

# Add-ons for All

## The Mozilla Add-ons API and Builder

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20 November 2010





Image by [drbakker](#) on Flickr





# Jetpack

A project to make it easy  
to build Firefox add-ons using  
common web technologies!



# Overview

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Today I'll talk about ...

- Why?
- Goals
- How?
- What Next?

But most importantly...

**Participating and creating your own**



# Background

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The current add-on system and developer community is great, but...

- Hard to develop ?
- XUL is a non-standard technology, another thing for developers to learn
- Usability issues, e.g. browser restart after install
- Compatibility issues when Firefox updates
- Full control: add-ons can do just about anything, even things many don't need



# Goals

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- Simplify add-on development
  - High-level APIs
  - Standard Web technologies (HTML, JavaScript, CSS)
- Robustness, i.e. solve the upgrade issue (a.k.a. Write Once, Run Everywhen!)
- Install/Remove without a restart
- Better security, better privilege set








# Context

Other Browsers are catching on.

Information Regarding Web Browsers - Windows Internet Explorer

[http://www.browserchoice.eu/BrowserChoice/browserchoice\\_en.htm](http://www.browserchoice.eu/BrowserChoice/browserchoice_en.htm)

**Select your web browser(s)** This site is currently in testing. Please send issues to [bcfeed](#).

 <p>mozilla <b>Firefox</b></p> <p>Your online security is Firefox's top priority. Firefox is free, and made to help you get the most out of the web.</p> <p><a href="#">Install</a></p> <p><a href="#">Tell me more</a></p>	 <p><b>Opera</b> browser</p> <p>The powerful and easy-to-use Web browser. Try the only browser with Opera Turbo technology, and speed up your Internet connection.</p> <p><a href="#">Install</a></p> <p><a href="#">Tell me more</a></p>	 <p>Google <b>chrome</b></p> <p>Google Chrome. A fast new browser. Made for everyone.</p> <p><a href="#">Install</a></p> <p><a href="#">Tell me more</a></p>	 <p><b>Safari</b></p> <p>Safari for Windows from Apple, the world's most innovative browser.</p> <p><a href="#">Install</a></p> <p><a href="#">Tell me more</a></p>	 <p>Windows <b>Internet Explorer 8</b></p> <p>Internet Explorer is the world's most widely used browser, designed by Microsoft with you in mind.</p> <p><a href="#">Install</a></p> <p><a href="#">Tell me more</a></p>
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[Select Later](#)

[Further information, Terms of use and Privacy statement.](#)



Choice

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**Choice is GOOD**

**(give Mozilla credit)**



# Core APIs

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Integrated set of API modules for common use case in add-ons

- System (clipboard, notifications, file)
- Browser (private browsing, tab-browser)
- UI (Widget, context-menu, panel)
- Requests (xhr)
- Web Content (pagemods)
- And more...

<https://builder.mozillalabs.com/api/>



# Modular

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Modular architecture based on the [CommonJS Module Specification](#)

- Libraries
- Write and distribute your own

Reuse and remix, the Open Source way!



# Add-ons SDK

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- Command line toolkit built on Python
- Testing
- Packaging


... but for those of you more visually inclined...



addon - Quakeyfox r. 32 by mackers - Add-on Builder

addon - Quakeyfox r. 32 by ma... Tutorial - Add-on Builder Add-ons Manager

mozillalabs.com https://builder.mozillalabs.com/addc Google Feedback



# Add-on Builder

PREVIEW

Documentation My Account (Sign Out)

Quakeyfox Test Download Copy Revisions

- Modules (1)
  - main
- Libraries (1)
  - Jetpack Core 0.5

```
1 const widgets = require("widget");
2 const timer = require("timer");
3 const request = require("request");
4
5 var wm = Components.classes["@mozilla.org/appshell/window-mediator;1"]
6         .getService(Components.interfaces.nsIWindowMediator);
7 var browserWindow = wm.getMostRecentWindow("navigator:browser");
8
9 var parseAtomDate = function(datestr)
10 {
11     var yy = datestr.substring(0,4);
12     var mo = datestr.substring(5,7);
13     var dd = datestr.substring(8,10);
14     var hh = datestr.substring(11,13);
15     var mi = datestr.substring(14,16);
16     var ss = datestr.substring(17,19);
17 }
```

# Add-ons Builder

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- Online, collaborative, code editing based on [Skywriter](#) (formerly Bespin)
- 1-Click Install (Testing)
- 1-Click XPI Packaging
- Revision Control
- And more...



# Living on the Edge (for now)

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Builder (some parts) is broken in Firefox 4 Beta 7 and latest (Minefield nightly builds).

