



# Native Apps in HTML5?

Yes. Yes you can.

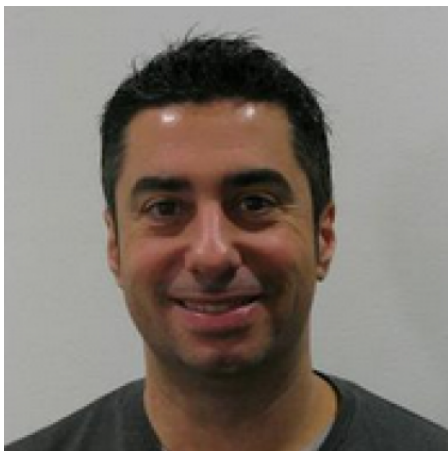


**GAME DEVELOPERS CONFERENCE™**

SAN FRANCISCO, CA  
MARCH 25-29, 2013  
EXPO DATES: MARCH 27-29

**2013**

## About Me



# Joe Marini

Developer Advocate for Google Chrome



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<https://github.com/joemarini>

# Agenda

Web Apps vs. Native Apps?

Overview of Chrome Packaged Apps

Demos

Anatomy of Packaged Apps

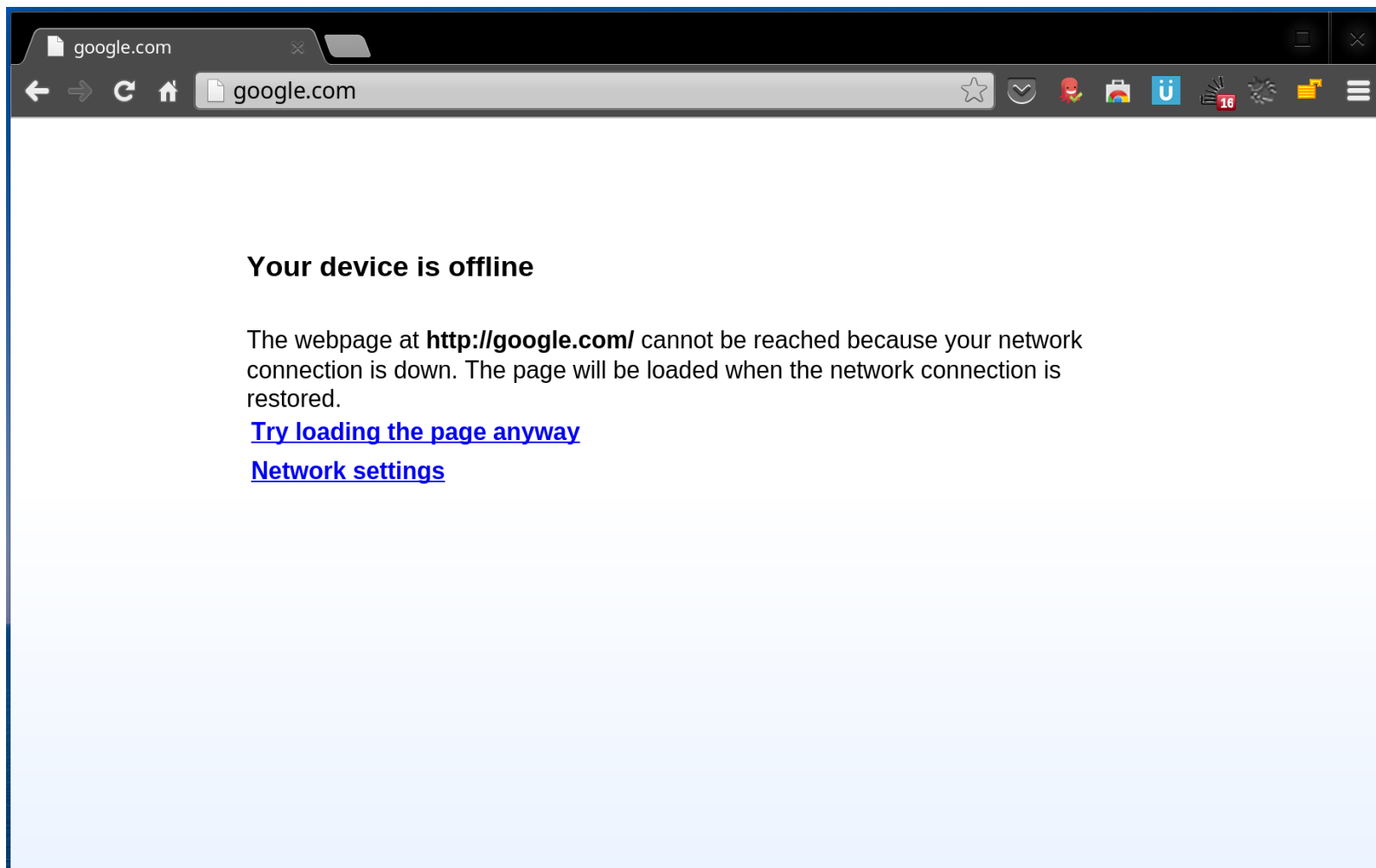
Distribution and Monetization

Becoming a Packaged App / CWS Developer

# Web Apps are Great!



... Until They're Not.



# Web Games are Great!



... Until They're Not.



