

DTA Model Projects Overview

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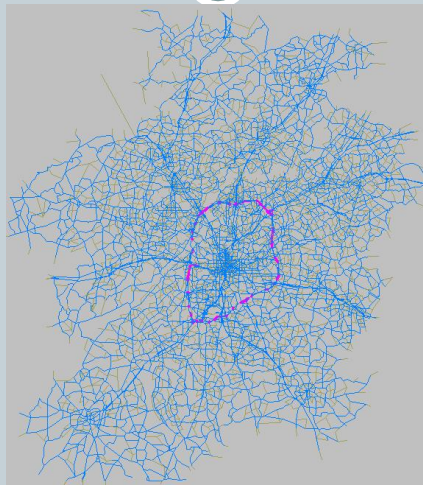
DTA projects Overview

- Atlanta Region
- Island of Guam
- San Francisco County
- San Francisco – Doyle Dr Corridor

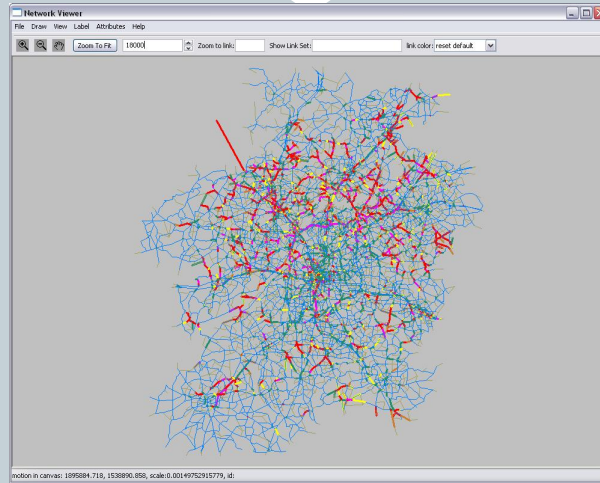
Atlanta DTA Model

- DTA Model of entire Atlanta region
- Demand for traffic microsimulation models
 - I-285 ring corridor / 4 sections
- Very large scale model
 - Long run times
 - Difficult to calibrate
 - Decent calibration results
- No Signal Data
 - Generated using HCM type methods
- Developed many analysis tools