Platform dependency issues.

Alpha software, issue will be resolved for SDK 1.0 (very soon)

Follow bug:

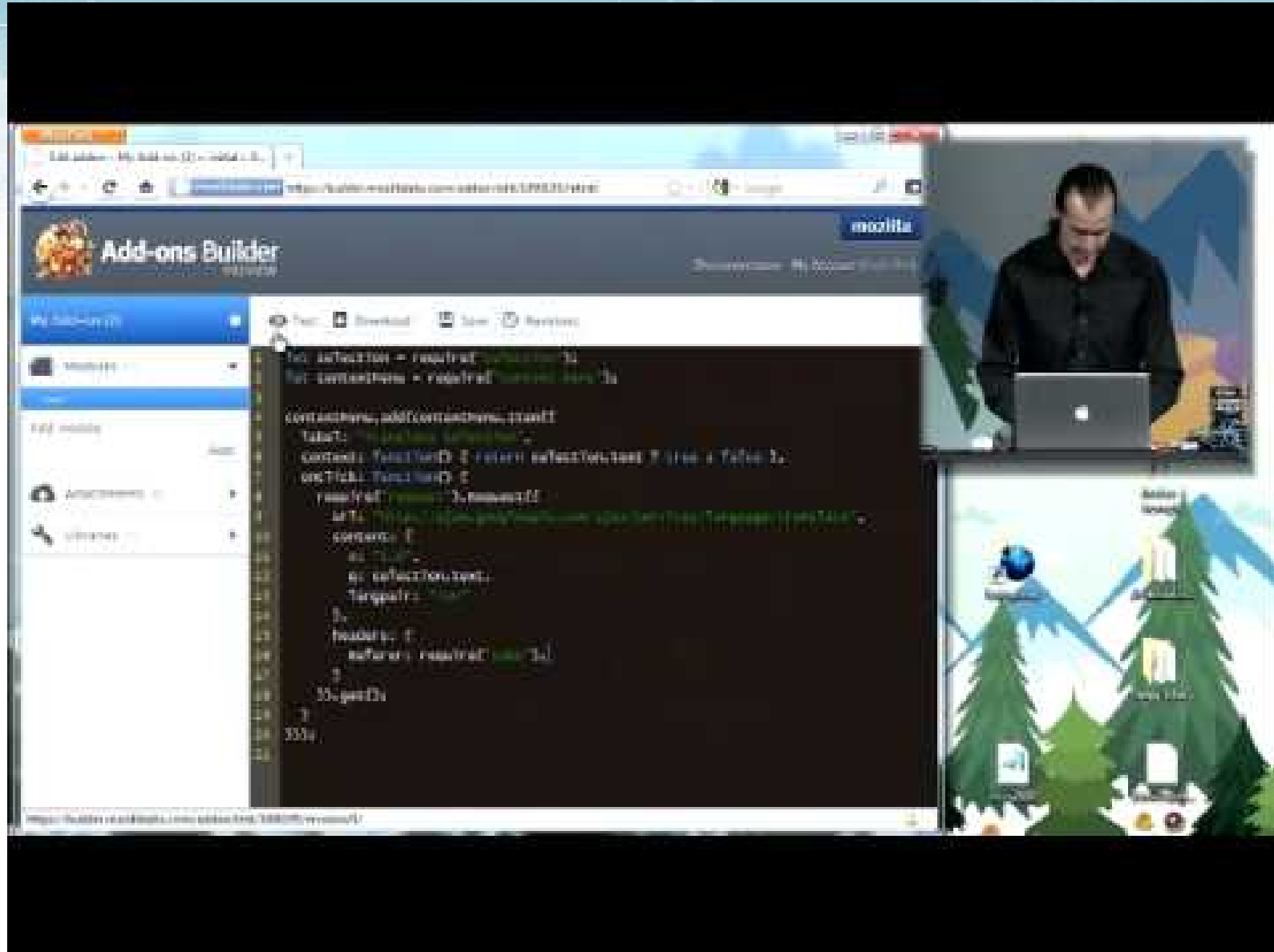
[https://bugzilla.mozilla.org/show\\_bug.cgi?id=604641](https://bugzilla.mozilla.org/show_bug.cgi?id=604641)



