

What's New in Safari Extensions

Session 514

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These are confidential sessions—please refrain from streaming, blogging, or taking pictures

What You Will Learn

- Safari Extensions Primer
- What's new with Safari Extensions
 - New events
 - New UI

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Why Should You Make an Extension?

- Adding to Safari's User Interface
- Persistent experience
- Mashups



HTML5



CSS3



JavaScript



Native Code



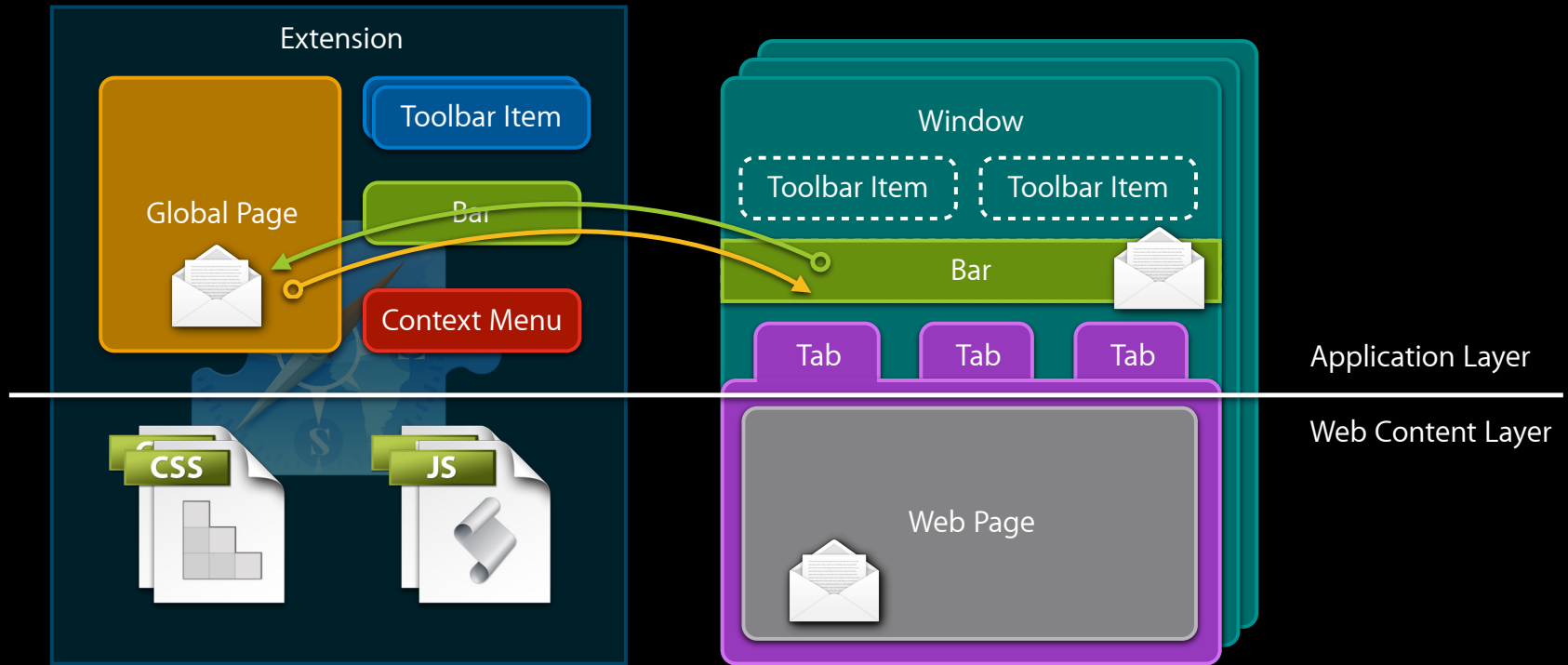
Ease of
Development



Secure



Crashes

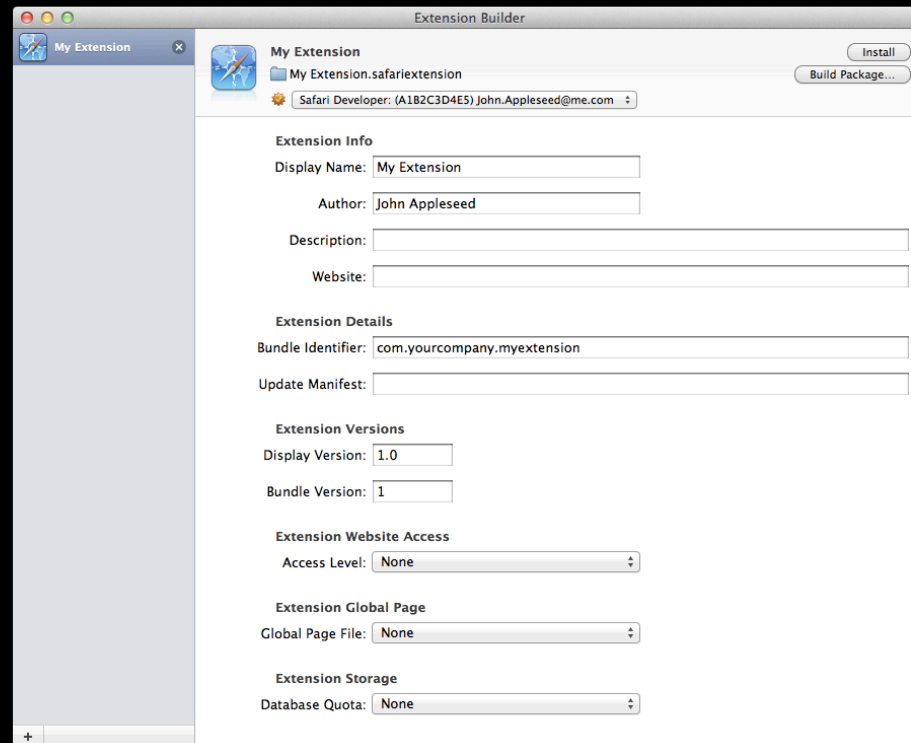


Building Extensions

Free

- Requires a free Safari Developer certificate to build
<http://developer.apple.com/safari>

