



mozilla LABS
Jetpack

Next Generation Browser Extensions

Anant Narayanan
FOSS.IN 2009

mozilla LABS

The Problem

- Add-ons are a big reason for Firefox's success
- However, writing add-ons require you to write reasonably involved JS or C++
- Not to mention, browser restarts!
- Jetpack wants to change all that by lowering the cost of participation

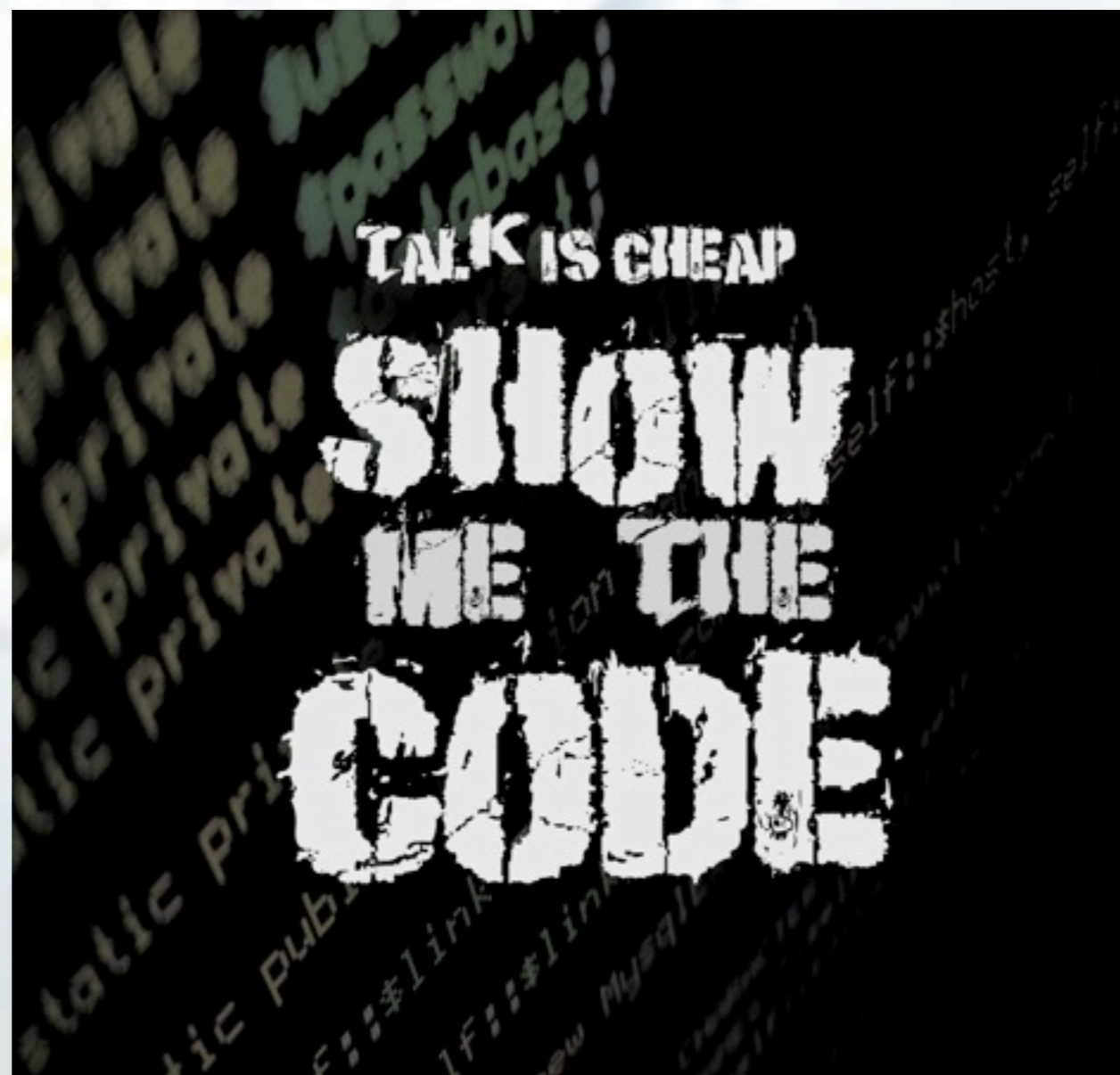


Design Goals

- No browser restarts
- Simple, easy to use API
- Give 80% of current extensions the 20% of functionality they actually need from XPCOM!
- Let anyone with sufficient knowledge to make a website change the way the browser works



Hello, World



Code with me!



