Firefox 4

Wait - what happened to Firefox 3.7?

- Firefox 3.7 primarily motivated by out of process plugins

- UX team suggested longer "bake time" for theme update

- Jetpack reboot removed dependency pressures

- New engineering capabilities allowed for back-porting

- We turned Firefox 3.7 into Firefox 3.6.4

Wait - what happened to Firefox 3.7?

The primary goal for Firefox 3.7 was out of process plugins, which will be shipped to users in Firefox 3.6.4
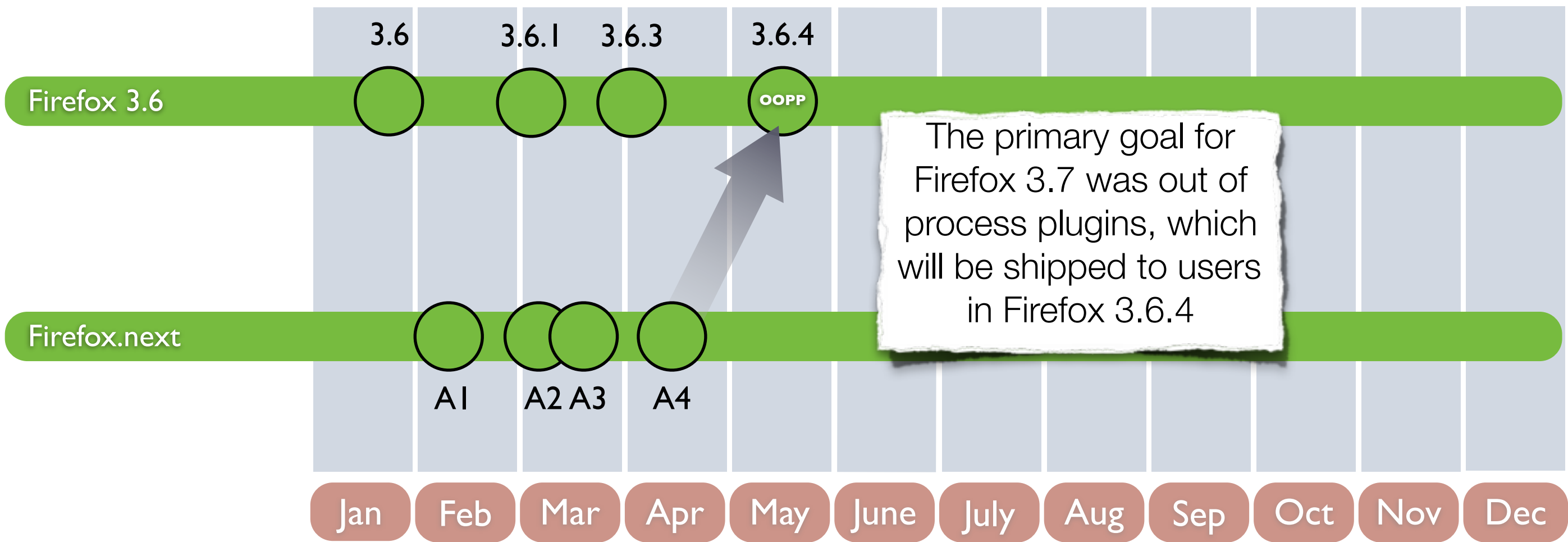
Firefox 4

4

Firefox 4 - Motivation

1. Who uses Firefox?

2. What are those people trying to do?

3. How can Firefox be the best tool for the job?

4. What does Firefox need to succeed?

5. How can Firefox help lead the Open Web forward?

Firefox 4 - Motivation

- Who uses Firefox?

  - End users (early adopters, mainstream)

  - Web developers (early adopters, mainstream)

  - Firefox developers (wait - that's us!)

Firefox 4 - Motivation

- What are those people trying to do?

  - Users: interact, create, find, learn, experience, control

  - Developers: build, create, express, impress, reach

How can Firefox be
the best tool for this?

What does Firefox
need to succeed?

How can we lead
the Open Web?

Firefox Themes

for users...

Fast, friendly and empowering

Simpler, cleaner, faster navigation

Control your relationship with websites

Personalize and customize

for web developers...

Tools for capable, fast Web apps

New HTML5 / Web technologies

Native multimedia capabilities

Great developer tools

a technology base that's...

