RESEARCH PROBLEM STATEMENT
TITLES - RANKED

Format: Title (no. of votes at 7/11/05 Performance Measure Workshop)

July 13, 2005

- Common definition of performance measures among tools
- How sensitive is each model to common inputs?
- Use uniform test data sets
- Tradeoffs between measures, methods, cost
- Potentially establish minimum acceptable thresholds

7. Probe Vehicle Data for Traffic Signal System Performance Monitoring & Control (18)

- Fleet vehicle, toll tags for monitoring
- Potential for cell phone tracking for real-time control

2. Reliability-Based Performance Measures for Traffic Signal Systems (14)

Incorporating safety and efficiency trade-offs in signal timing optimization tools
Quantify red-light violations, rear-end crashes as may be related to coordination
Validation of simuln. conflict surrogates vs. field data
(on-going work looking at conflict analysis vs. actual accidents)


Combine all viable arterial travel modes
Harness citizen complaints?
10. Intelligent Detection for Traffic Signal System Management (11)

*Use of RFID/DSRC for detection*


4. Incident Management for Surface Street Systems (8)


*e.g., Adaptive, TSP, etc*
16. Translating Traffic Signal System Performance Measures into Policy (6)

8. Including Air Quality & Fuel Consumption Considerations in Traffic Signal Timing Optimization (4)
   \textit{Emissions measurement at intersection for real-time assessment}

   \textit{Regional need}
fyi

(11. Develop Benchmarks for Assessing Traffic Signal System Performance – *combined into 6.*)
Synthesis Statements

12. Synthesis of Practice on Traffic Signal System Performance Evaluation (20)

5. Medium-Size City Policies on Traffic Signal System Performance & Timing Optimization (15)

3. Identifying & Overcoming Institutional Impediments to Effective Traffic Signal System Management (11)