## As Great as the Web is, There are Some Limitations

- Hard to do offline well - AppCache support is inconsistent
  - And even then, AppCache has its set of problems
- Advanced features aren't universally available
  - Accessing the file system
  - Using WebGL and WebRTC
  - Advanced JavaScript features like WebSockets and WebWorkers
- Very little support for accessing hardware
  - USB, Bluetooth, Camera, Microphone, etc.
- Running across multiple browsers and platforms is challenging



# CHROME PACKAGED APPS

## The Goal of Chrome Packaged Apps

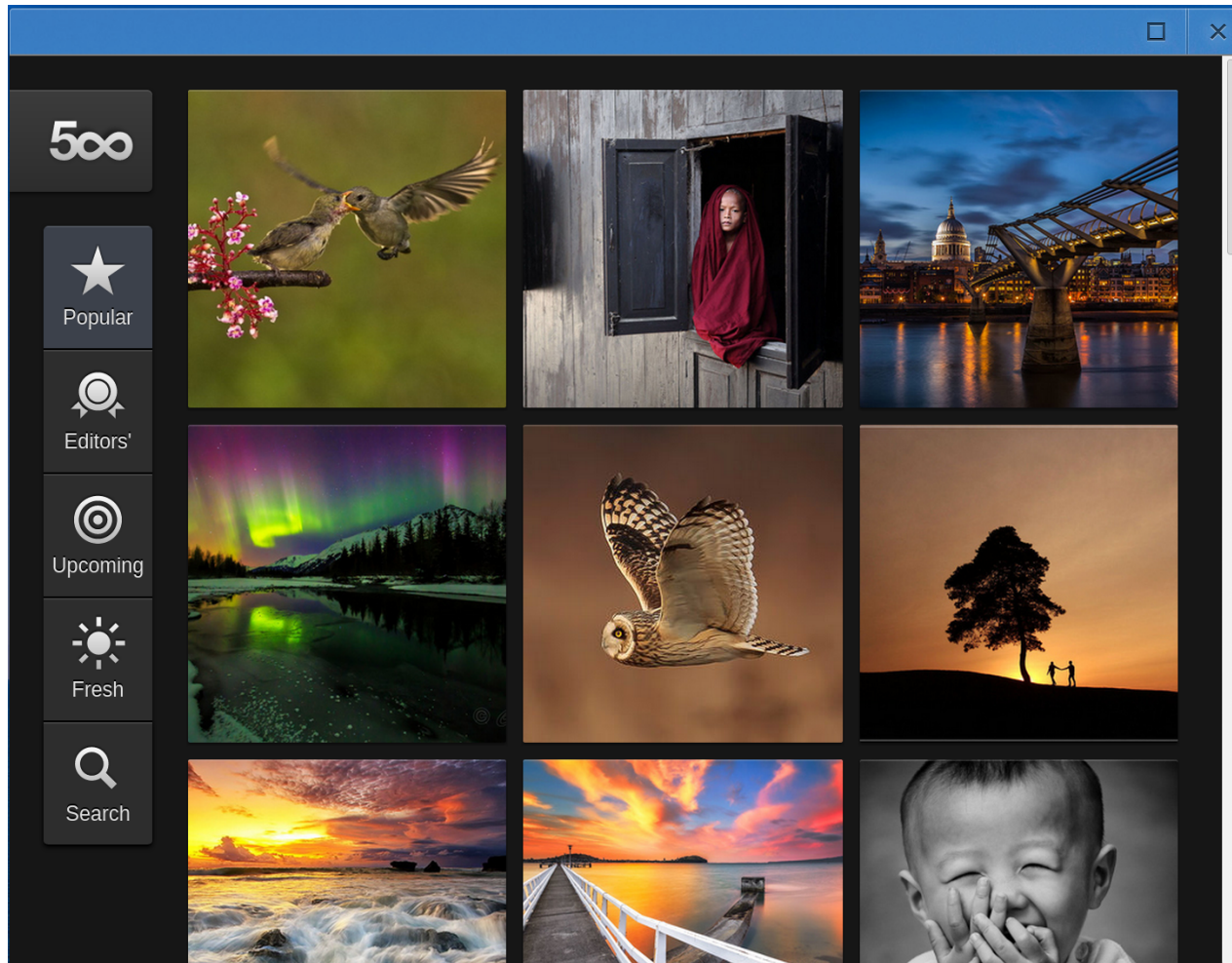
Give users the **convenience** and **experience** of native applications...