Wasn't that Easy?

- Minimal idea-to-prototype time
- In-built development environment
 - Build *for* the browser *in* the browser
- Reduce lines of code required for most common tasks
- Rapid code-test-debug cycle
- Let's take a look at deploying a Jetpack...



But, But, Greasemonkey?

- Greasemonkey allows you to modify *pages*, Jetpack lets you modify the *browser*
- Plans for adding Greasemonkey script support directly into Jetpack are underway
- Perhaps a more involved example will help?



A Voice Memos Jetpack



Code with me!



Features we just used

- Audio
- Storage
- Status and “Slide” bars
- But that’s not all, Jetpack also ships with:
 - Clipboard, selections, Menus, Toolbar, Panels, Settings, Boosters, Music, Video, and the list goes on...



How do I find out more?

- JEP - Jetpack Enhancement Proposal
- Every API/feature needs a JEP before it makes it to the codebase
 - Serves as the authoritative API reference
 - Quick list of all the capabilities that are currently available
- Missing something? Write your own JEP!
 - <https://wiki.mozilla.org/Labs/Jetpack/JEP>

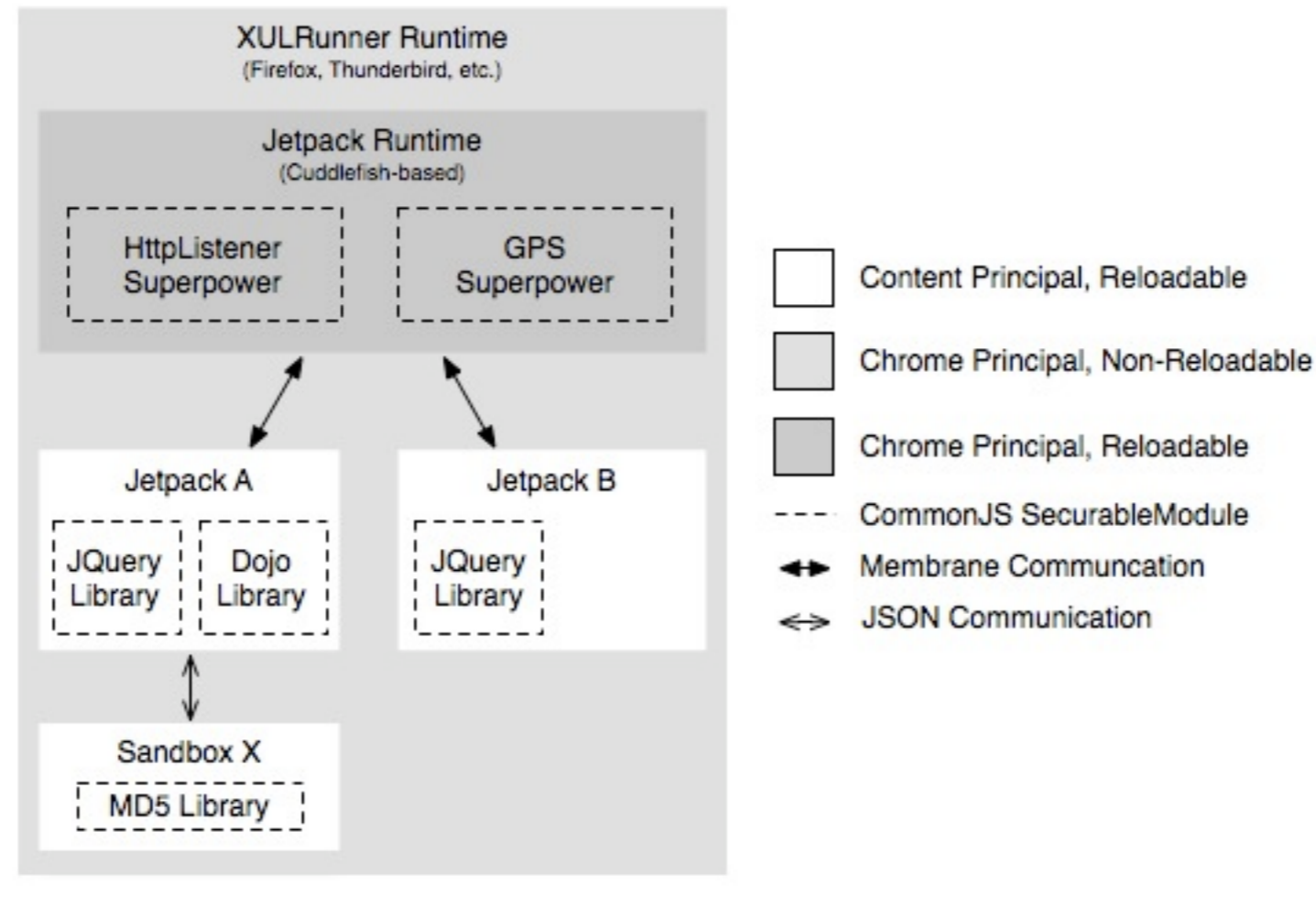


Security Model

- Streamlined one-click installs with auto-updates; hmm...
- SecureMembrane™ technology allows Jetpacks to do only what the user authorized them to
- We use a combination of code signing, manifest and sandboxing to keep the user safe



Security Model



Looking Ahead

- Latest release: 0.6
 - Includes all the exciting features and APIs we've covered and more