Extension Builder



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Reader

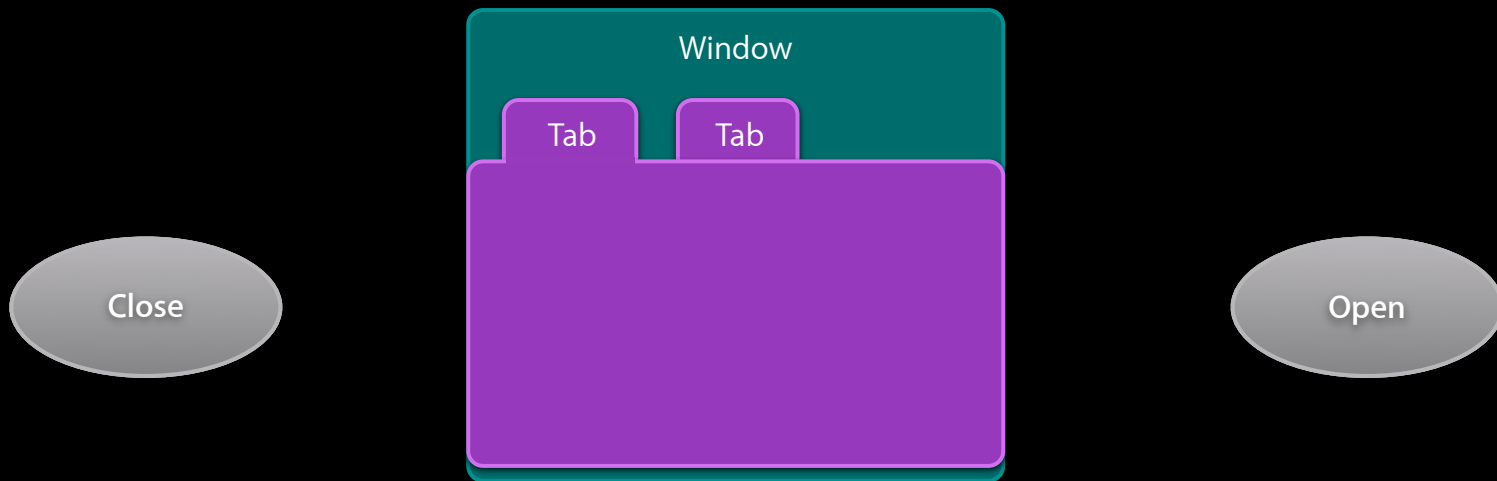
Safari Reader Events

- Available event
 - Fired on a tab when we determine Reader is available
 - Can enter Reader automatically
- Activate and deactivate events
 - Fired on a tab when the user enters or exits Reader

Windows and Tabs

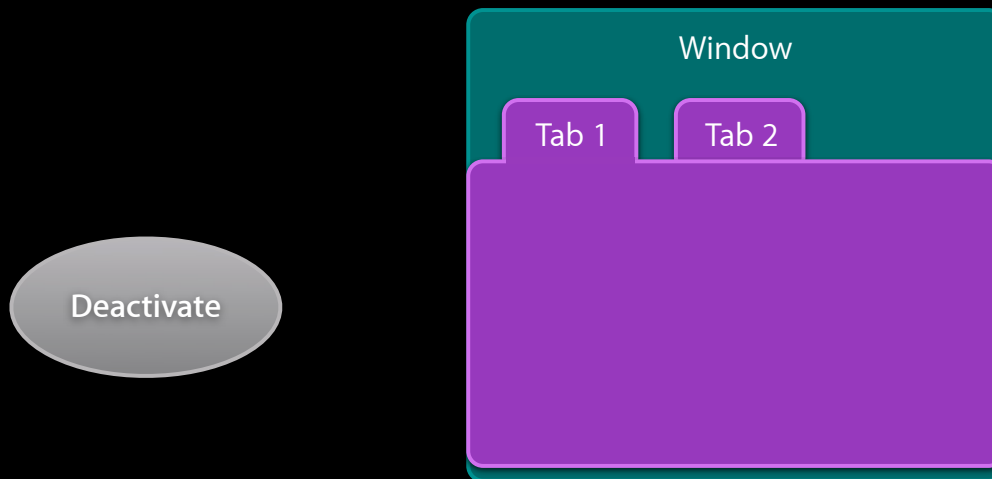
Open and Close Events

Sent to tab or window when it opens or closes