Fast, secure, optimized

Faster JS, DOM, and UI

Stable & secure by design

Optimized for today's hardware

8

Firefox 4 - Plan for Users

Fast, friendly and empowering

Simpler, cleaner, faster navigation

Control your relationship with websites

Personalize and customize

New, sleek, simpler default theme
    Fewer user interface controls
    Fewer pixels between user and content
Performance optimizations (user experience)
    User experience improvements
    No more modal dialogs
    No interruptions at startup
    Updates apply in the background
Faster navigation for today's web users
    Switch to tab
    Dedicated "application tabs"
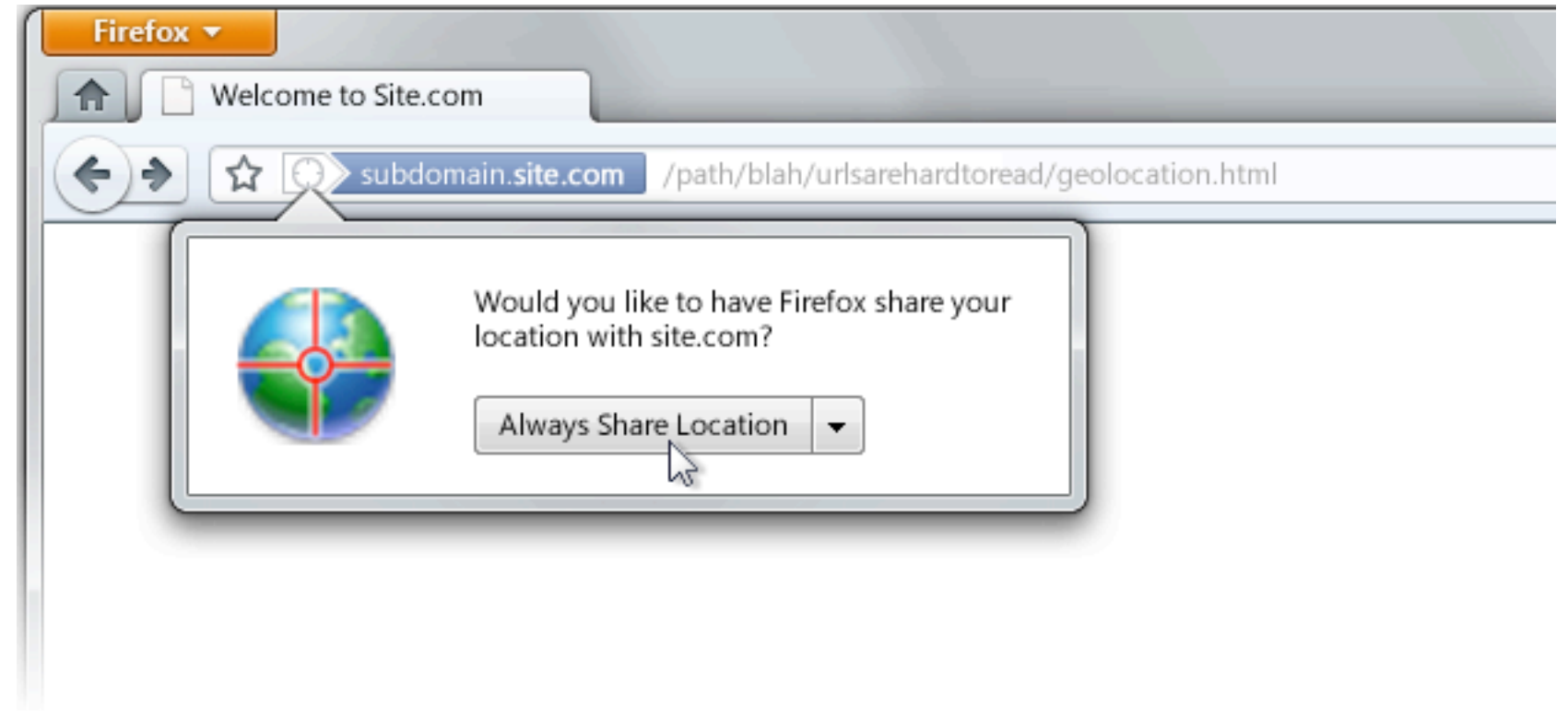   Tab Candy

**PLANS
MIGHT
CHANGE
(please don't overreport)**

PLANS MIGHT CHANGE (please don't overreport)
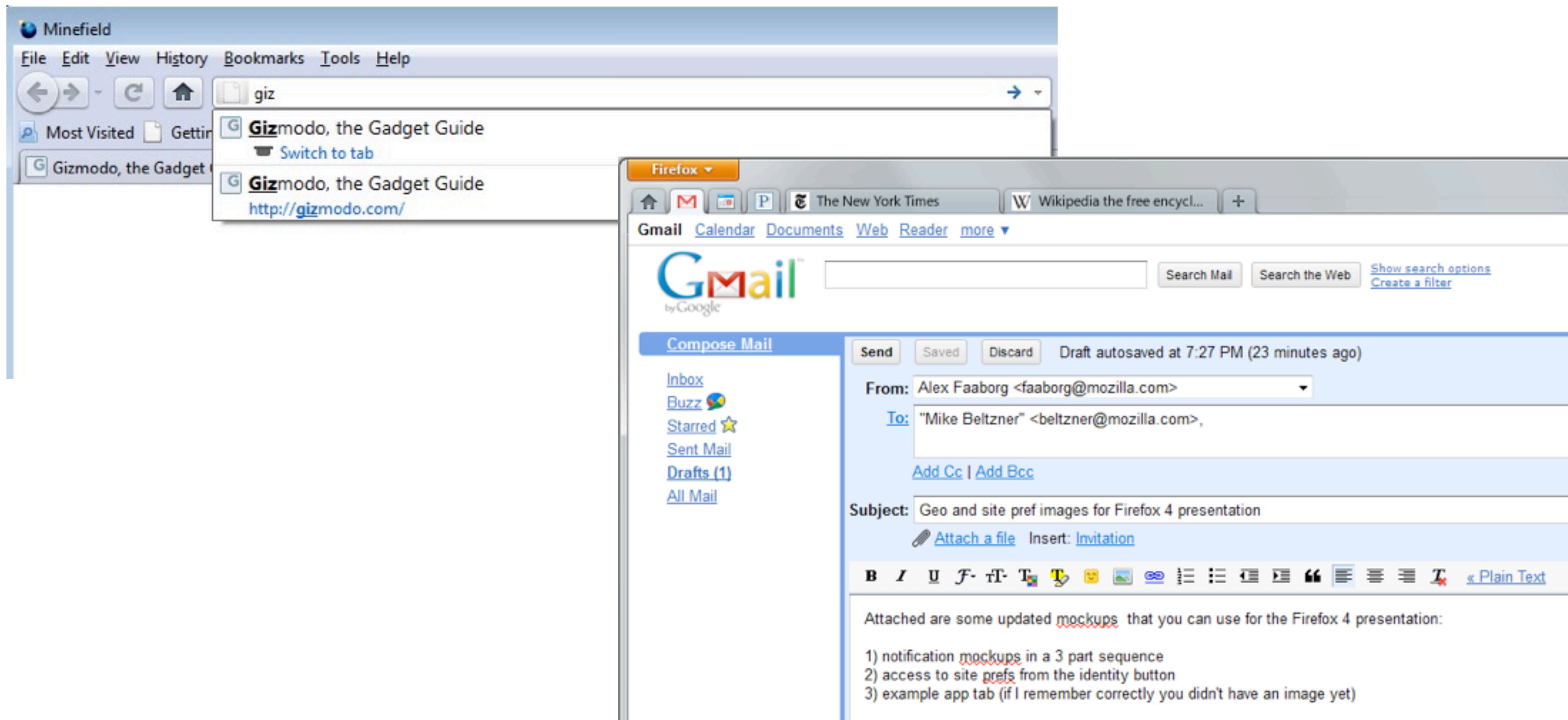
Simpler, cleaner, faster navigation | New sleek, simpler default theme

