Transit Appliance Project

Powered by JavaScript!

Defining Transit Appliances

- A variety of <u>browser-based</u> low-cost devices to display real-time transit information for a <u>fixed location</u>.

- Make it simple: <u>plug it in and it works</u>.

- Keep operating costs low: <u>leverage existing infrastructure</u>.
  - TriMet or other Agency servers
  - Free or cheap cloud computing (e.g., Google App Engine)
  - Existing WiFi networks

Who's the Audience for Transit Appliances?

- Smartphone users are well served…
- We want to help everyone else:
  - Folks without smartphones
  - Folks who can't be bothered to download an app or open their phone
  - Folks who never thought about it
- People will use more transit if we make it so easy they don't have to think about it.

Use Cases

- Coffee Shops
- Bars
- Building Lobbies
- Storefront Windows near Transit Stops
- Where else?

Prototypes in the Wild

- Portland Building Lobby
- Bailey's Tap Room (SW Broadway & Ankeny)

A Variety of Devices

- Low cost consumer hardware, e.g., Insigna Infocast

- Low-cost processors (Atom, ARM, etc.) driving VGA or HDMI displays (repurpose old monitors, HDTVs)

- New crop of cheap tablets on the horizon

- Holy Grail: low-power, weatherized tablet that can run on solar power in a bus shelter!

Introductions

- Team Members
  - Chris Smith, Architect, lead developer
  - Matt Conway (SF), 'phone home' loader
  - Francis Storr, UX

- Portland Transport
  - Oregon 501(c)(3) with focus on promoting discussion around transportation policies and facilitating tools for transportation information display
  - Home for all project intellectual property
  - Offering Transit Board^{TM} Since 2006