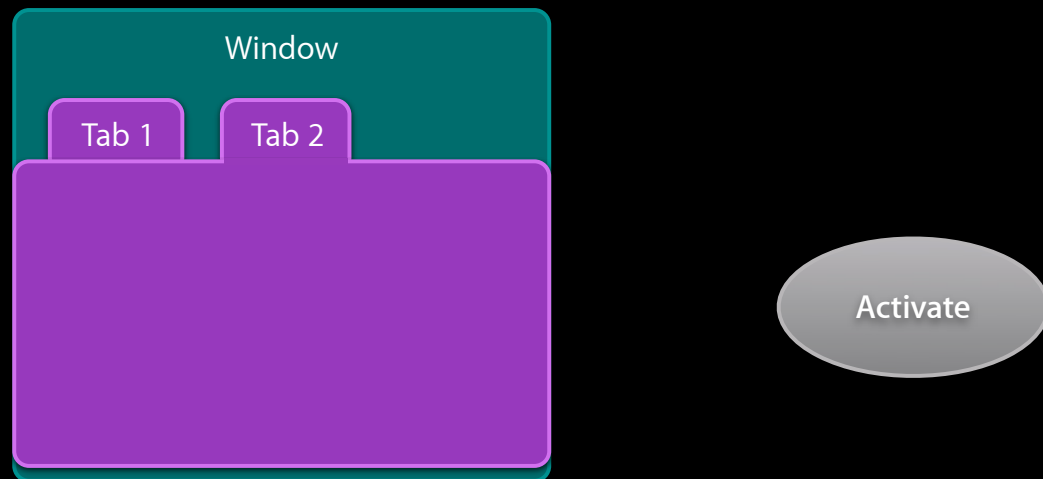
Activate and Deactivate Events

Sent to tab or window when it is activated/deactivated



Activate and Deactivate Events

Sent to tab or window when it is activated/deactivated



Before Navigate and Navigate Events

- Before navigate
 - Sent to tab before user navigates within it
 - Cancelable by calling `preventDefault` on the event
- Navigate
 - Sent to tab when main frame has finished loading