**DEMO TIME!**



# Or Rather...



The image is a screenshot of a video recording. On the left, a Firefox browser window displays the 'Add-ons Builder' interface. The address bar shows the URL 'https://addons.mozilla.org/en-US/developers/'. The page title is 'Add-ons Builder'. Below the title, there are navigation tabs for 'New', 'Download', 'View', and 'Revisions'. A sidebar on the left contains a list of add-ons. The main content area shows a code editor with the following JavaScript code:

```
1  var selection = require('selection');
2  var contentNode = require('contentNode');
3
4  contentNode.add(contentNode.prototype, {
5    tabbable: function() {
6      contentNode.prototype.tabbable.call(this);
7      contentNode.prototype.tabbable.call(this);
8    }
9  });
10
11  contentNode.prototype.tabbable = function() {
12    return true;
13  };
14
15  contentNode.prototype.tabbable = function() {
16    return true;
17  };
18
19  contentNode.prototype.tabbable = function() {
20    return true;
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94
95  contentNode.prototype.tabbable = function() {
96    return true;
97  };
98
99  contentNode.prototype.tabbable = function() {
100   return true;
101 };
102
```

On the right side of the video, a person is visible from the chest up, sitting at a desk and working on a laptop. The background behind the person is a stylized illustration of a mountain range with evergreen trees and a small cabin. The overall scene suggests a developer working on a web application or extension.

Add-ons Manager

addon - Quakeyfox r. 32 by ma... Tutorial - Add-on Builder Add-ons Manager

about:addons Google Feedback

copy shorturl

- Search
- Get Add-ons
- Extensions
- Appearance
- Plugins

Search: My Add-ons Available Add-ons

Name Last Updated Best match

**Copy ShortURL 1.3** November 15, 2010  
By [Fred Wenzel](#)  
Adds a right-click menu "Copy Short URL" on every page. If a page expo... [More](#) [Install](#)

**Copy URL 1.0** November 9, 2010  
By [Fred Wenzel](#)  
Copy the URL of the current page to the clipboard at the click of a button. [More](#) [Install](#)

**Cutyfox URL Shortener (goo.gl / is.gd) 1.3.9** October 21, 2010  
By [cosenary](#)  
Cutyfox URL Shortener shortens the long link of your current website an... [More](#) [Install](#)

# And What About HTML5?

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... and other Open Web technologies?  
Canvas, video, audio, SVG, WebGL, ...

Jetpack add-ons are build on HTML, JavaScript, and CSS and have available to them the same technology stack as the browser.

They further blur the line between the browser and the Web to provide a seamless customisation option for developers.



# Status

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- 9 release of the SDK (0.9 latest)
- Stable 1.0 by end-of-2010 (in time for Firefox 4)
- Complete move from Labs Experiment to full product (AMO integration, processes, documentation, Web, ...)



# Try Some Out!

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Finding restartless add-ons on AMO:

<http://blog.mozilla.com/addons/2010/10/01/finding-restartless-add-ons-in-amo/>

Search using the Jetpack tag:

<https://addons.mozilla.org/en-US/firefox/tag/jetpack>



# **What about XUL?**

**Is it going away?**

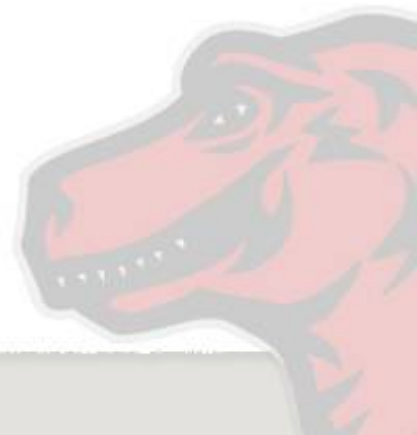




Image by [TrevinC on Flickr](#)



**NO!**



# Build Your Own

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Build

[builder.mozillalabs.com](http://builder.mozillalabs.com)

Find out more...

[jetpack.mozillalabs.com](http://jetpack.mozillalabs.com)



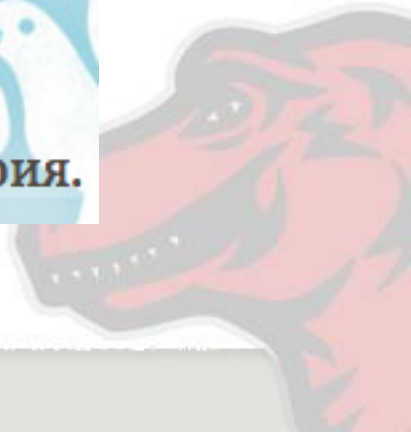
# WAIT - 2 Things

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- <http://bgzilla.org> - a website if you want to join Mozilla Community in Bulgaria
- Mozilla Session in "Bugras" Hall tomorrow (Sunday), starting at 14:04. QA and more.

**Mozilla в България**

Временна страница на сайта на обществото на Mozilla в България.



# Thanks!

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Get in touch

[@brianking](#)

[www.briks.si/kontakt](http://www.briks.si/kontakt)