... while leveraging the **deployment** and **security** of the web

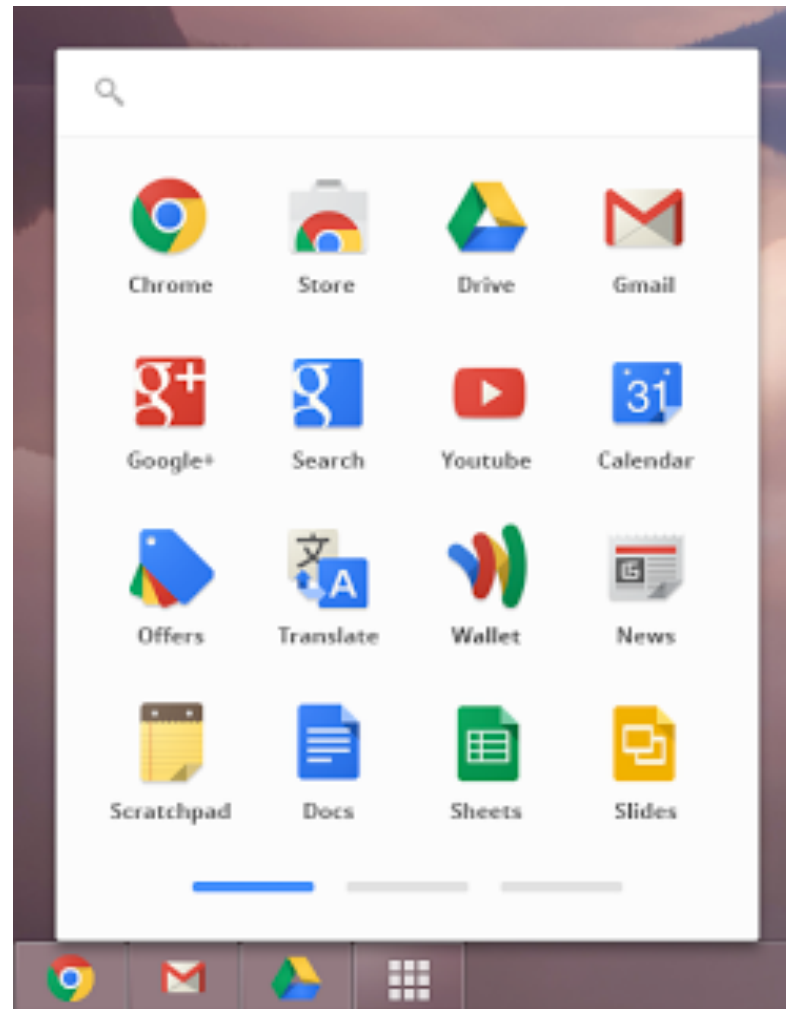
## Basics of Chrome Packaged Apps

- 1) Run independently and outside of the browser UX
- 2) Provide expanded APIs to access hardware and much more
- 3) Run offline, by default
- 4) Are distributed via the Chrome Web Store
- 5) Are monetized the way you want them to be

