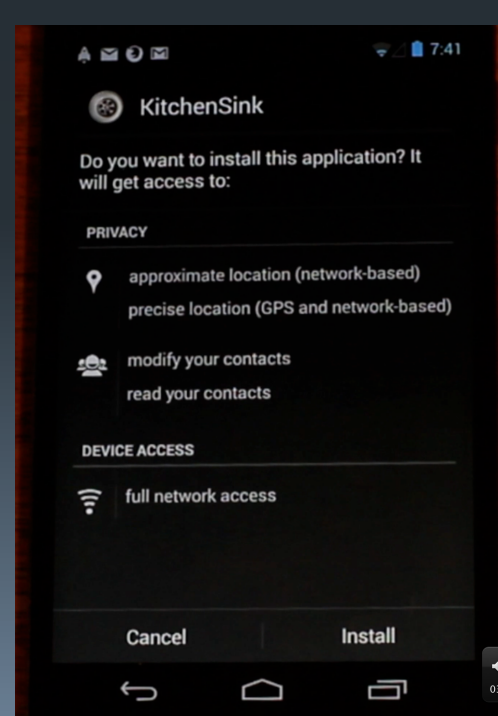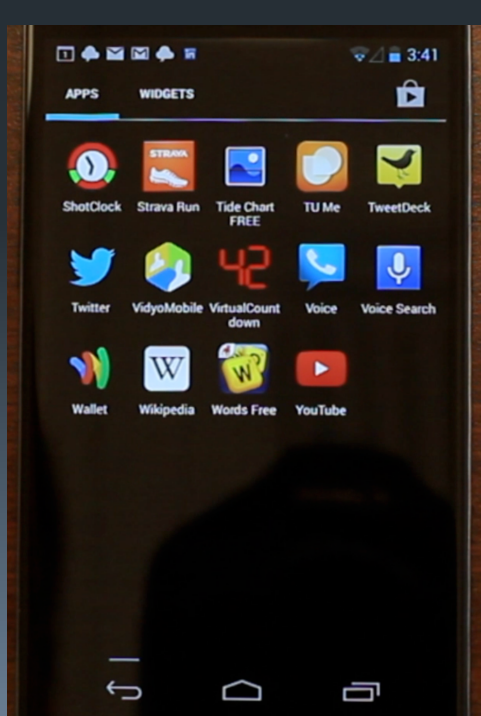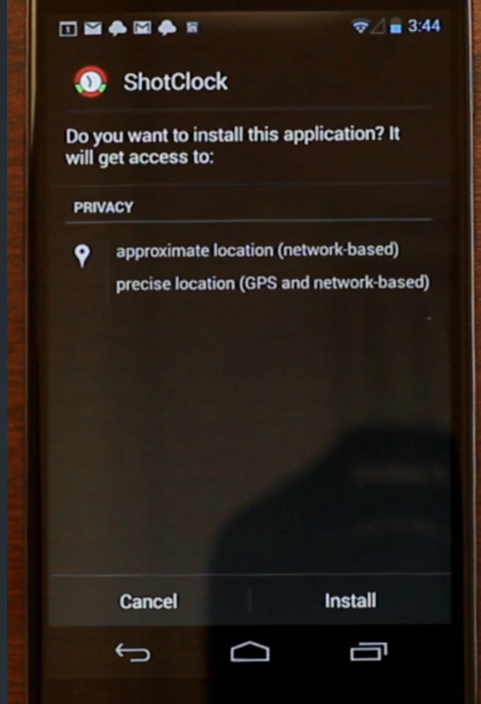# Open Web Apps on Android

Meeting Objective: Share the scope of v1 release, Get Feedback. Contribute!

# Program Goals:

- Deliver Open Web Apps on Android from Firefox Marketplace that feel like native apps

- App submission process either unchanged or requires very little knowledge of Android

- Support Open Web Apps on Android Ecosystem-wide, including other  app stores and AppMaker self-publishing buttons

# MVP Goals:

- Implement full life cycle support for packaged apps
    - Install
    - Launch
    - Update
    - Uninstall

- Implement security/permissions model to enable privileged apps

- Open web app experience should be the same as native android apps

# MVP Non Goals:

- Submitting APKs to Google Play

- Synthesizing APK on-device

- Operator billing (dependent on WebAPI to port MNC / MCC)

