



ATMS GPL Software

IRIS

Brian Kary

MnDOT

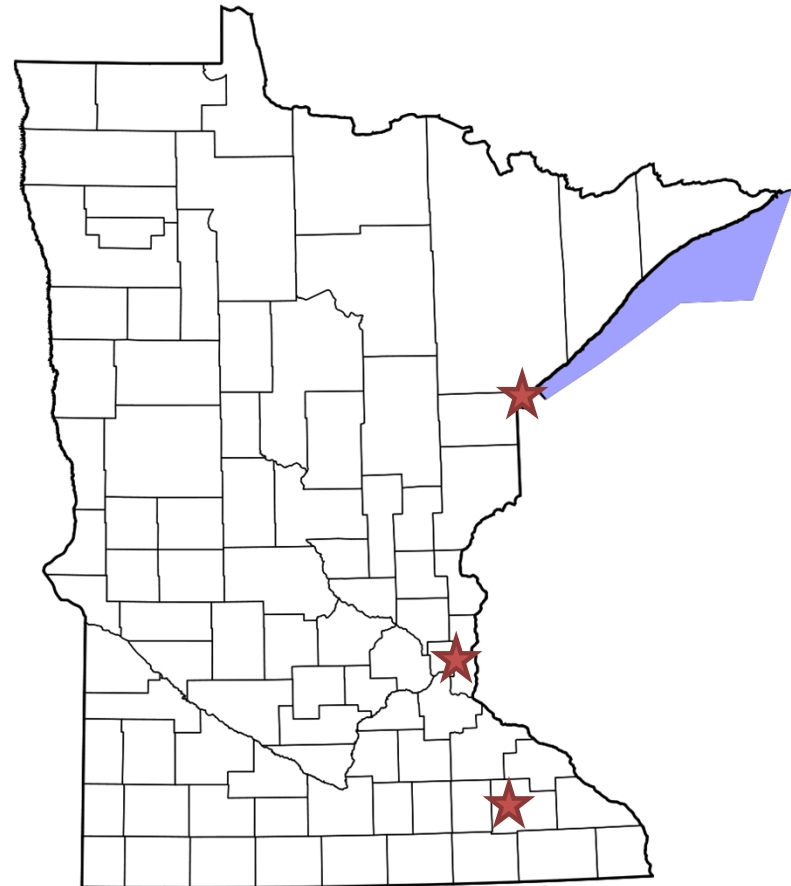
History of IRIS

- IRIS development began with in-house staff starting in the late 1990s
- Developed system internally
 - Had internal programming staff already
 - Wanted to avoid significant initial and ongoing costs associated with commercial packages
 - Ability to add functionality based on user needs
 - Focused on open source OS (Linux) and ancillary programs to keep cost low
- Needed to support NTCIP compliance for DMS
- Started with DMS deployment capabilities and expanded from there

