

Urban Traffic Data Collection in Atlanta

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Urban Traffic Data Collection

- Urban Environment
- Current Programs
- Traffic Data Needs
- System Constraints
- Equipment and Software Challenges
- Future Directions

Urban Environment

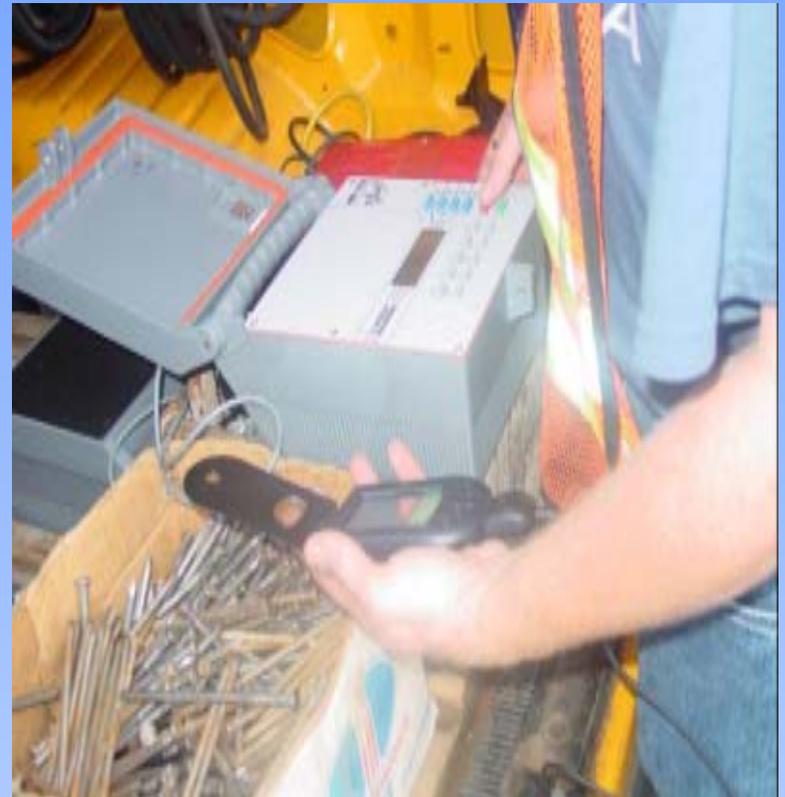
- Metro population increased 136%
 - 1970: 1,567,580
 - 2000: 3,698,660
- Road miles increased 186%
 - 1970: 6,430/3,588 (paved/unpaved miles)
 - 2000: 18,371/875 (paved/unpaved miles)

Urban Environment

- Multiple agencies address transportation issues
 - GDOT, ARC, GRTA, GEPD
 - FHWA , EPA
 - City and county governments
 - Citizens

Current Programs

- Continuous Counts
 - Loop/piezo sensors
 - ATR (Peek 241, ADR 1000 & 3000)
- Coverage Counts
 - Road tubes
 - Portable counters (Peek ADR 900)



Current Programs

- Ramp Counts
 - Contract (tube counts)
- Special Counts
 - Contract (tube counts)
 - Trailer-mounted microwave sensor
- Legacy software

Data Needs

- Traditional speed/volume/classification
- Special needs
 - HOV planning studies
 - Modeling studies
 - Air quality studies
 - Truck/freight movement
 - HAZMAT movement

Data Needs

- Decision makers want data to be:
 - Credible (accurate, consistent)
 - Specific (location, type)
 - Accessible
- Data collectors need equipment and software to meet these needs

System Constraints

- Traffic congestion
 - Peak vs. non-peak
 - Increased weight and speed
- Road configuration
 - Number of lanes
 - Complex ramps
 - Location of utilities

System Constraints

- Volume of data
- Multiple sources of data
 - Quality
 - Integration
 - Processing
- Reporting data

System Constraints

- Installation and maintenance
 - Cost
 - Lane closures
 - Road maintenance



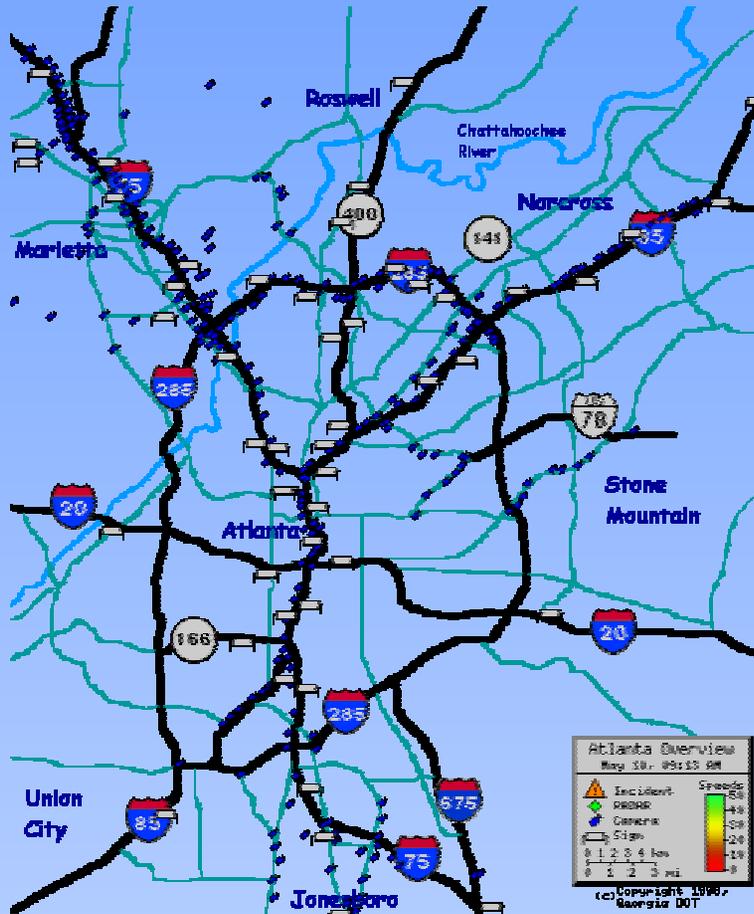
Equipment and Software Challenges

- Cost vs. Data
- Reliability and maintainability
- Compatibility
- Automated editing and verification
- Accessibility and exportability

Future Directions

- Expansion of continuous count program
 - Traffic data and weigh-in-motion data
- Expansion of county coverage and special counts programs
- HOV lane monitoring
 - Monitor existing HOV corridors annually
 - Volume, speed & vehicle occupancy

Future Directions



- Evaluate ITS data for traffic counting uses
 - Accuracy
 - Retrieval & processing
- Integrate systems
 - Common equipment
 - Shared communications
 - Data warehousing

Future Directions

- Enhance software capabilities
 - Automated editing & verification
 - Exportable data
- Explore non-intrusive technologies
 - Test magnetic imaging sensors
 - Develop and deploy portable platforms (e.g., microwave sensors)

Summary

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