Using Safari Events

- Just like DOM events
- Listeners
 - All events except available do not bubble
 - Must use capturing listener or listen to correct target

```
safari.application.addEventListener("open", openHandler, true);  
tab.addEventListener("activate", activateHandler, false);
```

Using Safari Events

Is it a tab or a window?

```
if (event.target instanceof SafariBrowserTab)
if (event.target instanceof SafariBrowserWindow)
```

Demo

Using new events

Demo Recap

- Extension Builder refresher
- Adding listeners for new events
- Updating toolbar items

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New UI Elements

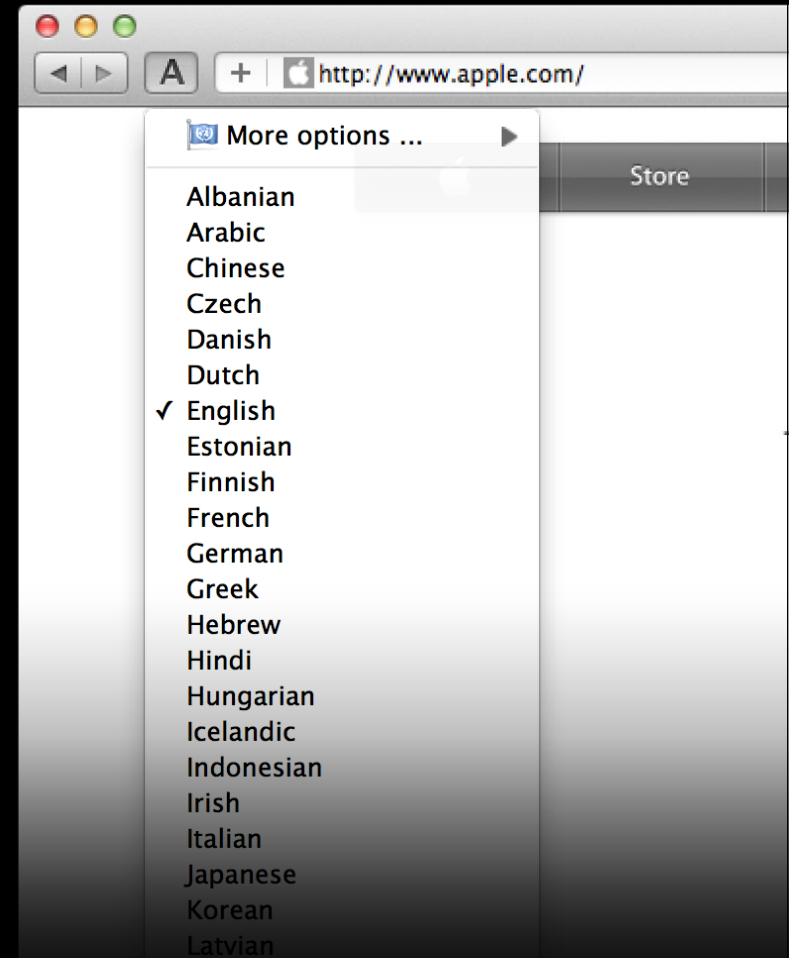
Jessie Berlin

Safari and WebKit Engineer

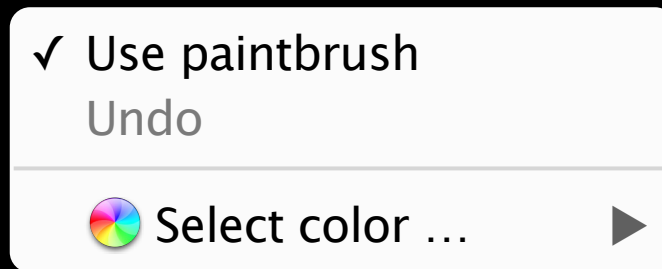
Menus

Extension Menus

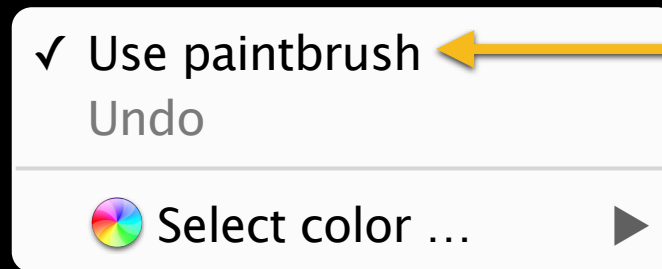
- Show lists of items
- Native look and feel
- Appear beneath Extension
Toolbar Items



