Research: Data Visualization of Large Scale Time Series Sensor Network Data

Research is underway with sensor network data, including time-series data, in support of data visualization and near real-time delivery to mobile and stationary devices. Research outcomes of this effort will include:

1. assessment of data interface design techniques for data visualization and presentation, and
2. mobile application prototypes, including pattern and trend identification.

Research: Algorithmic Problems in Restricted Sensor Networks

Algorithmic models of sensor networks are being investigated at both the radio communication level and at the application-level. In particular, research outcomes are expected to contribute to:

1. the understanding of energy and time complexity of these areas;
2. feasibility and experimental evaluation of various sensor node models.

Research: Visualization of Large Amount of Trajectory Data and Knowledge Discovery of Human Space-time Activity Patterns

Research is funded by NIH to develop tools and visualizations exploring patterns in large amount of trajectory data and investigate human space-time activity patterns related to influenza infection. Trajectory data collected using GPS, A-GPS or Smartphone is involved. Research outcomes of this effort will include:

1. a complete add-on software package to the ArcGIS software for trajectory data analysis and visualization (Trajectory Analyzer, completed)
2. space-time patterns of student activities on Kean University campus in relation to chances of flu infection

*NSF-funded CAVETM Automatic Virtual Environment.*

*NSF-funded 1040-core cluster, Puma.*

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