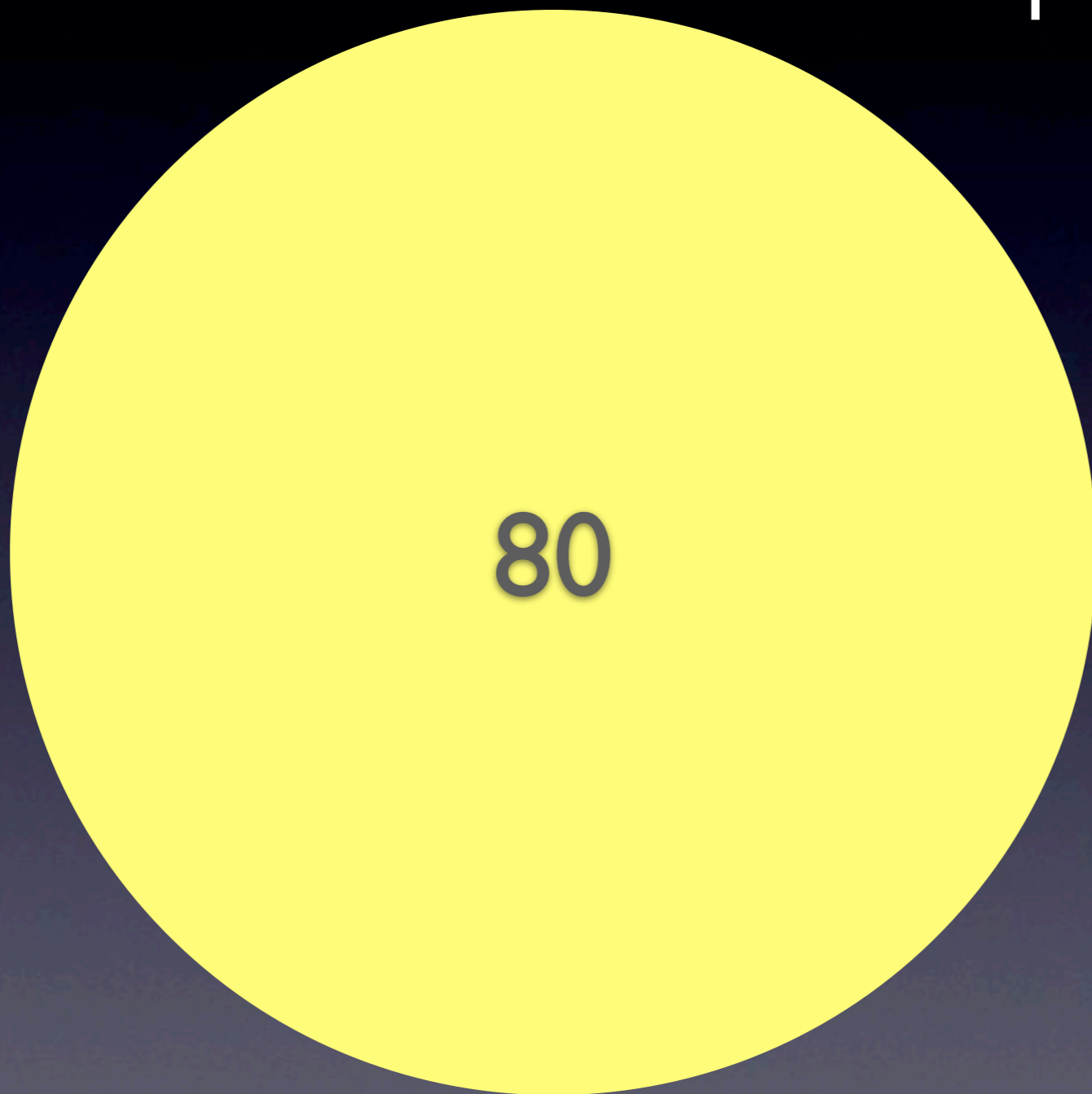
VP of Engineering





VP of Engineering

# Mozilla Corporation Development Team





VP of Engineering

Mozilla Corporation  
Development Team



80



100s

Daily  
Contributors



Mozilla Corporation  
Development Team

80

Daily  
Contributors

100s

# Contributors

1000s

Daily  
Contributors



Contributors

Nightly testers

10,000s



Daily  
Contributors

Contributors

Nightly testers

10,000s

Beta testers

1,000,000

Contributors

Nightly testers

Beta testers

IM

# Daily users

(approx 330M)