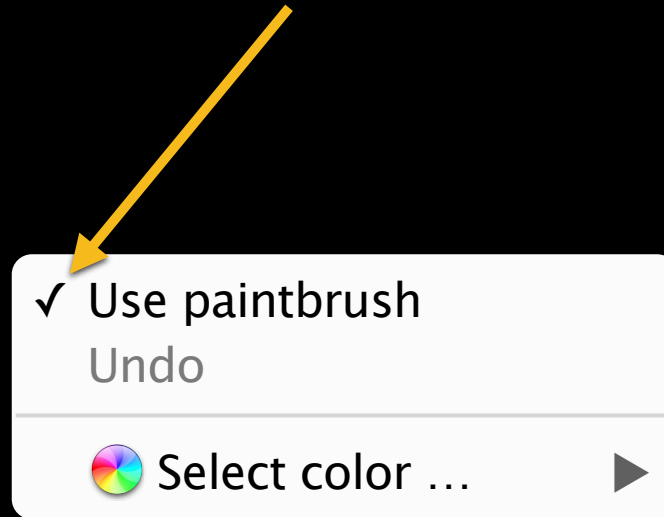
Extension Menu Items



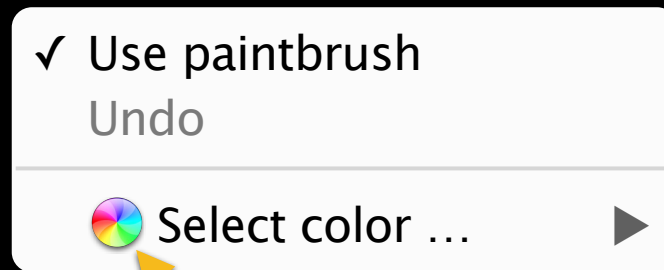
Extension Menu Items



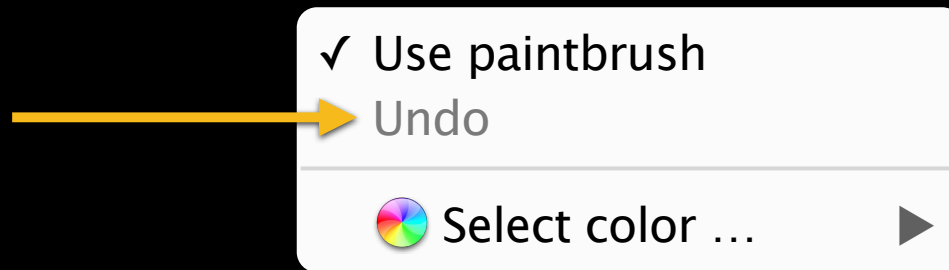
Extension Menu Items



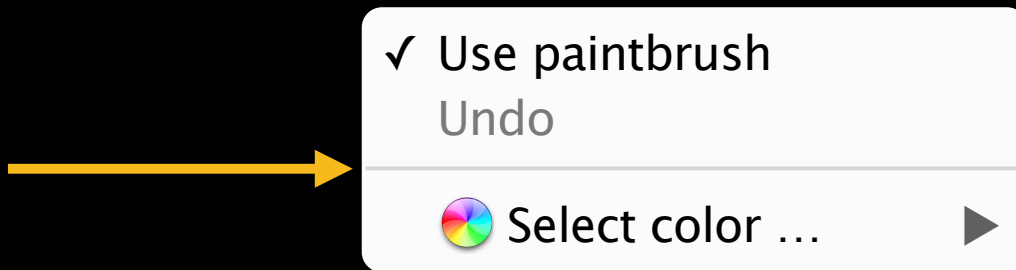
Extension Menu Items



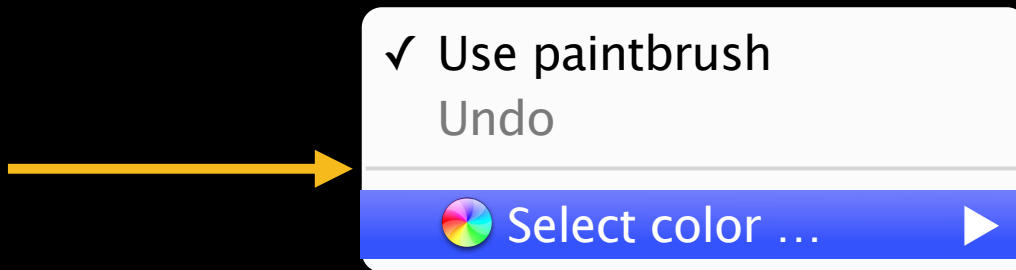
Extension Menu Items



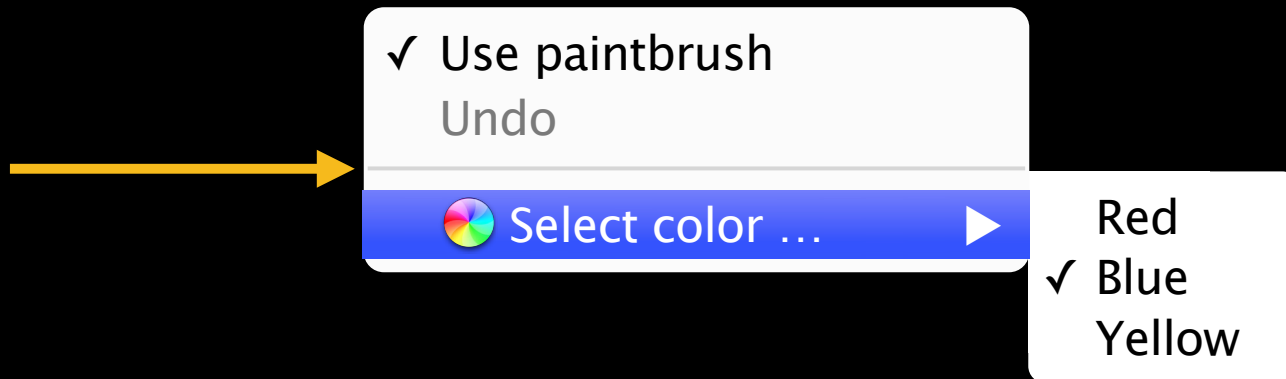
Extension Menu Items



Extension Menu Items



Extension Menu Items



Creating Extension Menus

- New Extension Builder section
- Can be created at runtime
 - createMenu, removeMenu
 - appendMenuItem, appendSeparator, insertMenuItem, removeMenuItem
- Modification allowed up until visible
- Menus array on the extension object

Extension Menu Events

- Before show
 - Menu event
 - Validate events for each menu item

Extension Menu Events

- Command event sent when menu item selected

```
safari.application.addEventListener("command", commandHandler, false);
function commandHandler(event) {
    switch(event.command) {
        case "foo":
            // Do foo.
            break;
        case "bar":
            // Do bar.
            break;
        ...
    }
}
```