- Changes to Fennec release or packaging

# Constraints

- Developer cannot upload an APK - we synthesize it

- APK Signing Keys and Packaged App Signing Key

- As always, each App must adapt to the APIs available on the device and platform

# Target Dates

- 4-Mar, 2014 Fx 29 (General Audience)

- 10-December Fx 29 Nightly Open for patches
  - 21-Jan all work "fixed verified" by Fx29 Aurora

- 24-Feb MWC
  - all work beta quality

# Call to Action

- Marketing - Messaging for March 2014, MWC
- Product Marketing - New proposition - Cloud publishing of web apps
- Product Strategy - find out more about the 3-4M ADI user base
- Content - Apps on Android affect content strategy?
- Marketplace - add Android to review process, tweak metrics
- Dev Engage
  - MDN - educate, document initial API coverage
  - Evangelism
  - Blogs

# Scope Review

- Developer Experience
- Consumer Experience
- Internal Mozilla Experience

# Developer Experience

# App Submission Process

1. A developer submits a standard app, not an APK
2. The developer chooses to offer their app on Android
3. The Marketplace creates an APK automatically (APK Factory)
4. Developers can review the APK before it is live

Recommendation:

- App developers are responsible for the maintenance and submission of their app in other marketplaces

# Submit an App
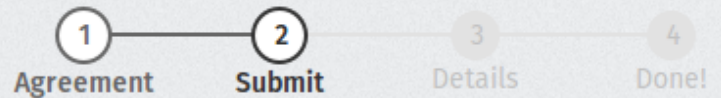
| Free | Paid / In-app |
|------|---------------|

### Firefox OS
**Fully open mobile ecosystem**

☐

### Firefox
**Windows, Mac and Linux**

☐

### Firefox Mobile
**Android smartphones**

☐

### Firefox Tablet
**Android tablets**

☐

| Hosted | Packaged |
|--------|----------|

## Submit your app manifest URL

http://                                                          Validate ▶

Manifest URLs must start with a protocol (for example, http:// or https://) and typically use the .webapp extension.

# APK Factory

- A Cloud service to make APKs from Open Web Apps
  - 1. Verify input is valid
  - 2. Generate APK signing key for each developer*
  - 3. Sign the APK

- Cache the APK for use at install time

# APK Factory

- Create new APK signing keys for most developers

- Store and use legacy APK signing keys for Android-savvy developers

- MDN / Doc Needed: WebAPIs supported cross platform
  - Help the developer understand available APIs
  - alarm, push (not first version*), web activities

# Payments on Android

- Credit card payments processor ( US / UK / Euro )


- For in-app purchase, the APK will need access to trusted UI, mozPay and and all payment processes**


- Decision: No region and currency detection for V1***

# Consumer Experience

# Discovery

- Android users see Android apps

- API that allows us to promote Android apps in Fennec
  - menu > about:apps > go to the marketplace

# Discovery
## Future Work

- Marketplace itself as an app on Android
  - App for hardware partners to pre-install

- E.Me search results integration

# Download & Install

- native flow, with standard install confirmation dialog

- dialog lists permissions requested by privileged apps

- user must enable "unknown sources"; Marketplace/Firefox can help explain/direct

- reinstall from same Marketplace will update existing app, but reinstall from different Marketplace may duplicate app

- TBD how to handle reinstall of app installed as bookmark

# Use & Manage

- launch via native Home, All Apps, and Recents screens

- quit, switch, and manage apps via native interfaces

- app appears like native app in all Android interfaces

- runtime prompts to access privileged APIs, à la FxOS

- TBD crash reporting and permissions management

# Update & Remove

- runtime will periodically check for and download updates

- should be similar to native update

- native remove flow

- if user removes Firefox, app prompts user to reinstall it

- TBD persist app data after Firefox removal

# Legacy apps on Android <26

- 117K apps installed as shortcuts on Android, usage unknown

- Solution: one-time update code (Fx29) detecting apps in the registry, offer to update selected APKs

# Internal Management Scope

# App Review

- App reviewers review Android apps on Android devices

- Open Questions:
  - How do reviewers get reviewer certs on their Android devices?
  - How many devices will reviewers need?

# Metrics

- Android apps have same metrics as all apps
  - Developers know what % of installs are APK installs
  - Internal Mozillians know # app downloads, app use of APKs

- Open Questions
  - Are there ADI pings?
  - Do we separate out app statistics - android APKs vs web apps?
  - Ability to add to FHR (like we do with add-ons)

# Final Questions / Feedback?