mercredi 12 mai 2010

Simpler, cleaner, faster navigation | Performance optimizations

PLANS MIGHT CHANGE
(please don't overreport)

Simpler, cleaner, faster navigation

Faster navigation for today's web users

Firefox 4 - Plan for Users

Fast, friendly and empowering

Simpler, cleaner, faster navigation

Control your relationship with websites

Personalize and customize

Simple, powerful control over websites' permissions
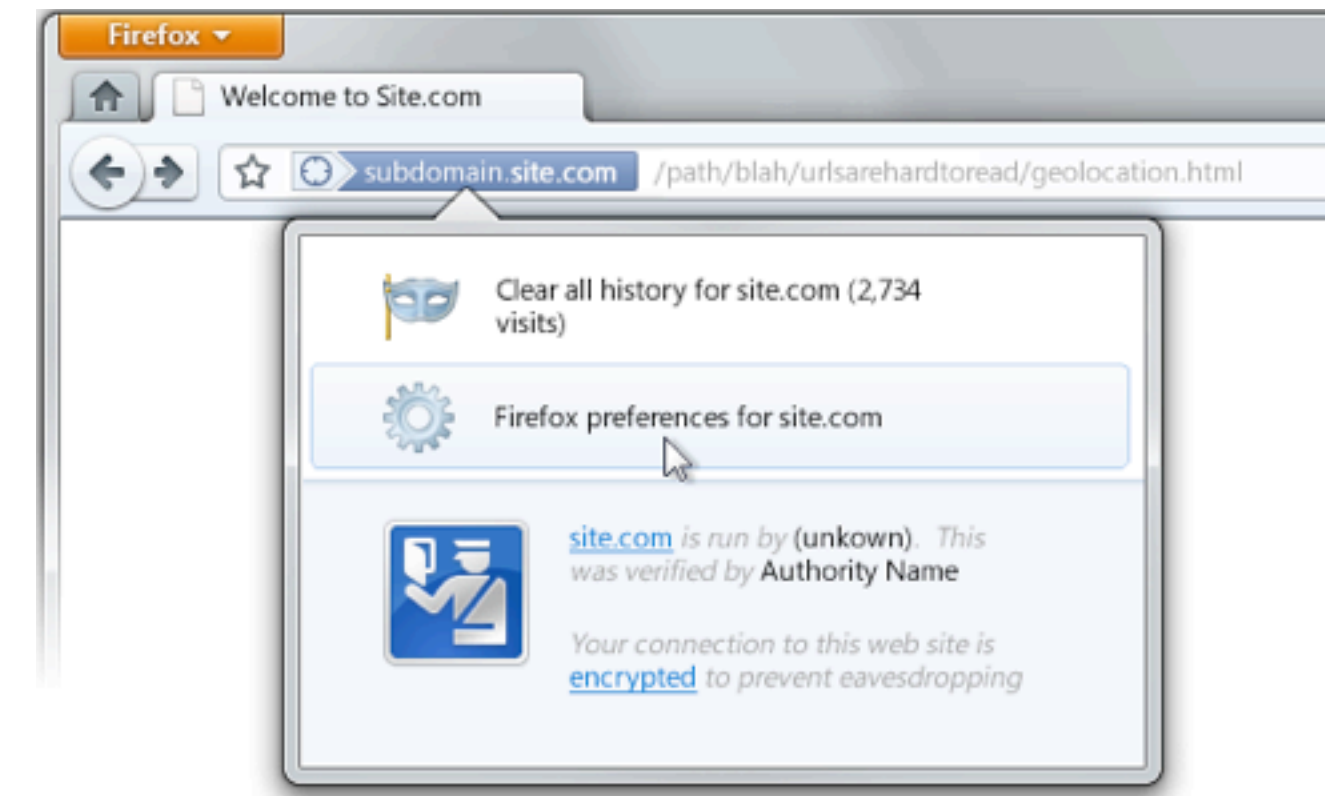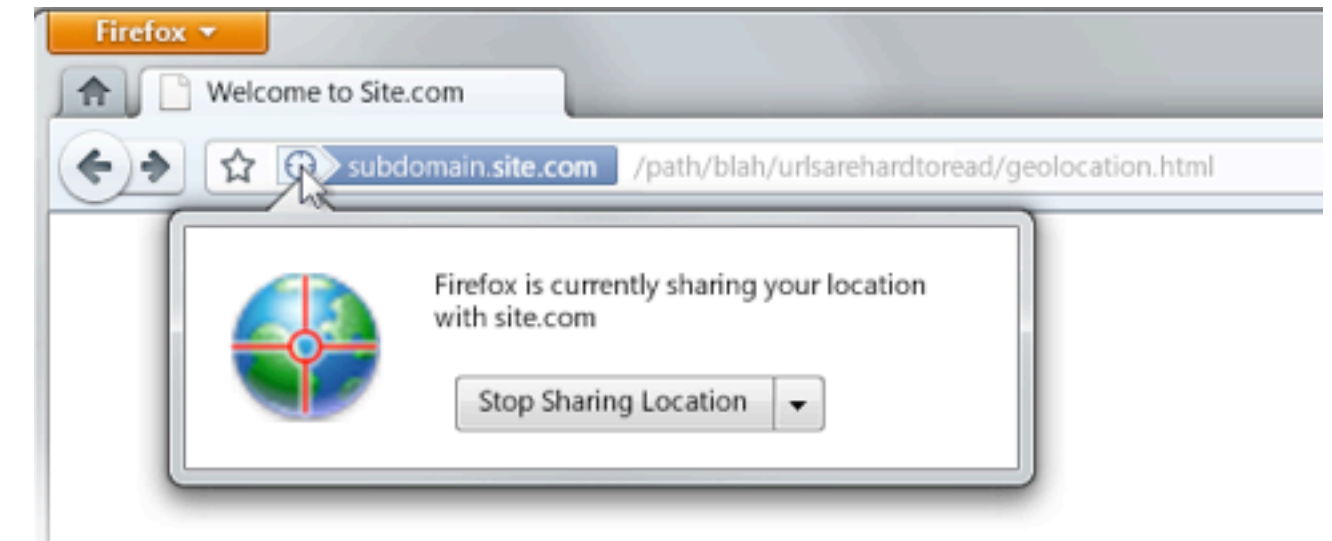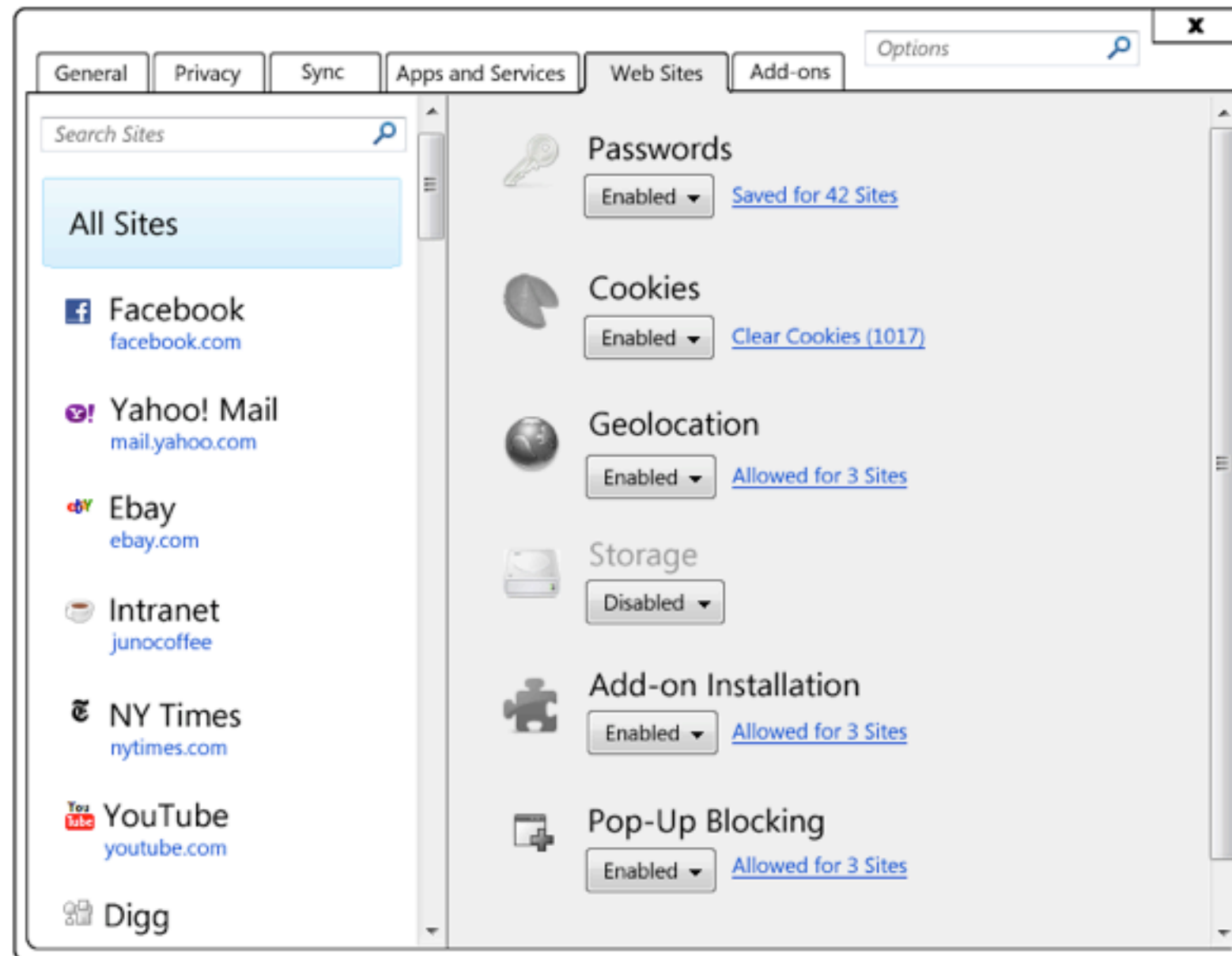One-click overview of user/site relationship
Backup and share user data with Firefox Sync
Single click sign on to websites