Mozilla

**Firefox**™

37% of the code contributed  
to Firefox since November '06  
has come from the community



# From Chaos to Order



# Chaos

Anyone can propose a change

<a href="#">Bug #</a>	<a href="#">Dupe Count</a>	<a href="#">Change in last 30 day(s)</a>	<a href="#">Component</a>	<a href="#">Severity</a>	<a href="#">Op Sys</a>	<a href="#">Target Milestone</a>	<a href="#">Summary</a>
<a href="#">247116</a>	64	5	Toolbars	normal	All	---	Web pages bounce/shake/jump when "Bookmarks Toolbar Items" is empty and placed to right of menu bar
<a href="#">319196</a>	115	4	Startup and Profile System	blocker	Windows XP	Firefox 3 beta1	customized toolbar always reset to default on restart, bookmarks and search engines lost, unable to add search engines (localstore.rdf corruption on upgrade or crash). SEE URL FIELD FOR SUPPORT LINK
<a href="#">351819</a>	9	2	Extension/Theme Manager	normal	All	---	When installing an incompatible extension that is made compatible via its update rdf the Restart button is not enabled
<a href="#">334065</a>	8	2	Menus	normal	Mac OS X	---	Click and hold / Long mouse click brings up no right click / ctrl click / context menu.
<a href="#">311438</a>	19	2	Toolbars	normal	All	---	Blank strip or bar appears in top chrome over time, or when dragging tabs
<a href="#">283697</a>	33	2	Preferences	normal	All	Firefox 3 beta1	Firefox Options (Preferences) panels are cropped (cut off)
<a href="#">260553</a>	11	2	Bookmarks	major	Windows XP	---	Bookmarks disappear after power outage and/or crashes
<a href="#">253331</a>	7	2	Search	normal	Windows XP	---	Search bar's text should be cleared after a search is performed
<a href="#">220932</a>	9	2	Bookmarks	normal	Windows NT	---	Can't delete "Bookmarks Toolbar Folder"
<a href="#">195031</a>	30	2	Bookmarks	normal	All	Firefox 3 beta1	Bookmarks menus should be sticky (should remain open in some cases)
<a href="#">375710</a>	7	1	Software Update	major	Windows XP	---	Firefox wants to downgrade to 2.0.0.2 from 2.0.0.3
<a href="#">370219</a>	6	1	Software Update	normal	Windows XP	---	add xpicleanup.dat to removed-files.in on trunk and MOZILLA_1_9_BRANCH



# Chaos

Anyone can *comment* on a proposal for a change

**Bug 18574 (mng) – restore support for MNG animation format and JNG image format (edit)**

Status

[Cosmin Truta](#) 2003-06-06 19:09:11 PDT

Comment [#101](#) [reply]

Severity

Private

Keywords

Since G

White

not  
restore

URL:

I am tr  
but I c  
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Cosmin

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Version

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OS:

I've ju  
the MNG  
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to unde  
8kbytes  
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Target

Milest

[Glenn Randers-Pehrson](#) 2004-06-08 17:58:10 PDT

Comment [#456](#) [reply]

Private

Re [comme](#)

[Gerard Juyn](#) 2007-03-28 07:00:38 PDT

Comment [#725](#) [reply]

Private

[Peter W](#)

Private

I am run  
--enable  
and Linu  
display  
official  
to the 1  
anyway i  
1. The f  
<http://w>  
appear w  
backgrou  
backgrou

I'm just restarting this comment for the 59th time in the last week or so.....