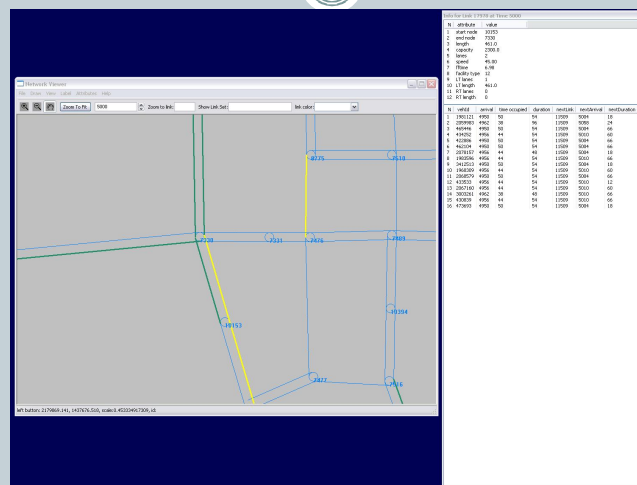
Atlanta Network with I-285 Links



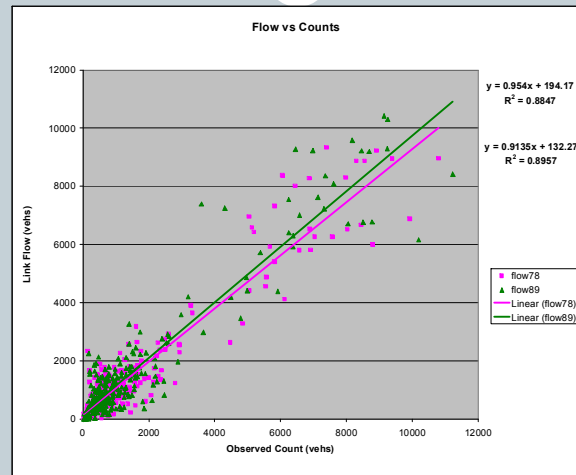
Dynamic Network Visualizer



Detailed Visualization



Atlanta DTA Flow Results



Atlanta DTA Travel Time Results

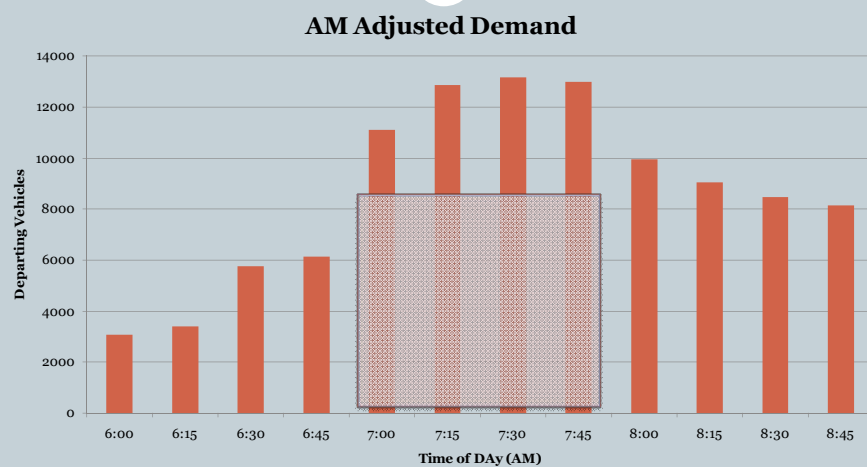
Simulated Route Travel Times vs Observed

Observed OD Times	Number Observations	Mean AM Observed	Mean AM Simulated	Relative Error	%RMSE
< 20 Mins.	72	17.0	25.9	51.9%	60.3%
20-25 Mins.	90	22.6	27.4	21.4%	37.5%
25-30 Mins.	123	27.1	30.1	11.1%	26.6%
30-35 Mins.	66	32.0	30.0	-6.4%	25.9%
35+ Mins.	27	40.7	33.5	-17.7%	27.3%
Total	378	25.9	28.9	11.3%	33.2%

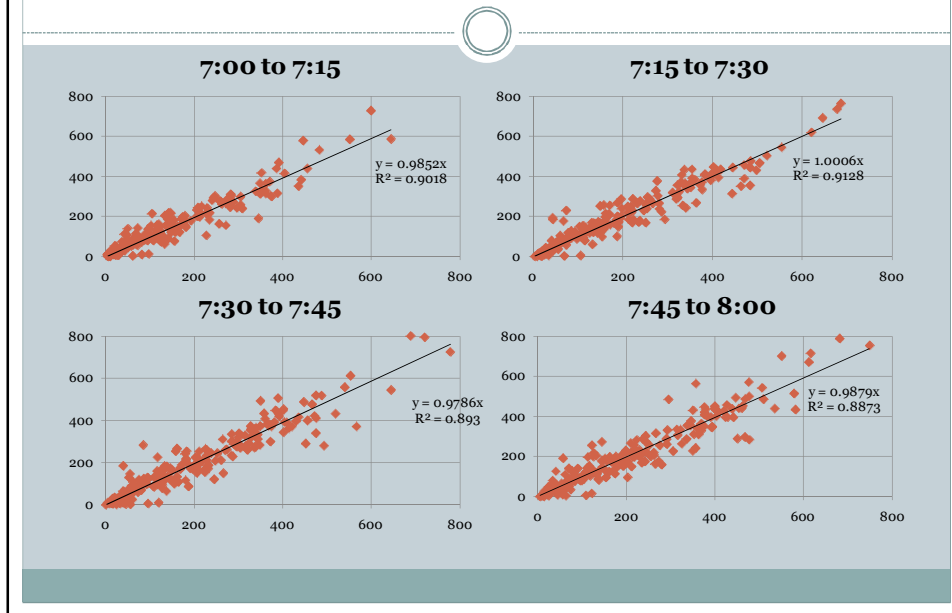
Guam DTA Model

- DTA model of entire Island
- Impact of increase in military personnel
 - Construction traffic
 - 10,000+ more military residents
- Traffic Signals from Synchro Models
 - Wrote software to convert to DTA
- Mitigation Scenarios
 - Limited travel periods
 - Alternative routes
 - Transit options