PLANS
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(please don't overreport)

Managing your relationship with websites

PLANS MIGHT CHANGE (please don't overreport)

Firefox 4 - Plan for Users

Fast, friendly and empowering
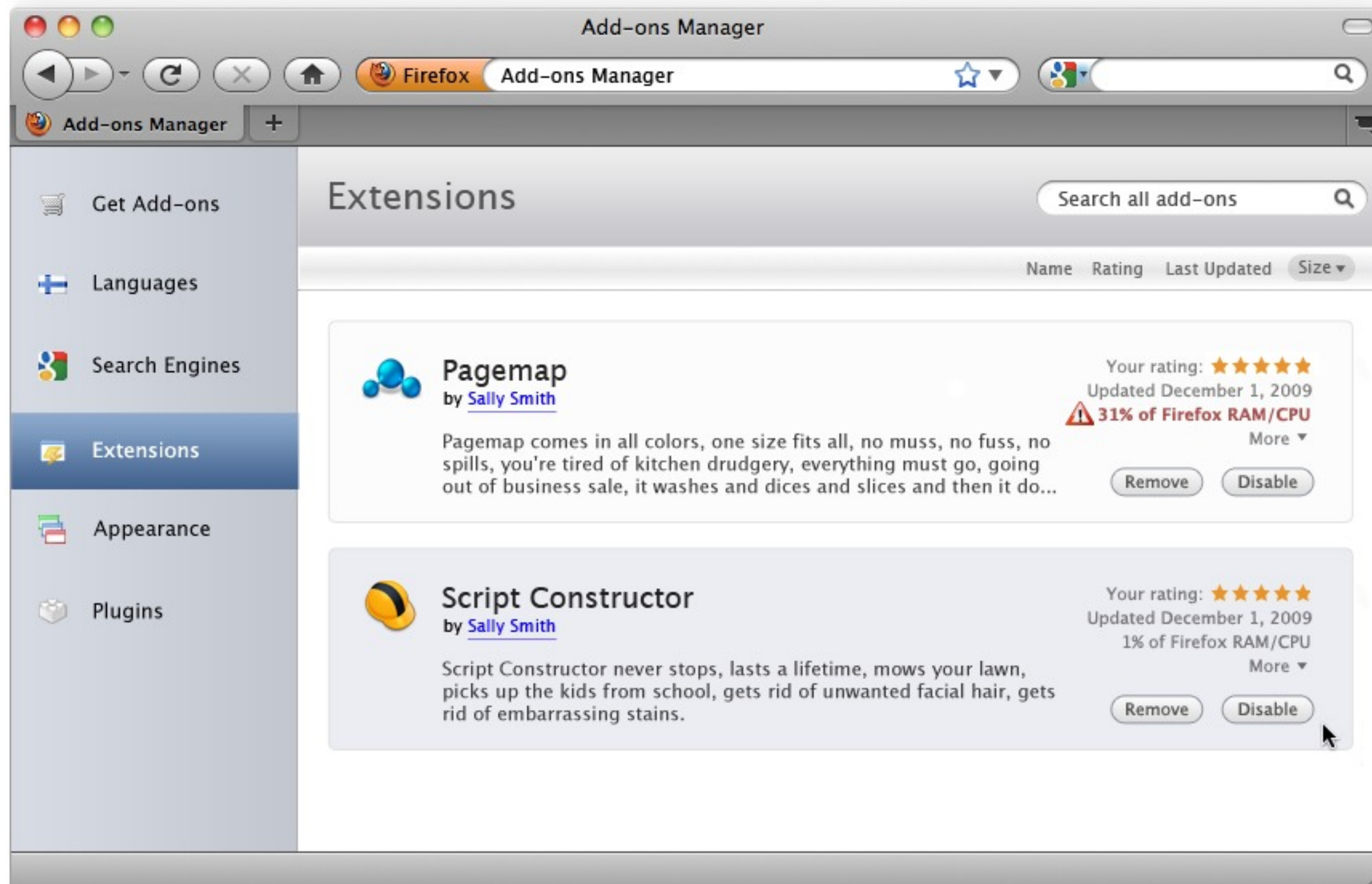
Simpler, cleaner, faster navigation

Control your relationship with websites

Personalize and customize

New customization management interface
Easier to discover and find relevant add-ons
Install add-ons without restart
Jetpack based add-ons running out of process

PLANS
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CHANGE
(please don't overreport)

PLANS MIGHT CHANGE
(please don't overreport)

Personalize and customize | New Add-ons Manager

Firefox 4 for Users: Risks and gaps

Theme	Current Projects	Gaps & Risks
Simple, clean fast navigation	• Started theme changes on trunk • Switch-to-tab on trunk, "App Tabs" work started • Work begun to remove modal dialogs • Work planned for updater improvements • User experience performance issues identified	• Need to prioritize and resource user experience performance issues • Need to identify measurements & targets for performance issues • Need to address performance problems from dirty profiles
Giving users control & ownership	• Designs for user control over permissions started • Weave planning to be ready for first beta • Account Manager evaluation version released	• Must quickly finalize use cases and designs for permissions manager • Must resource permissions manager work • Solid Weave integration plan • Account Manager specification still in flux
Full ability for customization	• New extension manager landed • Jetpack work underway • New AMO interactiveness plans begun	• Compatibility issues from API changes • Evangelism of Jetpack and API changes