Can we please all agree that this is going nowhere? The decision not to support MNG natively has been made and we have been offered an alternative. The big question is only, is it a workable alternative and who has the ability/time to spend on building it? Since it's proposal I haven't been made aware of any new bugs opened to even start this thing. If they have then please let me know as I'd like to listen in :-)

Now as for APNG, can we please move that discussion to [bug 257263](#) and let this one rip? There are some things that people need to be aware of that are not getting addressed on here, because it would definitely defeat the purpose of a bug repository. (although I personally think good ol bugzilla is a little more than that)

The short story (but again please go to [bug 257263](#) for the long story):



# Chaos

Anyone can submit a change to the code

```
Index: browser/base/content/browser.js
=====
RCS file: /cvsroot/mozilla/browser/base/content/browser.js,v
retrieving revision 1.777
diff -u -8 -p -r1.777 browser.js
--- browser/base/content/browser.js      13 Apr 2007 01:26:38 -0000      1.777
+++ browser/base/content/browser.js      14 Apr 2007 23:36:20 -0000
@@ -1818,16 +1818,18 @@ function addBookmarkForBrowser(aDocShell
     title = url;
   }
   BookmarksUtils.addBookmark(url, title, charSet, aIsWebPanel, description);
 }
#endif

function openLocation()
{
+  if (window.fullScreen)
+    FullScreen.mouseoverToggle(true);
  if (gURLBar && isElementVisible(gURLBar)) {
    gURLBar.focus();
    gURLBar.select();
    return;
  }
#ifdef XP_MACOSX
  if (window.location.href != getBrowserURL()) {
    var win = getTopWin();
@@ -3090,16 +3092,18 @@ const BrowserSearch = {
    win = window.openDialog("chrome://browser/content/", "_blank",
```

[Edit Attachment As Comment](#) | [View Attachment As Diff](#)

# Order

Not everyone can *approve* a change





# Order

Strong leadership structure  
Mike Beltzner, Director of Firefox





# Delegating authority: Module Ownership

- A Module is a collection of source files that form a coherent bundle.
- An Owner is the person in charge of a Module.
- A Peer is a person whom the Owner has designated to help maintain the Module
- If a Module has an Owner, the Owner or a Peer should in general review all code changes that go into that module.

# Order

Multiple Code Reviews

# Order

## Multiple Code Reviews

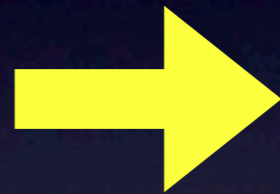
Submit  
Patch  
(anyone)



# Order

## Multiple Code Reviews

Submit  
Patch  
(anyone)



