ONE BUS AWAY
AN OPEN-SOURCE TRANSIT TRAVELER INFORMATION SYSTEM

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Agenda

- Background
- Components
- Project Approach
- Benefits
- Use & Results
- Future Research
Background

- US has 263 million cell phone subscribers (84% of the US population)
- US has 222 million internet users in US
- Most agencies have only static maps and schedules and live customer service support

Components of One Bus Away

- Website
- Smart phone enhanced website
- Text-messaging
- Phone
Components of One Bus Away

- Real-time Tracker
- Service Alerts
- Route Maps and Timetables
- Trip Planner
- "Explore" Attraction Search
- Commute Calculator

Route Maps and Timetables

- Enhancement of static data through Web 2.0
- Stem-and-leaf format
Trip Planner

- Similar to Google Transit, Tri-met, BART, WMATA, CTA
- Open-source allows advanced tools
- Integration with real-time tracker data and up-to-date service alerts

Real-Time Tracker

- No real-time vehicle tracking hardware or prediction
- Interface with existing systems
- Demo – [http://onebusaway.org](http://onebusaway.org)
Service Alerts

- Temporary incidents (construction, detours, accidents, severe weather, or special events)
- Service alert notification
  - Operator interface (create, update, and delete service alerts)
  - Integration with the route timetables, trip planner and real-time tracker

Components of One Bus Away

- Real-time Tracker
- Route Maps and Timetables
- Trip Planner
- “Explore” Attraction Search
- Commute Calculator
Advanced Tools

- Open-source code gives ability for developers to create more tools
- Two we propose:
  - Commute Calculator
  - Nearby Attractions Search

Commute Calculator

- "Given that I work at location X, where can I live that’s less than a Y minute commute away using transit?"
Nearby Attractions Search

- "I'm looking for a nearby restaurant / park / library that's close by when taking mass transit. What are my options?"
- Demo – [http://onebusaway.org](http://onebusaway.org)

Project Approach

- Initial system design and implementation
- User Evaluation and Testing
  - Controlled observation
  - Field-testing with surveys
- Transit Agency Interaction
  - Three agencies of varying sizes
Ridership Benefits

- Increased transit ridership
  - Perception of reliability
  - Easier to use and more convenient
  - Improved load factors (off-peak and infrequent trips)
  - Reduced automobile emissions (choice riders)
- Safety / security
- Reduction in live customer service

Open-source Benefits

- Free use for transit agencies
- Consulting for formatting data and helping set up the system
- Access to open-source code available to agencies & developers
OBA Use & Press

- Website hits = 4,000 daily
- Calls = 1,500 daily

- University Week
- Q13 Fox
- KOMO
- KIRO
- KUOW
- Techflash

Future Research

- Expansion of System
  - Nokia / NSF
  - UW Supported research
  - TRB IDEA Grant

- Travel Model Improvement Project
  - Collecting data from users to improve travel models

- Transit Travel Time Reliability
  - Perceptions of time based on information
  - Relationship between schedule and headway-based service
And of course... Use the Site

http://onebusaway.org