PLANS MIGHT CHANGE
(please don't overreport)
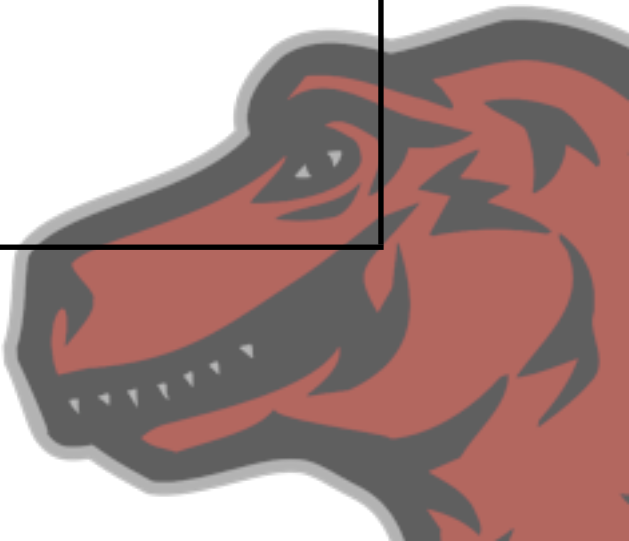
Firefox 4 - Plan for Web Developers

Bidirectionally connected apps (Websockets)
Better AJAX-y interactions (PushState)
New interactions (gesture & multi-touch)
Easier layout and styling (CSS3)
HTML5 Parser (HTML5)
Content creation (contentEditable, HTML5 forms)
Structured data storage (IndexedDB)

Tools for capable, fast Web apps

New HTML5 / Web technologies

Native multimedia capabilities

Great developer tools

PLANS MIGHT CHANGE (please don't overreport)

Firefox 4 - Plan for Web Developers

Tools for capable, fast Web apps

New HTML5 / Web technologies

Native multimedia capabilities

Great developer tools

Animation of web content (CSS Transitions, SMIL)
Animation API (RefreshDriver)
High quality native video playback (<video>)
High quality native audio playback (<audio>)
Faster 2D drawing (<canvas>)
Fullscreen API
3D capabilities (WebGL)