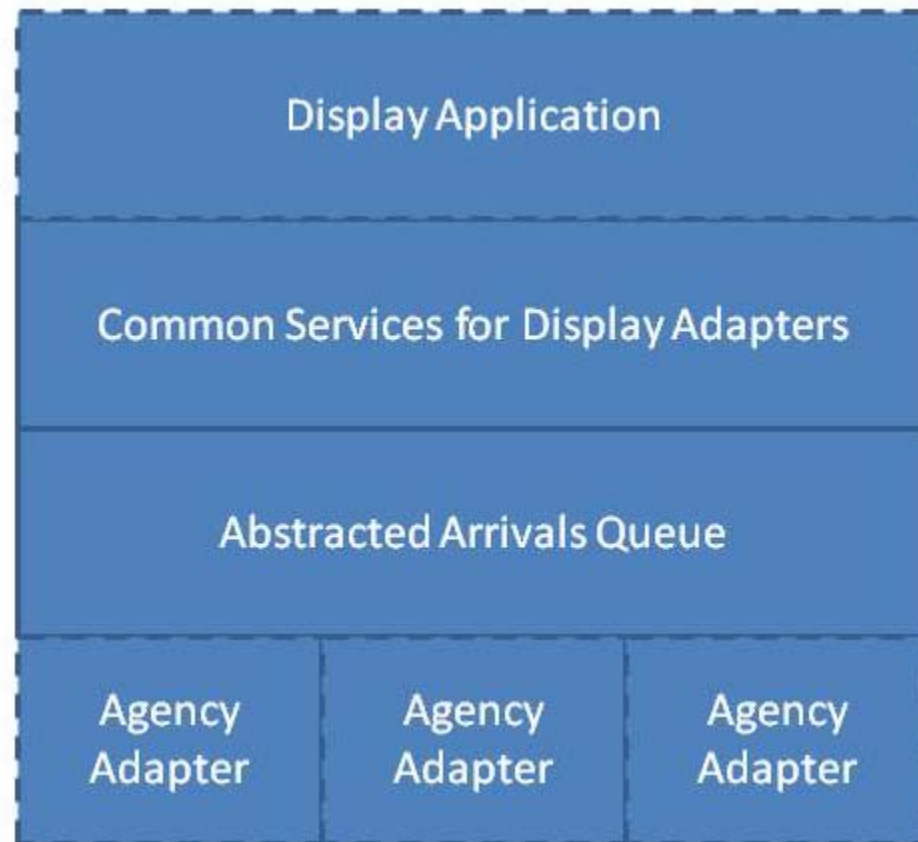# The "Phone Home" Appliance Model
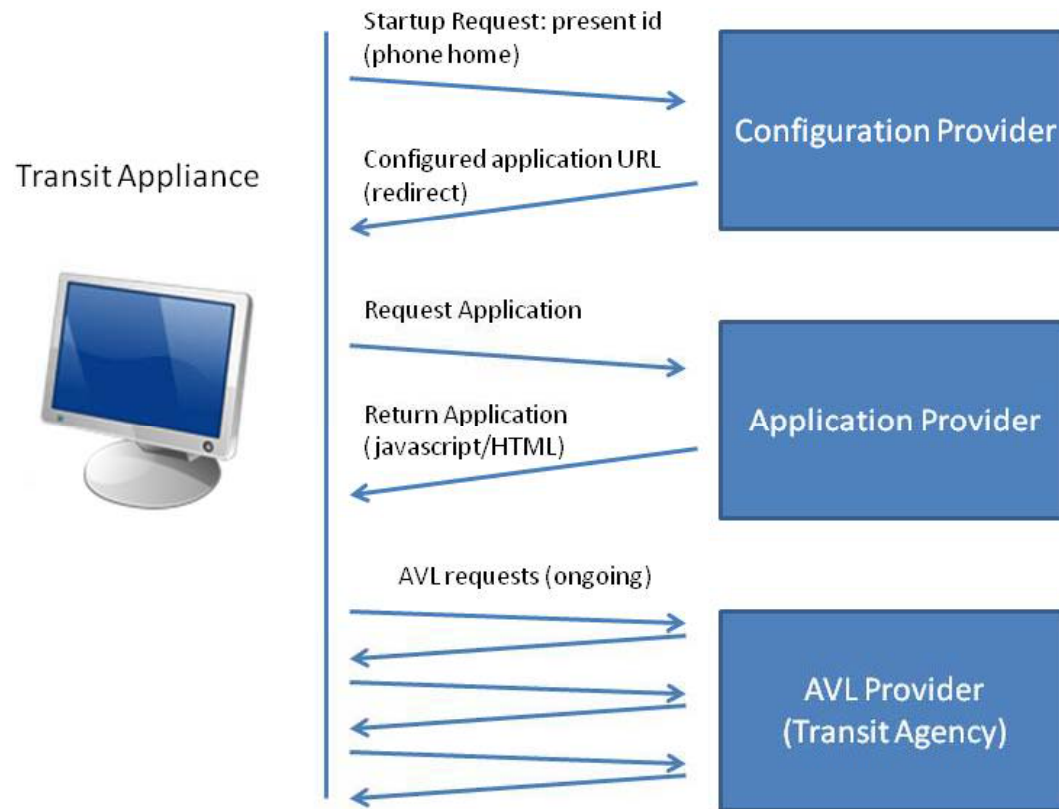
(demo time)

Components of the Project

- Configuration Tool
- Appliance Client
  - Gets configuration, verifies it, loads it
- World-wide Transit Stop Web Service
  - Required before Config Tool becomes multi-Agency
- Standardized JS components for Arrival Displays
- Linux Distro for Appliances?

Technologies

- Google App Engine for Configuration Tool
  - JSONEngine storage package
- CouchDB
  - World-wide transit stop database
- jQuery
  - Everywhere!

Architecture for JS-based Arrival Displays

More Info

- Project Blog
  - http://transitappliance.org
- Code Repositories
  - http://code.google.com/p/transit-appliance-config/
  - http://code.google.com/p/transit-appliance-loader/
- Configuration Service
  - http://service.config.transitappliance.com/
- chris@chrissmith.us

More Info

- Javascript Developers
  - Core display components
  - Agency Adapters
- Java Developers
  - Tweaks to JSONEngine package
- Code librarians/project managers
  - Setup and manage our source trees
- Linux distro gurus
  - Create custom appliance distro(s)