# Rich, Immersive UI - Outside the Browser



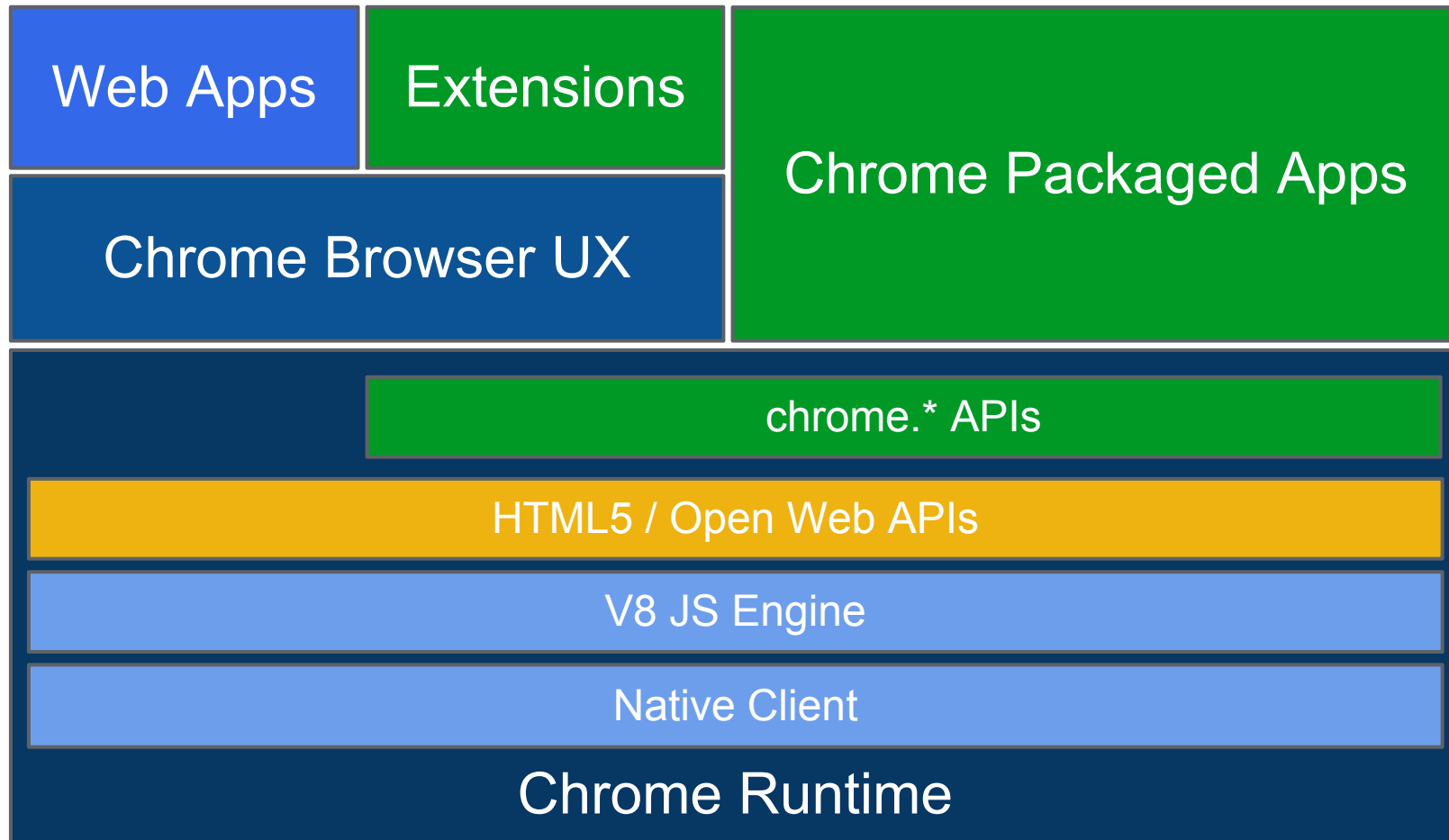
# Uniform, Common Launcher Experience



# PACKAGED APP DEMO

# ANATOMY OF CHROME PACKAGED APPS

# The Packaged Apps Conceptual Programming Model



# Components of a Packaged App

## **manifest.json**

*Information about the app -  
permissions, version, etc*

## **background.js**

*App startup - set up events,  
create windows, etc*

## **Other HTML, JS, CSS**

*Your application logic and  
