2007 MWCOG Household Travel Survey

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Washington Region Complexity

o Multi state, multi jurisdictional
o Different modal options
- Commuter Bus (multiple providers)
- Commuter Rail (multiple providers)
- Subway (Metro)
- Local Bus (multiple providers)
- HOV lanes - slugging
- Bicycle paths and lanes

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Washington Region Complexity (cont'd)

o Special accommodations for challenges
- Trained interviewers on local area geography
- Geocoded trip ends in house
- Offered $50 incentive to attract non-traditional households
  - Minorities, households in poverty, cell phone-only households

Working with Baltimore

o Baltimore Metropolitan Council joined beginning in Quarter 2

o Win-win for both agencies resulting in fuller dataset that is completely integrated

o Have continued to work with BMC during the editing process

Geocoding

o Done during the survey
  - New for both MPO and for contractor
  - Allowed for local knowledge to be applied
  - Moved to Navteq Database (very helpful)

o Results: 97% of trip ends geocoded to x,y coordinates

Geocoding Technology

o Anybody can geocode, but not always well!
o ArcMap allows for a reasonable autocoder
  - Overall about 75% autocoded
o Manual coder is tedious but functional
o Online map services have come a long way
  - Mapquest has a solid tight algorithm, but requires state/city or zip
  - GoogleMaps is looser – good when provided info is thin

MAPQUEST gives all options upfront

GOOGLE assumes, but has transit stations

Post Survey Activities

- o Contractor runs edit checks on data
- o Contractor QCs geocoding
- o MWCOG runs additional edit checks (adding local knowledge)
- o Determine if any households will need to be dropped for insufficient data

Basic Edit Checks

- Verify Persons with no trips are reasonable
- Verify Persons outside Region for full travel day are truly outside Region
- Verify Trip +Activity Time = Full 24 hours (for trip makers who spent some or all of their day in region)

Basic Edit Checks (cont'd)

- Geocoded remaining missing trip ends
  - About 3% of 132,000 trip ends
  - Used other household members or other destinations to determine locations where necessary
- Conduct analysis of Quick Stops (gas vs. other)
  - Recode trip purpose of some 'Quick Stops'

Commuter Rail/Bus Analysis

- o Standardize Rail Station Names
- o Verify Rail Trips start & end at stations
- o Recode trips to Metro/Local Bus as necessary
- o Add missing Mode of Access/Egress segments

Metrorail Trip Analysis

- o Standardize Metrorail Station Names
- o Verify Metro Trips start & end at stations
- o Recode trips to Commuter Rail or Local Bus as necessary
- o Add missing Mode of Access/Egress segments
- o Used Metro's Trip Planner to aid in decision making for trip tours missing segments

Local Bus (only) Trips Analysis

- Verify Trips are Bus Only
- Add missing Mode of Access/Egress segments
- Switch to MetroRail trips as necessary

Carpool/Auto Passenger Analysis

- Verify each passenger has a driver
- Consistency check with other household members

Trip Linking & Survey Weighting

- Verify estimated modal shares and person trip totals with other data sources (eg. Metrorail and Metrobus surveys, ACS Commuting Data)
- Time/Distance/Speed checks by mode
- Check trip length frequency distribution by trip purpose

Some Lessons Learned

- Schedule sufficient time for developing survey materials and scripts for CATI system
- Pretest is helpful for checking methodology and trying strategies
- Schedule time to analyze pretest results before moving into main survey

Some Lessons Learned (cont'd)

- Incentive is useful
  - Industry question – How much money should be offered to be effective without spending more than necessary?
- Geocoding in house allowed us to keep closer control on how it was going during the survey – rather than after the fact

Next Steps

- Finish processing data
- Fully analyze results
- Produce reports