**PLANS
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CHANGE**
(please don't overreport)

Firefox 4 - Plan for Web Developers

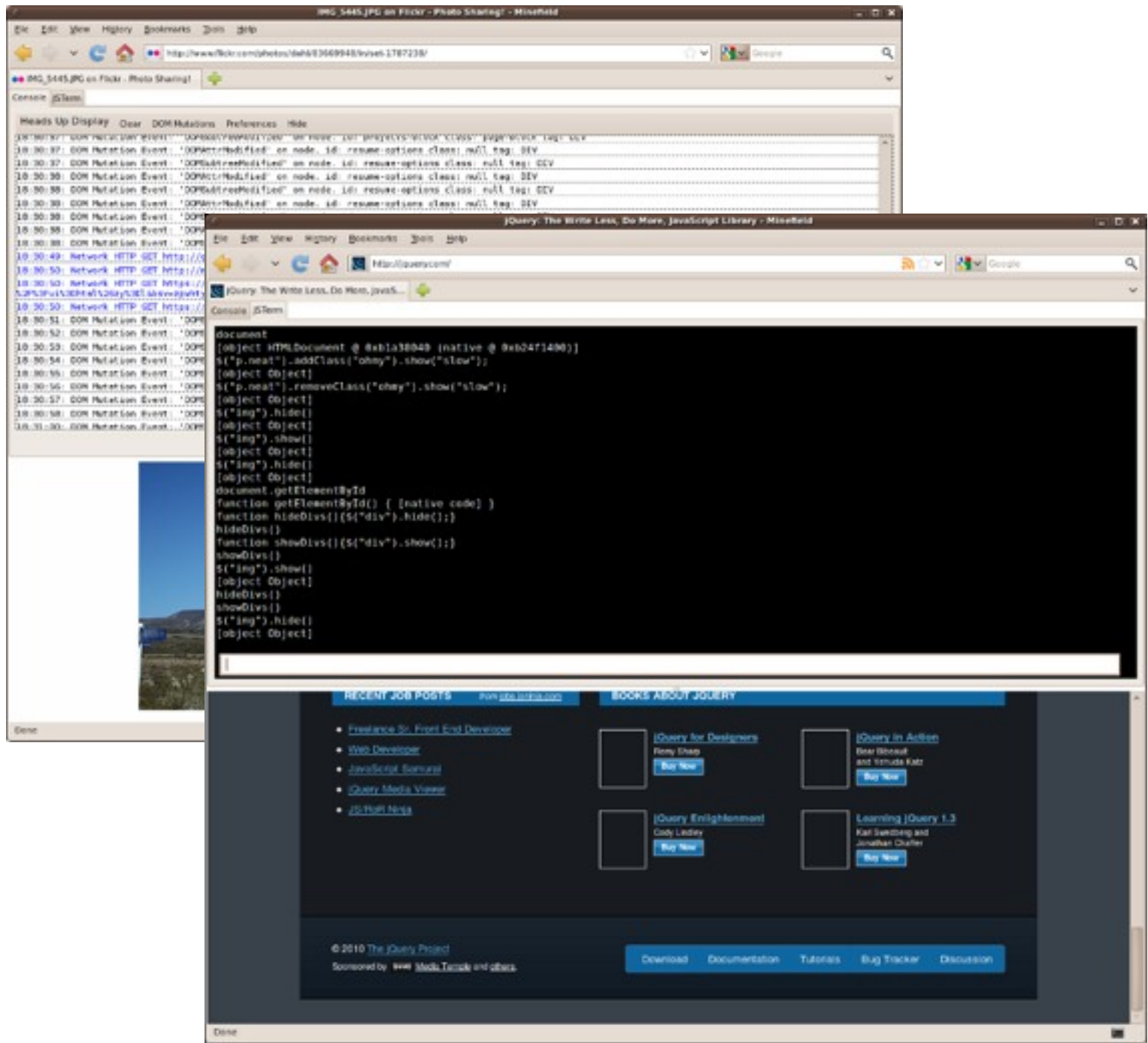Tools for capable, fast Web apps

New HTML5 / Web technologies

Native multimedia capabilities

Great developer tools

Firebug compatibility
Remote JavaScript Debugger
Web Console
Web Inspector
New profile manager
Timer API
Memory Diagnostic Tools

**PLANS
MIGHT
CHANGE**
(please don't overreport)

Great developer tools | Console, Inspector

Firefox 4 for Web Developers: Risks and gaps

Theme	Current Projects	Gaps & Risks
New HTML5/Web Technologies	• CSS3, HTML5 implementation (partial) • WebSockets, CSP, PushState implementation mostly complete • Multitouch Gestures in DOM underway • IndexedDB spec & implementation • contentEditable bugfixes, HTML5 forms project specified	• Need to prioritize and evangelize based on web developer need • IndexedDB specification unlikely to be finalized • contentEditable / HTML5 form work likely to be partial • decisions on shipping implementations of unfinished specifications
Native multimedia capabilities	• CSS3, SMIL and RefreshDriver for controlling animation • updated native video support • Fullscreen API specified • WebGL implementation started, resourced	• Our CSS syntax maps to W3C, doesn't match WebKit • video codec path under investigation • WebGL underresourced, driver requirements risky • some user control issues with fullscreen API
Great developer tools	• Web Console and Web Inspector work started • about:memory partially implemented • Firebug compatibility tracking • JSD2 planned, work starting	• Inspector is behind schedule • Console is not as visually appealing as WebKit tools • about:memory needs additional resources • Profile Manager is unowned

PLANS MIGHT CHANGE
(please don't overreport)

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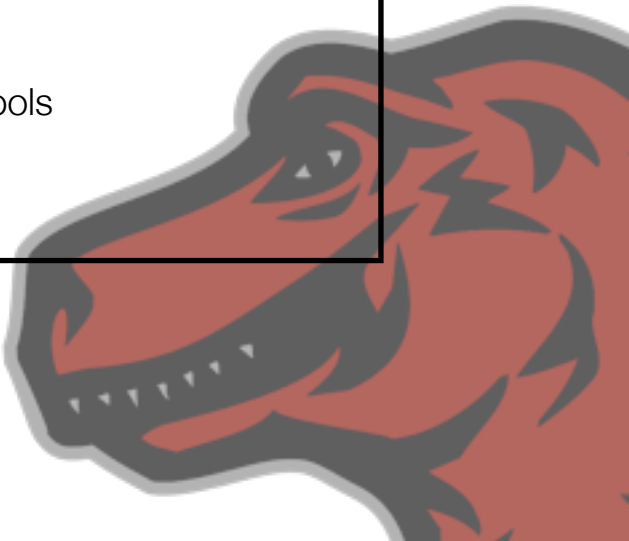
Firefox 4: Plan for Platform

JägerMonkey
HTML5 Parser off main thread
64 bit support
Startup timeline optimizations
Reduced I/O operations on main thread
JS threads and GC
DOM Performance improvements
Layers for compositing, scrolling
Pathological performance investigations

Fast, secure, optimized

Faster JS, DOM, and UI

Stable & secure by design

Optimized for today's hardware

PLANS MIGHT CHANGE
(please don't overreport)

Firefox 4: Plan for Platform

CSP (allowing secure pages)
:visited fix (privacy)
ForceTLS (authenticated login)
CritSmash
Early Security Reviews
PAKE (authenticated login)

Fast, secure, optimized

Faster JS, DOM, and UI

Stable & secure by design

Optimized for today's hardware

PLANS
MIGHT
CHANGE
(please don't overreport)

Firefox 4: Plan for Platform

Graphics compositing with Layers
Hardware acceleration using Direct2D
Multitouch support
Aero Peek integration
OSX integration
Standards for contacts, cameras, microphones

Fast, secure, optimized

Faster JS, DOM, and UI

Stable & secure by design
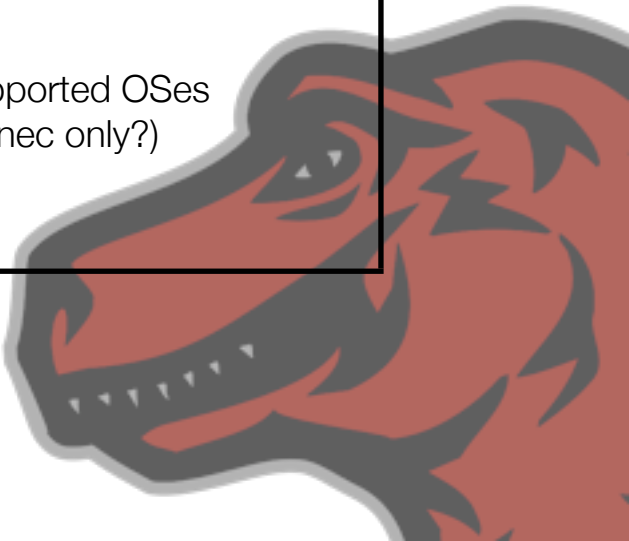
Optimized for today's hardware