Demo

Showing a menu

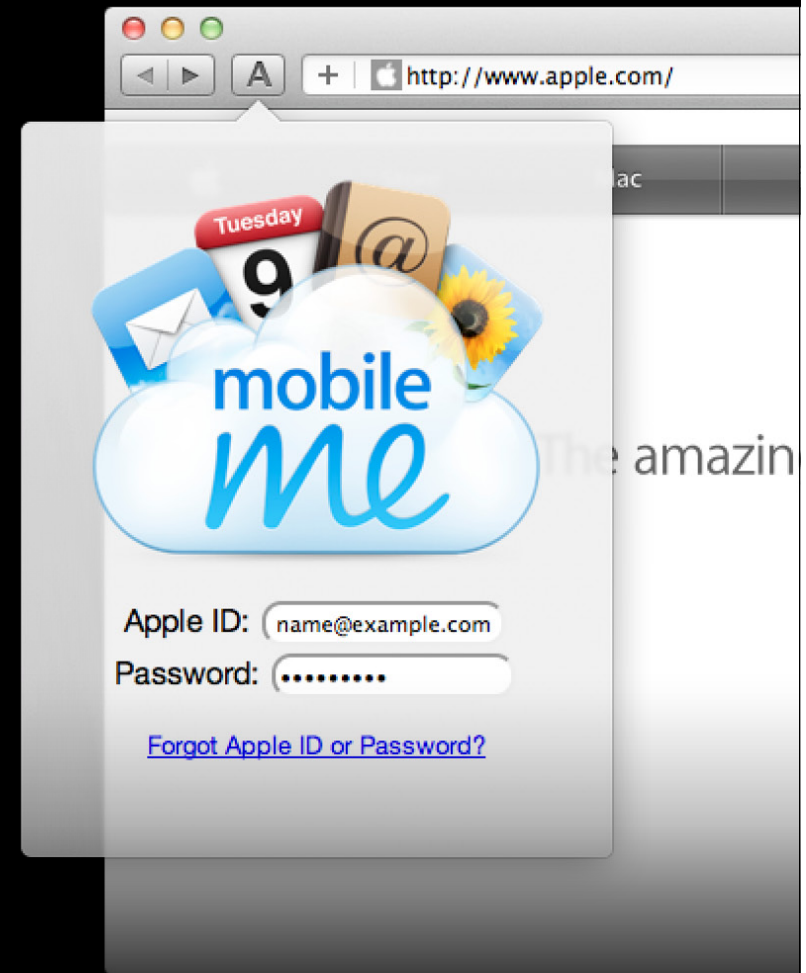
Demo Recap

- Extension Builder
- Menu and command events
- Creating and using menu items

Popovers

Extension Popovers

- Show large chunks of content
 - Do not steal page real-estate
 - No navigation required
- Appear from Extension Toolbar items



What is in Extension Popovers?

- HTML, JavaScript, CSS
- Loaded when popover created
- ContentWindow

```
safari.extension.globalPage.contentWindow.foo();  
popover.contentWindow.bar = baz;
```

Creating Extension Popovers

- New Extension Builder section
- CreatePopover, removePopover
- Popovers array on the extension object

Using Extension Popovers

- Popover event
- Adjustable width and height
- Hide when focus lost

Demo

Creating a popover

Demo Recap

- Extension Builder
- Popover event
- Reusing display code

Summary

- Extensions provide a great and easy way to add functionality to Safari
- New Reader, window, and tab events
- New Extension Menus API
- New Extension Popovers API

More Information

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Safari Extensions Gallery

<https://extensions.apple.com>

Documentation

Safari Extensions Reference

<http://developer.apple.com/library/safari/#documentation/UserExperience/Reference/SafariExtensionsReference/>

More Information

Safari Developer Center

<http://developer.apple.com/safari/>

WWDC 2010 Extensions Sessions

<https://developer.apple.com/videos/wwdc/2010>

Related Sessions

Using HTML5 Offline Storage

Marina
Thursday 3:15PM

What is New in CSS Effects and Animations

Marina
Wednesday 4:30PM

Labs

Safari Extensions Lab

Internet and Web Lab A
Thursday 4:30PM - 5:30PM

HTML5 Offline Storage Lab

Internet and Web Lab B
Friday 9:00AM - 11:15AM

Q&A