user interface files*

***Application.crx***

## Typical Manifest File

**manifest.json:**

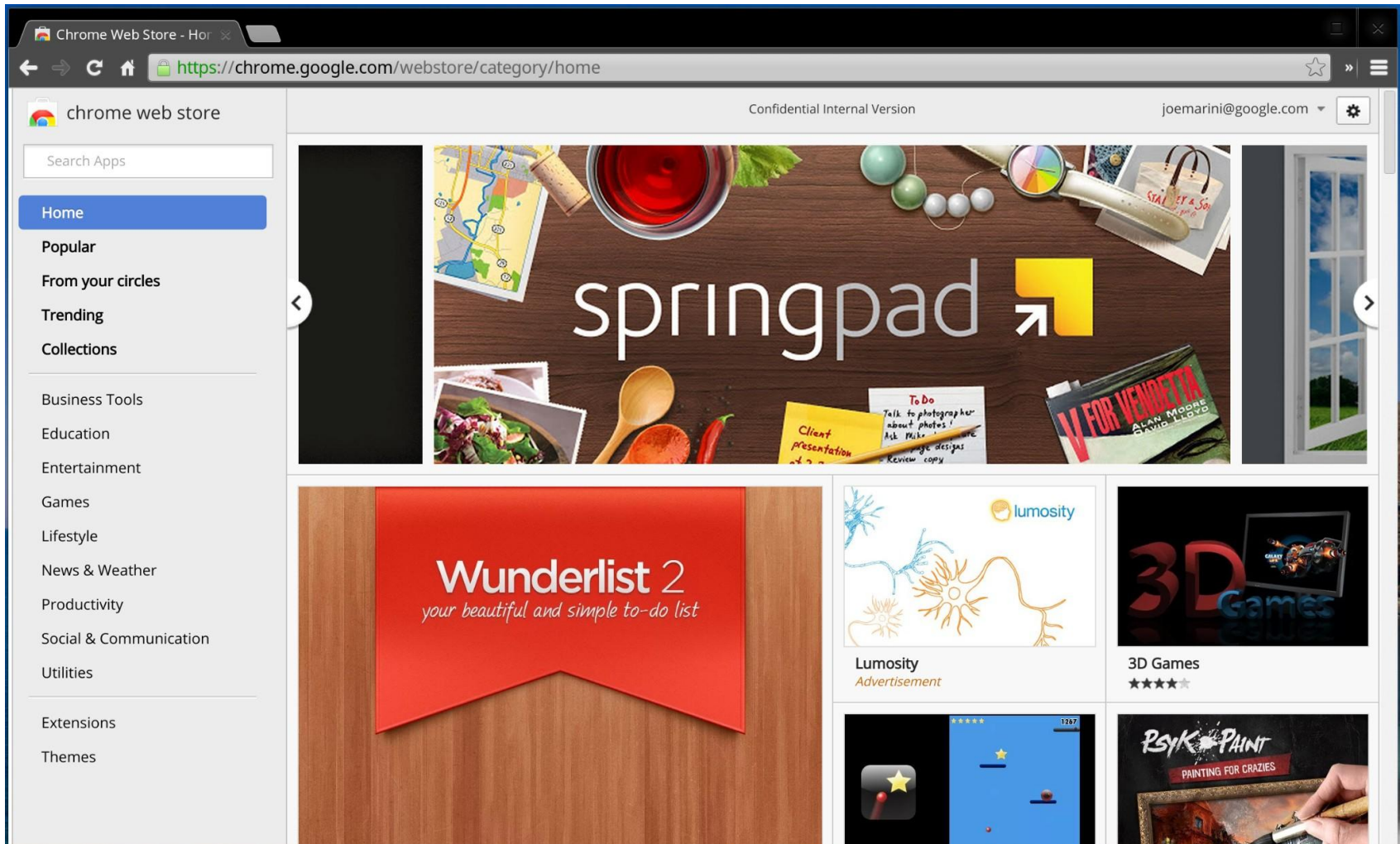
```
{
  "name": "Hello World!",
  "description": "My first Chrome platform app.",
  "manifest_version": 2,
  "version" : "1.2.3.4",
  "app" : {
    "background": {
      "scripts": ["background.js"]
    }
  },
  "permissions": ["experimental", "windows"],
  "icons": { "16": "icon_16.png", "128": "icon_128.png" }
}
```