MnDOT Deployments

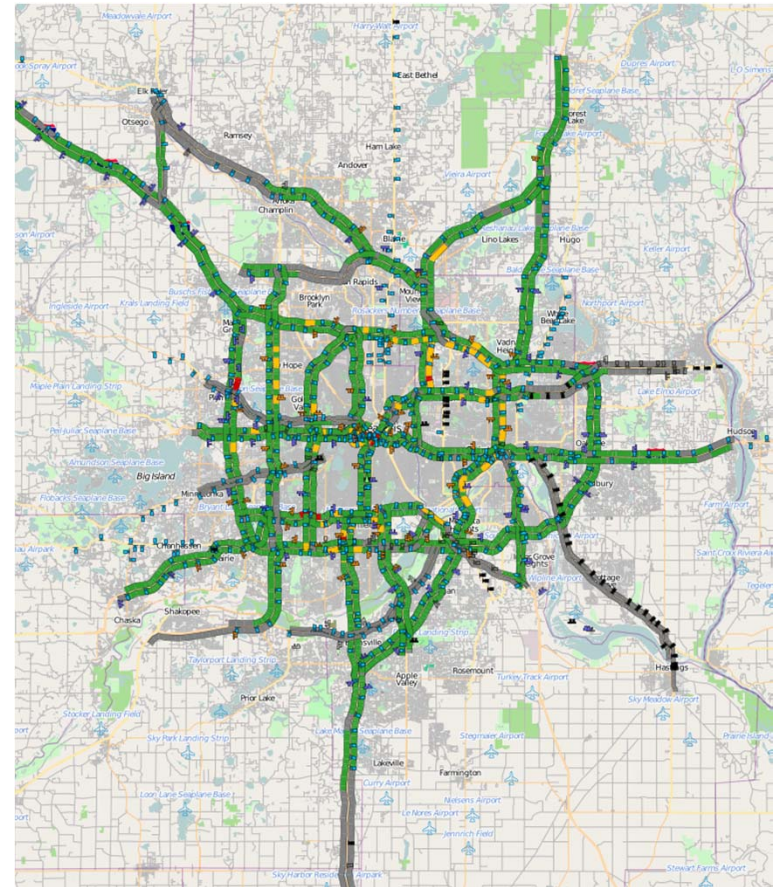


- Twin Cities Metro
- Duluth
- Rochester



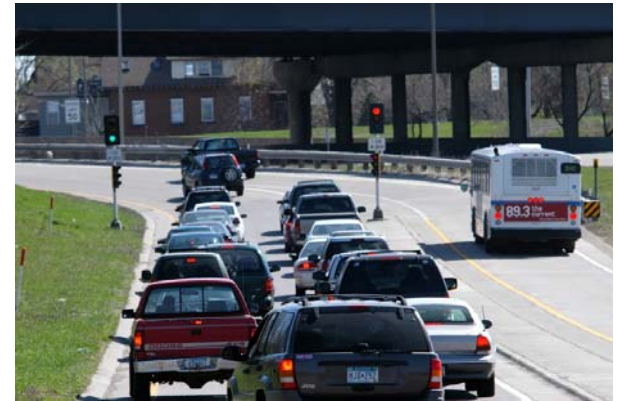
IRIS Capabilities

- Type of Equipment (Twin Cities)
 - Dynamic Message Signs (184)
 - Ramp Meters (441)
 - Lane Control Signals (300)
 - Camera viewing and control (600)
 - Traffic Sensors (5800)
 - Gate Arms (29)
 - MnPASS Toll Reader/Antennas (Future)
 - RWIS (CALTRANS)



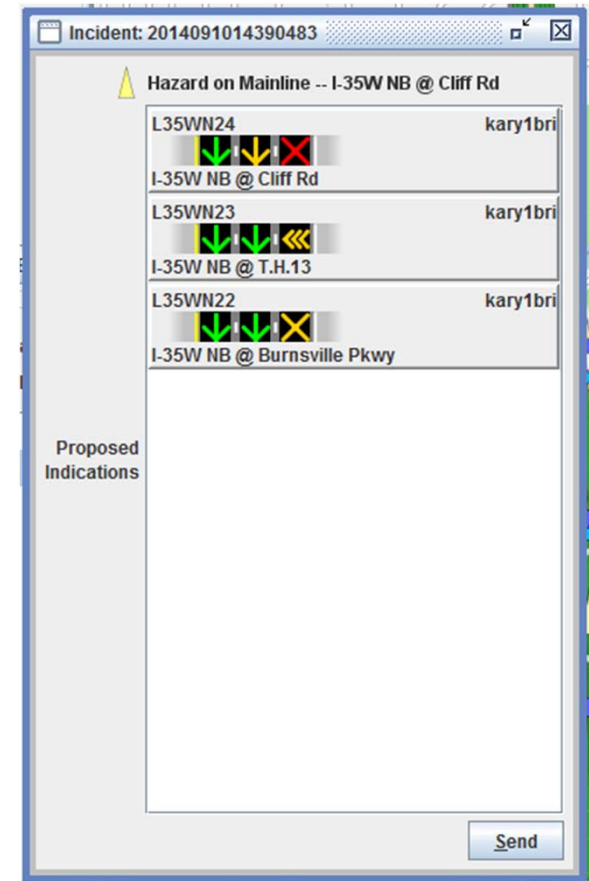
IRIS Capabilities

- Algorithms
 - Ramp Metering
 - Simple Plan (Time-of-Day)
 - Real-time Adaptive Ramp Metering
 - Variable Speed Limits
 - Travel Times
 - MnPASS HOT Lane Pricing Algorithm (Future)
 - Automated Warning Systems (CALTRANS)
 - Speed
 - Visibility
 - Wind