**PLANS
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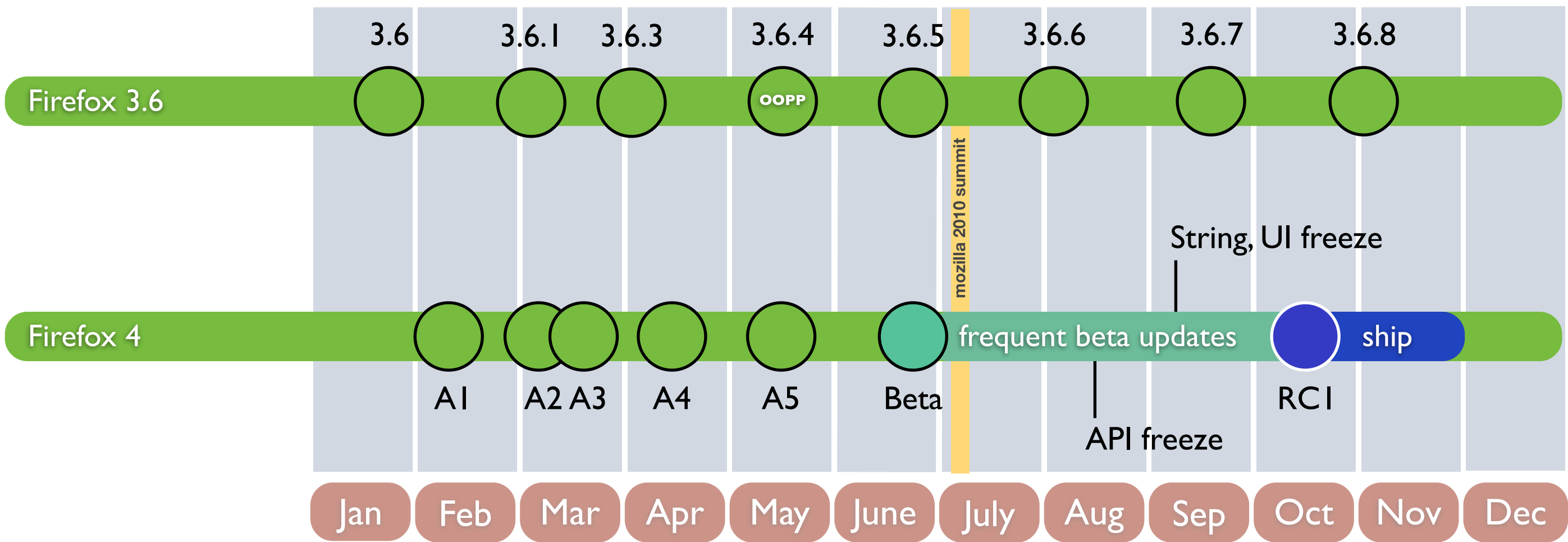CHANGE**
(please don't overreport)

Firefox 4 Platform: Risks and gaps

Theme	Current Projects	Gaps & Risks
Faster JS, DOM and UI responsivness	• JägerMonkey work started • DOM performance improvements begun • JS threads and GC plan in place • Over 50% of I/O off the main thread • Layers for graphic compositing and scrolling improvements	• JägerMonkey targets still under evaluation • DOM performance measurements hard to prove • Our use of cache is potentially holding us back immensely • Several ideas for responsiveness, but all unowned
Stable and secure by design	• :visited change complete • CSP, ForceTLS implementations well underway • CritSmash program tracking to targets	• No sandboxing beyond OOPP for Jetpack and plugins
Optimized for today's hardware	• Direct 2D optimizations • Harfbuzz for text rendering • Multitouch support • Windows 7 feature integration	• Decisions need to be made for supported/unsupported OSes • No plan for Firefox on touch-based devices (Fennec only?) • Need plan for driver hell in Direct2D space

PLANS MIGHT CHANGE
(please don't overreport)

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Firefox 4: Release Milestones

Firefox 3.6

3.6   3.6.1   3.6.3   3.6.4 (OOPP)   3.6.5   3.6.6   3.6.7   3.6.8

mozilla 2010 summit

Firefox 4

A1   A2 A3   A4   A5   Beta   frequent beta updates   String, UI freeze   ship

API freeze   RC1

Jan | Feb | Mar | Apr | May | June | July | Aug | Sep | Oct | Nov | Dec

PLANS MIGHT CHANGE
(please don't overreport)

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Firefox 4 - Beta Program

- Aimed at early adopters and mainstream users

- Frequent updates (14 - 21 days)

- Interactive

- Focused on gathering feedback and data from "the field"

**PLANS
MIGHT
CHANGE**
(please don't overreport)

Firefox 4 - First Beta (OMG**NOT**FINAL**DONOT**QUOTE _{just beltzner's proposal})

- Most of the new theme for user evaluation

- New extension manager for user / add-on developer evaluation

- Tab management improvements, basic application tab support

- HTML5 parser, CSS3 transitions, CSP, WebSockets, :visited

- "Reference" Layers implementation

PLANS MIGHT CHANGE
(please don't overreport)

Firefox Platform: Doing two things at once

- in 2009 and early 2010 we proved that we can split our focus

- once we branch for beta, must have plans in place

- priority will be given to full content/chrome process separation

- will start developing & communicating those plans next month

PLANS MIGHT CHANGE
(please don't overreport)

Firefox 4

project updates mondays @ 11am pt
development tracking tuesdays @ 11am pt
product planning wednesdays @ 11am pt