

Data Quality in the New England Traffic Monitoring System

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What is the NETMS?

- Adapted from the Maryland State Highway Administration TMS developed by GIS/Trans
- Additional factoring and reporting features
- Additional WIM data processing functions

Who is involved?

- The six New England states:
 - Vermont (lead state)
 - Connecticut
 - Maine
 - Massachusetts
 - New Hampshire
 - Rhode Island
- GIS/Trans (developer)

Why?

- Regional compatibility for data sharing
- Better access by more users
 - single source for all data types
 - GIS compatible
 - electronic format
- Automate annual processes
- Enhanced data analysis tools (ie, GIS)

What do we hope the system will do for us in terms of data quality?

- automated validation of individual counts
 - internal, such as daily variation
 - historical, growth from previous counts
- manual editing of raw data
 - elimination of invalid periods
 - estimated values for “missing hours”
- automation of calculations
 - fewer computational errors
 - improve consistency

Where are we now?

- Prototype system in place in 4 states
- Load programs for most data types
- Serious debugging issues
 - guess what - data quality is one of the biggies!

So what's the problem?

- Historical data
 - inconsistent use of header data fields
 - Location of site code
 - Directional coding (EB, ST, etc.)
 - variations in site code usage
 - TMS needs extra characters in front
 - Non-unique site codes for some states
 - unusual counts
 - multiple roads in single file
 - driveway and other oddball counts

Problems, cont.

- Definitions
 - what's a weekday?
 - whose holiday? (Patriot's Day? Battle of Bennington?)
 - What constitutes a count? (length)
- Calculations
 - How are factors applied?
 - How is axle correction factor calculated, and when is it applied?
- And a whole bunch of other things

Wrapping it all up

Before the NETMS can help us with our data quality, we need put quality data into the system