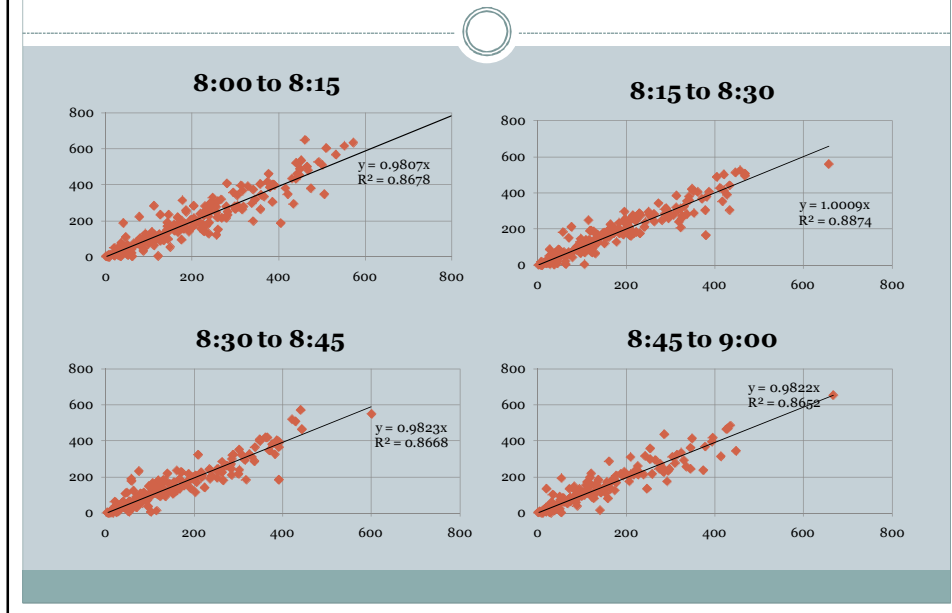
Demand for DTA Model



Guam Flow vs Count by 15 Minute Period



Guam Flow vs Count by 15 Minute Period



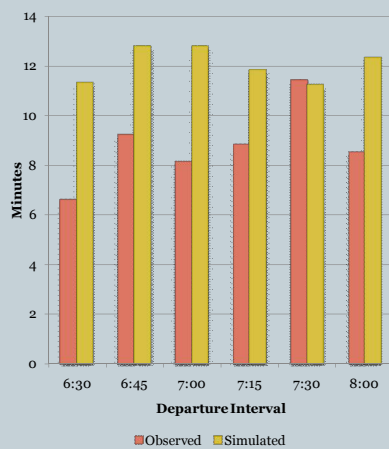
Observed Route Times



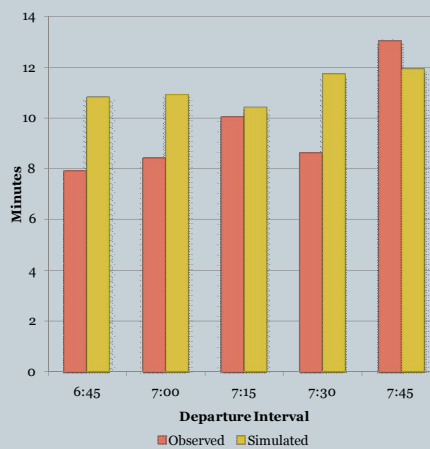
Intersection	Node	Run #1	Run #2	Run #5	Run#3,#6	Run#4,#7	Run #8
Start Time (in min)		6:41 AM	6:57 AM	7:01 AM	7:18 AM	7:39 AM	8:11 AM
ABC Sign	695	0	0	0	0	0	0
Route 30	686	29	29	66	30	31	36
	1005						
	694						
Route 14 (ITC)	687	46	69	46	81	116	57
	688						
Route 14B	689	73	65	57	67	75	113
	692						
Route 10A	693	77	99	68	70	79	44
	691						
Route 14A	504	53	56	58	73	56	54
DPW	994	24	50	25	27	27	24
	583						
Lipog (GTA)	546	18	61	16	58	86	32
	919						
St. John	995	37	38	35	37	98	37
PIA Marine	939	17	57	25	29	84	36
Route 14 (NSV)	542	23	26	89	56	29	78
Total Time (min)		6.6	9.2	8.1	8.8	11.4	8.5