Module Owner  
Code Review

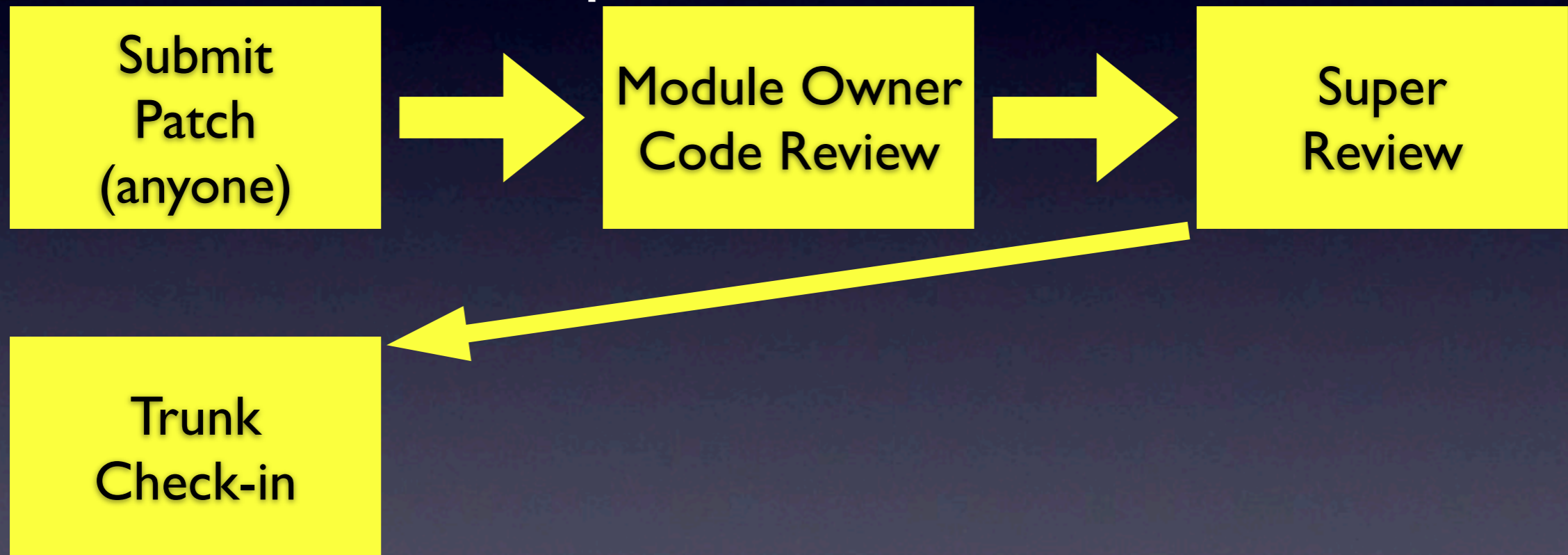
# Order

## Multiple Code Reviews



# Order

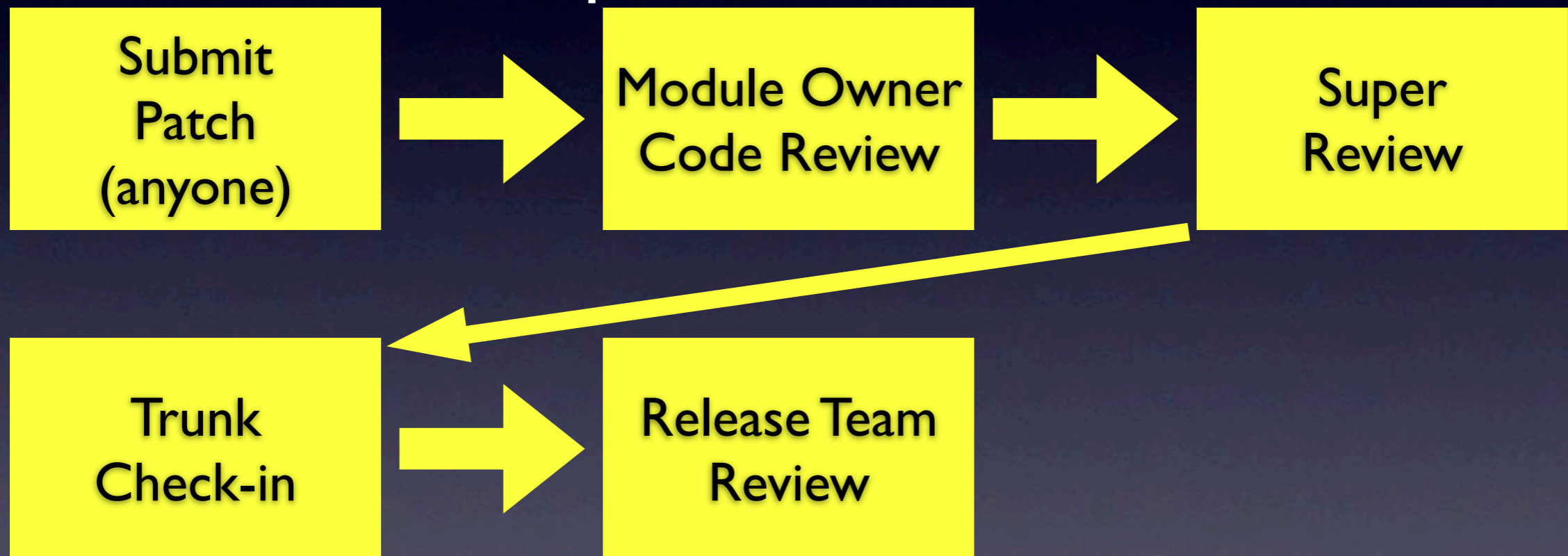
## Multiple Code Reviews





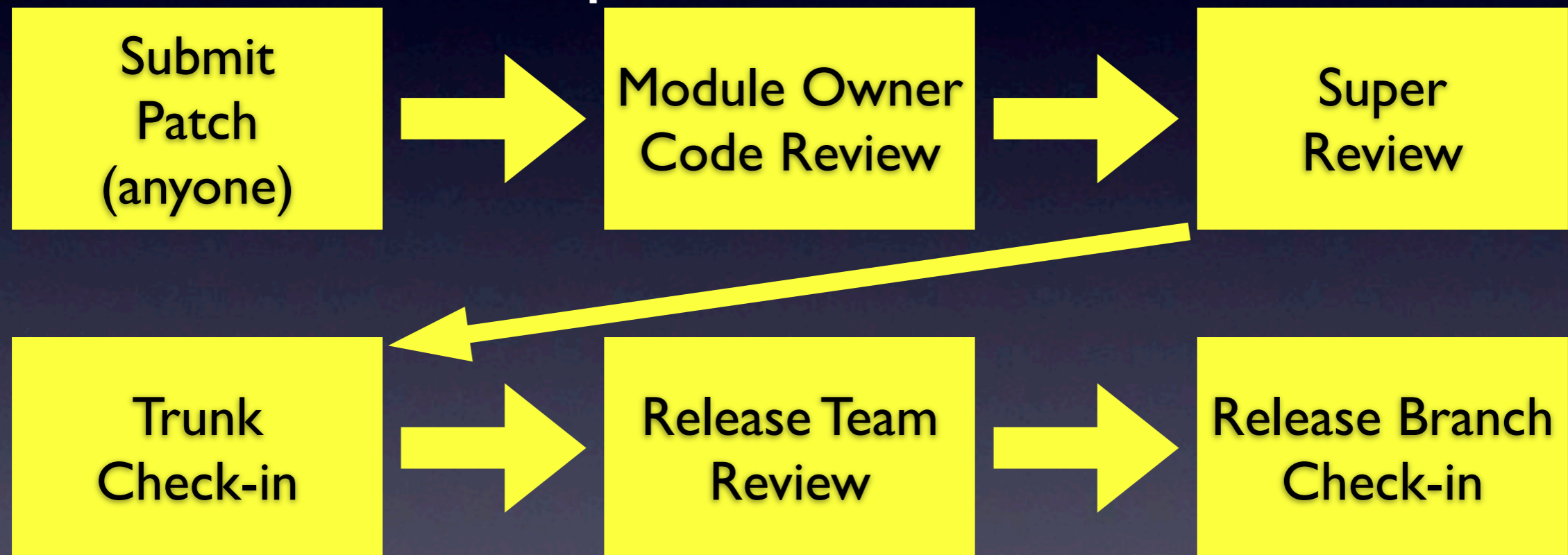
# Order

## Multiple Code Reviews



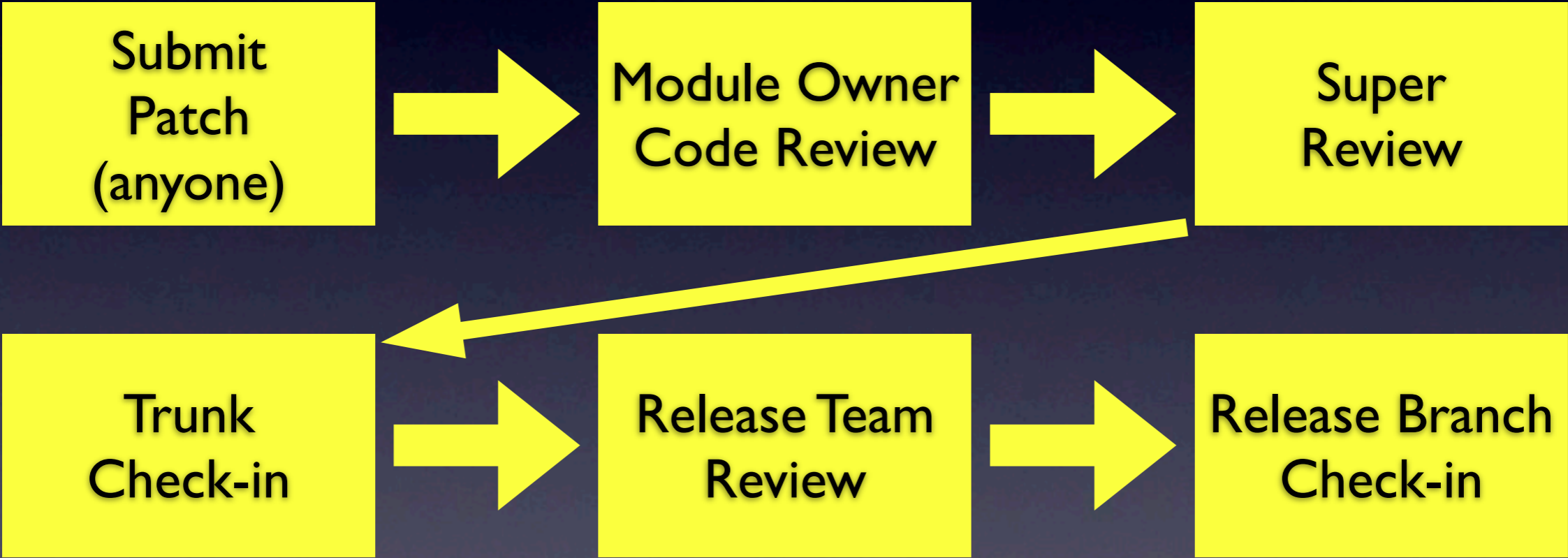
# Order

## Multiple Code Reviews



# Order

## Multiple Code Reviews



Mozilla  
**Firefox**



What about  
innovation?



# Issue: the process limits participation

- Steep learning curve
- Difficult to share experiments between users
- Release cycle getting in the way





mozilla

Register or Log in

Other Applications ▾

# Add-ons *for* Firefox

1,495,784,843 add-ons downloaded

167,519,712 add-ons in use

## Categories

within

Advanced ▾

Alerts & Updates 603

Appearance 693

Bookmarks 731

Download Management

344

Feeds, News & Blogging

674

Language Support 364

Photos, Music & Videos

543

Plugins 7

Privacy & Security 475

Social & Communication

851

Tabs 258

Toolbars 726

Web Development 821

## Plan business trips and unforgettable vacations



### Lonely Planet

Search through Lonely Planet's travel guides.

+ Download Now



### ScribeFire Blog Editor

ScribeFire is a full-featured blog editor that integrates with your...

+ Add to Firefox recommended



### 1-ClickWeather

1-ClickWeather for Firefox enables users to quickly view current weather...

