MTC’s Enhanced (Multimodal) Trip Planner
Successes and Challenges

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ITS Completes the Street
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An Introduction to 511 SF Bay

- Nine-county San Francisco Bay Area
- Traffic
- Transit
- Parking
- Ridesharing
- Bicycling
- Breaking news, emergency, and planned event information
Ten+ Dissemination Channels

- Phone
- Website
- Mobile website
- Transit app
- Texting
- Alerts
- Data feeds
- Widgets & custom interfaces
- Changeable message signs
- Social media
- Real-time transit signs
- Static information for 30+ transit agencies
- Real-time information for 10 transit agencies
- Trip Planners provide door-to-door itineraries
  - Transit Trip Planner
  - Enhanced Trip Planner
Enhanced Trip Planner

- Project began in 2009
- Development primarily funded by Urban Partnership Program (UPP) grant from USDOT
- Trip planning software provided by MDV
- Work was completed in three phases and wrapped up in June 2013
- Currently released in beta at 511.org
Advanced Trip Options

- Drive, Drive-to-Transit, and Transit directions
- Many options available to customize trip, including:
  - Select fastest, shortest, or trip with least transfers
  - Ex/include agency or mode
  - Establish max walking or driving distance
Trip Results

- Returns up to four itineraries for drive only, drive-to-transit, and transit only trips.
- Provides step-by-step instructions, real-time transit departures, estimated times, cost of trip, and CO₂ emissions by mode.
Sample Drive-to-Transit Trip Itinerary

Trip 1

<table>
<thead>
<tr>
<th>Mode</th>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive</td>
<td>4:07pm</td>
<td>Depart Woodside</td>
</tr>
<tr>
<td>Drive</td>
<td>4:21pm</td>
<td>Arrive Redwood City Caltrain Station parking</td>
</tr>
<tr>
<td>Park</td>
<td>4:27pm</td>
<td></td>
</tr>
<tr>
<td>Caltrain</td>
<td>4:29pm</td>
<td></td>
</tr>
<tr>
<td>Caltrain</td>
<td>5:01pm</td>
<td></td>
</tr>
<tr>
<td>Caltrain</td>
<td>5:08pm</td>
<td></td>
</tr>
<tr>
<td>Walk</td>
<td>5:15pm</td>
<td>Arrive Millbrae</td>
</tr>
<tr>
<td>Walk</td>
<td>5:15pm</td>
<td>Arrive Redwood City Caltrain Station parking</td>
</tr>
</tbody>
</table>

Driving Cost: $3.70 (Estimated at 55.5 cents per mile)

Announcement: Caltrain: Roadwork on CA-84 E
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Announcement: Stockton and Ellis Street...
### Successes and Challenges

<table>
<thead>
<tr>
<th>Successes</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaching users in less transit-friendly areas</td>
<td>Effect of complex calculations on system speed</td>
</tr>
<tr>
<td>Ability to adjust trip options</td>
<td>Dense areas with many park and ride locations</td>
</tr>
<tr>
<td>Readily available comparison of transportation modes: cost, time, carbon footprint</td>
<td></td>
</tr>
</tbody>
</table>
Drive-to-Transit Calculations – dense areas

No Altered Settings

Specified Hayward BART as DTT station
• Enter vehicle MPG
• Estimated CO$_2$ emission is calculated for transit, drive-to-transit, and drive-only trips
Next Steps?

- Other Public Sector Multimodal Trip Planners
  - Portland’s Trimet (http://rtp.trimet.org)
  - Chicago’s RTA (http://tripsweb.rtachicago.com)
- Private Sector Providers
  - Google/Waze, Citymapper, Moovit, Ridescout, others
- Planning for NextGen 511
Thank you!

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www.511.org