2008 AM Travel Time Comparisons

Route 1 from Route 14 to Route 30

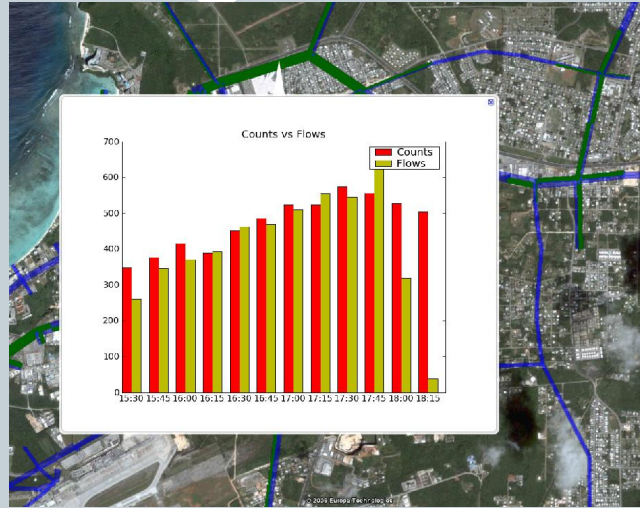


Route 1 from Route 30 to Route 14



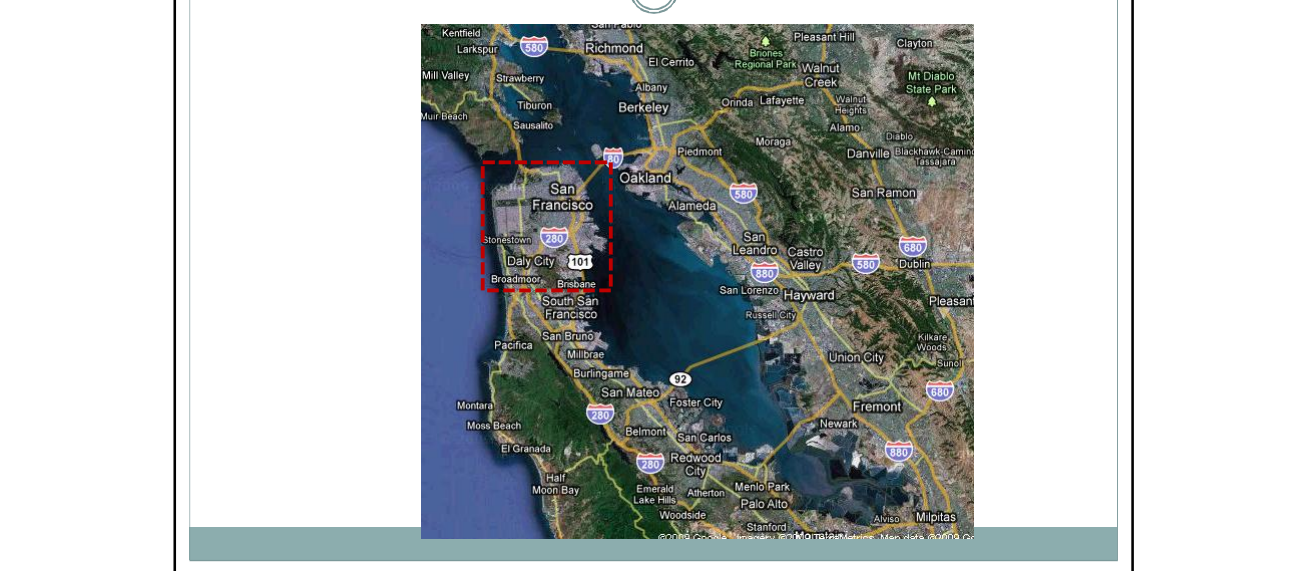
Google Earth KML Overlays

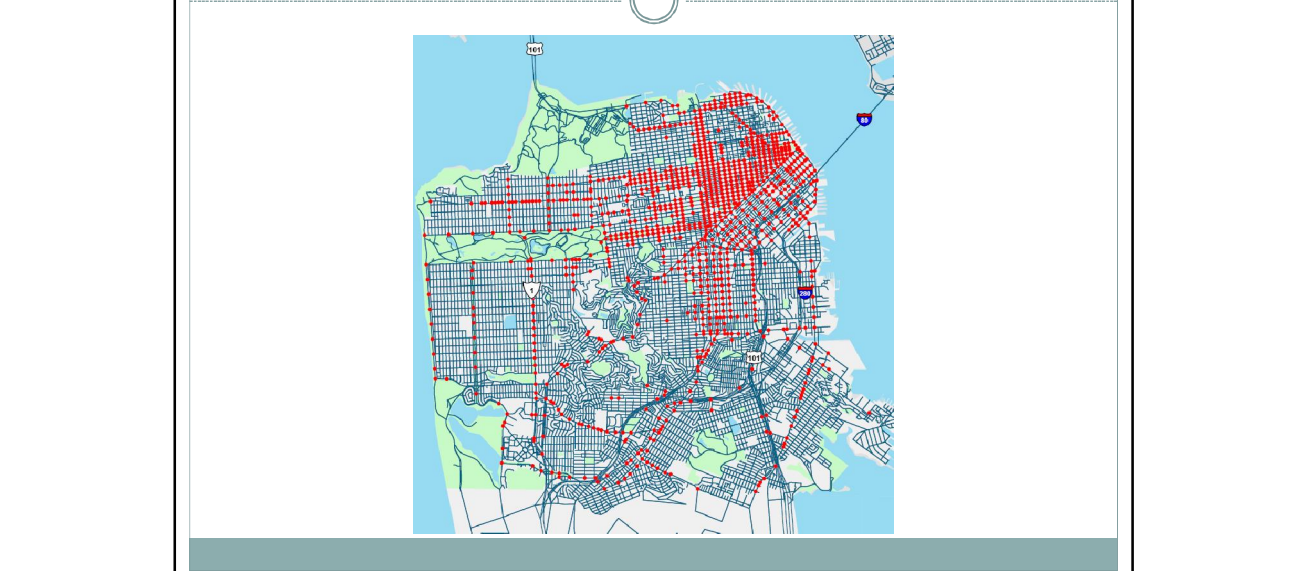
- Link count
vs link flow
- Link speeds



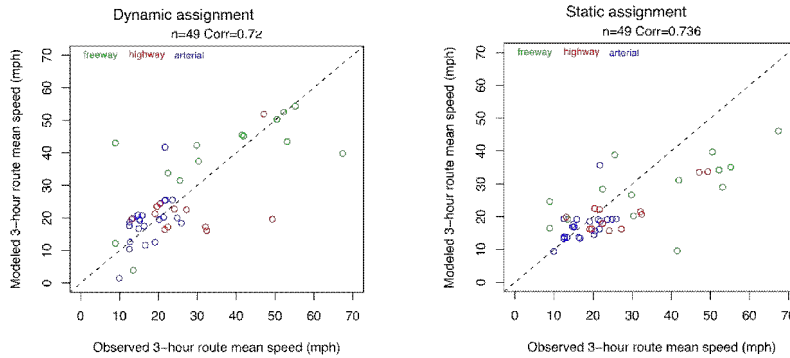
San Francisco County DTA Model

- Entire County DTA Model
 - Links for every city street
 - Zones at essentially city block level
- Traffic Signal Data Supplied in Excel Files
 - Wrote software to convert to DTA formats
- Very large scale issues
 - Runtime
 - Calibration
 - Adequate Observed Data





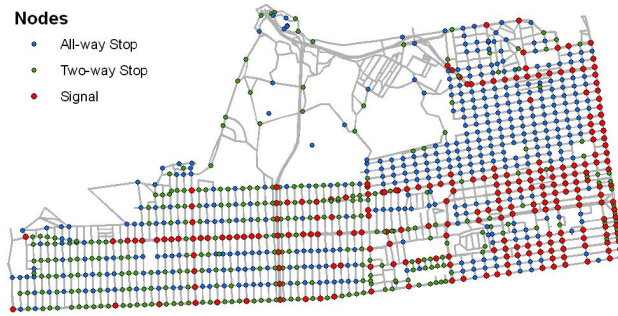
DTA vs Static Results Comparison



Doyle Dr. Corridor DTA

- Project In progress
- Model developed mostly by a DTA package developer
- Assisting SFCTA in scenario analysis
 - Construction closures
 - New alignment
 - Demand scenarios
- Illustrates minimal impact on neighborhoods

Doyle Dr Corridor Network



Questions ?