Integrating Spatial and Time Sensitive Data to Monitor Social Patterns: A Dynamic Methodology for Studying Social Issues

Wesley L. James, University of Memphis
wes.james@memphis.edu

Ronald E. Cossman, Mississippi State University
ronald.cossman@ssrc.msstate.edu

Neal Feierabend, Virginia Tech
neal@nealf.com

This research introduces a dynamic methodology for visually tracking data across time and space dimensions. Combining Geographic Information Systems and Google Earth, our research provides reliable and valid estimates of the density of freight flow traffic in 1 square mile grids in a sample of two American cities; Memphis, TN and Jackson, MS. The methodology is applicable to the broader scientific community using time and space sensitive data.

Map 1: Density of Freight Flow Data by 1x1 mile quadrants, Jackson, MS - Monday 12:00PM

Number of Trucks per Year per Time Segment

Data only includes trucks from the American Trucking Research Institute dataset

Map 2: Density of Freight Flow Data by 1x1 mile quadrants, Memphis, TN - Monday 12:00PM