## A Sampling of the Chrome APIs

- alarms
- app.window
- app.runtime
- bluetooth
- commands
- contextMenus
- events
- fileSystem
- identity
- notifications
- mediaGalleries
- permissions
- pushMessaging
- runtime
- serial
- socket
- storage
- systemInfo
- tts
- usb

# **DISTRIBUTION AND MONETIZATION**

# The Chrome Web Store



# The Chrome Web Store - The Three Ds

Discovery	Distribution	Dinero
<p><i>Help users discover and consume great content for Chrome</i></p> <ul style="list-style-type: none"> <li>• Apps</li> <li>• Websites</li> <li>• Extensions</li> <li>• Themes</li> </ul>	<p><i>Give developers an easy way to get their content into the hands of consumers</i></p> <ul style="list-style-type: none"> <li>• Updates</li> <li>• Partial Rollouts</li> <li>• Reviews</li> <li>• Analytics</li> <li>• User Feedback</li> </ul>	<p><i>Provide monetization options for developers</i></p> <ul style="list-style-type: none"> <li>• One-time pay</li> <li>• Ad-supported</li> <li>• In-App Payment</li> <li>• Third-party pay</li> </ul>

## Chrome Web Store: Discovery

- Reach:**
- 10s of millions of unique visitors per month
  - In 40+ countries around the world
  - Major traffic sources: US, EU, BR, RU, IN

- Exposure:**
- CWS search integrated with Google Search
  - Various opportunities for promotion in store
  - Developers can supply and update images

- Community:**
- Integrated with GPlus "+1"
  - Direct-to-developer feedback option

## Chrome Web Store: Distribution

**Management:** - Publish to "trusted testers"  
- Update graphic assets at your leisure

**Deployment:** - CWS handles scaled rollout of updates  
- Ability to deploy to % of users  
- Detection of user platform capabilities

**Measurement:** - Integration with Google Analytics  
- Detailed Impression/Install Reports

## Chrome Web Store: Dinero

### **Multiple Payment Models:**

- One-time pay-per-download
- Ad supported (AdMob)
- Subscription payments
- Integration with Google Wallet

### **Support for Third-Party Payments**

- Choose your own payment provider

## How to Get Started

1. Get the latest Chrome Canary
2. Visit [developer.chrome.com/apps](https://developer.chrome.com/apps)
3. Download the samples from [github.com/GoogleChrome](https://github.com/GoogleChrome)
4. Follow the code lab: [github.com/GoogleChrome/chrome-app-codelab](https://github.com/GoogleChrome/chrome-app-codelab)
5. Sign up for a Chrome Web Store dev account
6. Build an app
7. Publish

## Where to Learn More

- <http://developer.chrome.com/apps>
- <http://github.com/GoogleChrome/chrome-app-samples>
- StackOverflow: Follow the google-chrome-app tag
- <http://blog.chromium.org>
- <http://github.com/GoogleChrome/chrome-code-lab>
- Check out Chrome Apps on Google Developers Live:
  - <https://developers.google.com/live/chrome/>



thank you.



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