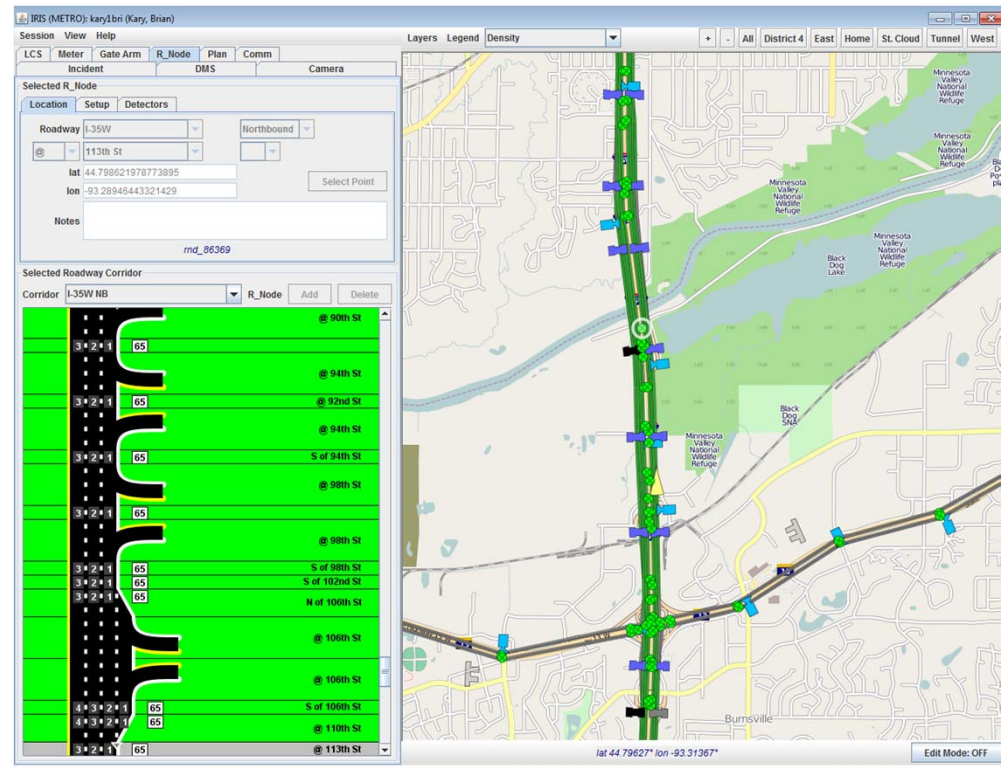
IRIS Capabilities

- Dynamic Message Signs
 - Sign Plans
 - Can develop plans that can be deployed manual or on a set schedule
 - Used for construction or PSA messages
 - Auto-Deployments
 - Current auto-deploys ILCS messages based on incident location data
 - Developing auto-deployments for DMS



IRIS Capabilities

- Configurable
 - Can be done by user, does not require programmer
 - Modification of Roadway System for map
 - Internal configuration of devices



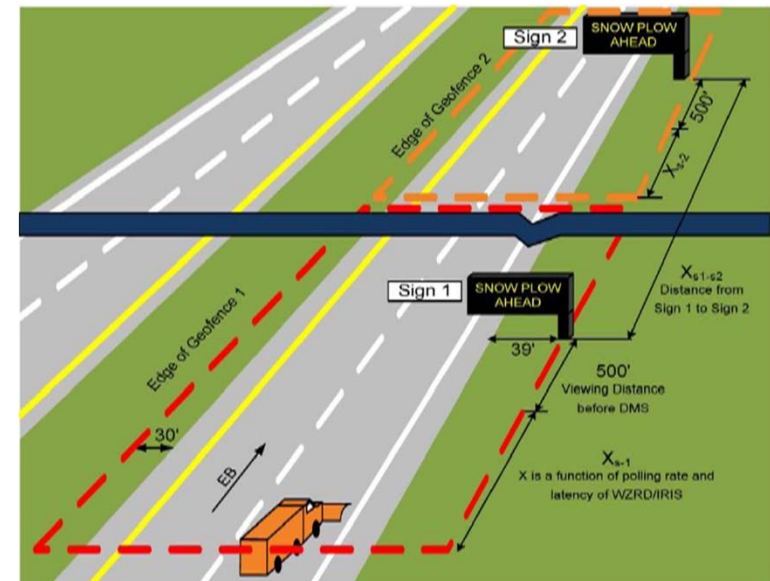
IRIS Capabilities



- Utilizes Open Source Software
 - Open Street Maps
 - PostgreSQL Database
 - Java

IRIS Capabilities

- Integration with other systems
 - DMS Activations
 - WZRD System - Automatic DMS activation for warning of active snow plowing ahead
 - ABC Parking Garage Status
 - Travel Time Messages (Chandler, AZ)
 - Incident Data
 - Imported from State Patrol Computer Aided Dispatch system
 - Traffic Sensor Data
 - Shared with MnPASS System
 - Shared via XML to external partners





General Public License

- Other states have requested IRIS
- Do not have the necessary resources
- Need to have more backup support for IRIS that others using it can provide
- Gain from others experience and enhancements
- Not appropriate mission to sell IRIS to others

Other Deployments

- Deployed
 - CALTRANS
 - Chandler, AZ
- In Progress
 - Wyoming
 - Nebraska
 - Bloomington, MN

IRIS Resources

Webpages

- <http://iris.dot.state.mn.us>
- <http://ahmct.ucdavis.edu/?projects=traffic-management-system>

Contacts

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