+ Add to Firefox recommended

Like these? Find related add-ons in the [Traveler's Pack](#) collection.

Introduction

Social

Family

Travel

Reference

Web Development

# Solution: Add-ons



# Add-ons

- Little interference with release cycle
- Lower (technical) barrier to entry
- Ability to share prototypes with others
- Long tail of innovation
- Best ideas may be featured in a future version of Firefox (if useful for a majority and not introducing complexity)



# Add-ons examples

- **Weave**: synchronizing user profiles across several Firefox instances (including mobile)
- **AdBlock+**: blocks advertising
- **Flashblock**: blocks Flash applets
- **CustomizeGoogle**: adds features to Gmail, remove redirects from search results
- **MassPasswordReset**: makes it easier to change your corporate password
- **BetterPrivacy**: removes ad-related tracking cookies
- **ThiTan**: Shortcut to create a wiki link and puts it into the clipboard



# Issue: (even) more people could participate

- Despite add-ons, the learning curve is still too steep
- Non technical people are less likely to participate. What about designers?
- 330 million users, but only several thousand participants. How can we extend the reach of participation?





# Enter Mozilla Labs

- Encourage Open Innovation through participation
- Monthly events IRL
- Dozens of experiments
- Organizing Contests
- Forums to encourage discussion and information sharing



# Ubiquity

- “An experiment of connecting the Web with language”
- A command-line to interact with the Web
- Ability to easily create “verbs” to extend Ubiquity’s vocabulary and power.





# Add-ons by Web devs

- Simple set of APIs enabling Web developers to create add-ons
- Lower barrier to entry, enable more participation





# Personas: theming for non-tech users



mozilla Labs  
**Personas**

Gallery

Create  
Your Own

How To

Frequent  
Questions

## What will your browser wear today?

*Personas are lightweight, easy-to-install and easy-to-change "skins" for your Firefox web browser.*

**Get Personas for Firefox - Free**



Firefox Add-on for Windows, Mac or Linux



# Mozilla Creative Collective

- Grow the graphic design community
- Enable community-generated artwork





# How can *you* participate?

- Use Firefox
- Use add-ons - [addons.mozilla.org](http://addons.mozilla.org)
- Spread the word  
[spreadfirefox.com](http://spreadfirefox.com)
- Give us feedback - <http://hendrix.mozilla.org/>
- Write an Add-on  
[developer.mozilla.org](http://developer.mozilla.org)
- Become a contributor







Thank you!

[nitot@mozilla-europe.org](mailto:nitot@mozilla-europe.org)