- Solidify security, figure out what the most popular APIs needed by extension developers are and implement them
- JS/HTML based browser extensions opens the doors to cross-browser compatibility!



Get Involved!

- Author of an existing extension?

- Port to Jetpack

- Know HTML/Javascript?

- Write your own Jetpack



- JS/XPCOM/XUL hacker?

- Write and implement JEPs to enhance the platform





What is a Jetpack?

Jetpack is a Mozilla Labs project that enables anyone who knows HTML, CSS, and JavaScript to create powerful Firefox add-ons.

The Jetpack Gallery is a community for developers and add-on users: Users get innovative add-ons that add functionality to Firefox, while developers receive valuable feedback and visibility in the Jetpack community.



SEARCH FOR JETPACKS

SEARCH

EDITOR'S PICKS



Thumbtabs

Display your tabs and their thumbnails in Jetpack's Slidebar.

Drawing Gra

Most of this content (tutorial, this page sho

Introduction

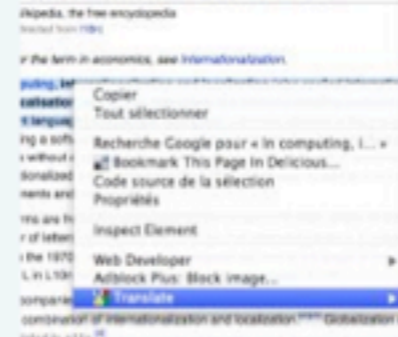
With Firefox 3.5, Firefox WHATWG canvas spec rendering graphs, UI etc newswan creates a free



GTranslatifier

Translate pages or selected text using Google Translate

rnationalization and localization



Jet Lagged

Jetlagged contextually translate some selected text or entire pages using the google translate API

POPULAR TAGS

- google
- twitter
- slidebar
- translate
- search
- translation
- ui
- contextmenu
- url
- language



Questions, Comments, Suggestions?

<http://jetpack.mozillalabs.com/>
#labs on irc.mozilla.org

anant@mozilla.com

Thanks for Listening

I look forward to seeing your Jetpacks!

