Regional Transportation Management

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ONTO 2050

Chicago Metropolitan Agency for Planning (CMAP) Recently published
ONTO 2050 Highway Operations Strategy Paper
http://www.cmap.illinois.gov/onto2050/strategy-papers/highway-operations

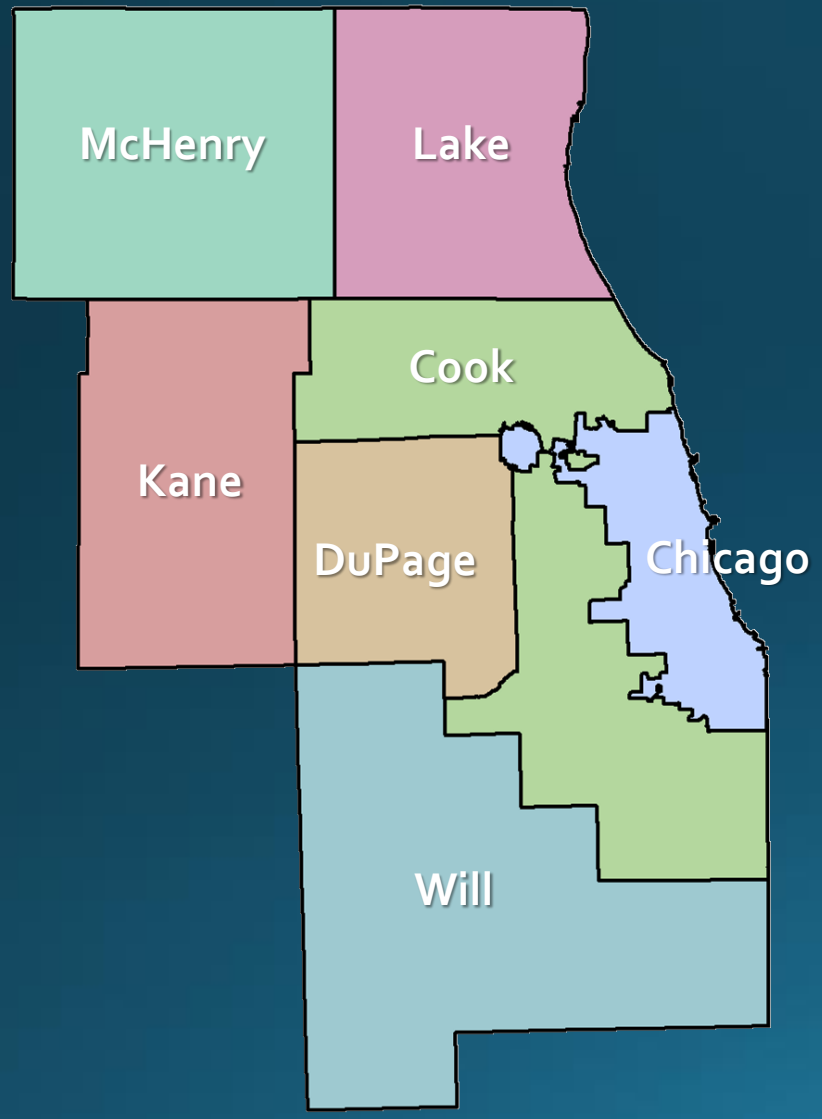
Benefits of a modern transportation management system

- Monitor system performance
- Communicate desired changes to traffic signals from central location
- Coordinate activities between multiple agencies
- Provide accurate information to the traveling public

Strategy paper states:

- Providing all urban areas of the region with Transportation Management Center (TMC) coverage is critical
- A regional center would eliminate the need for integrating multiple TMCs, and share the staffing, hardware and software costs.

Traffic Signals by County

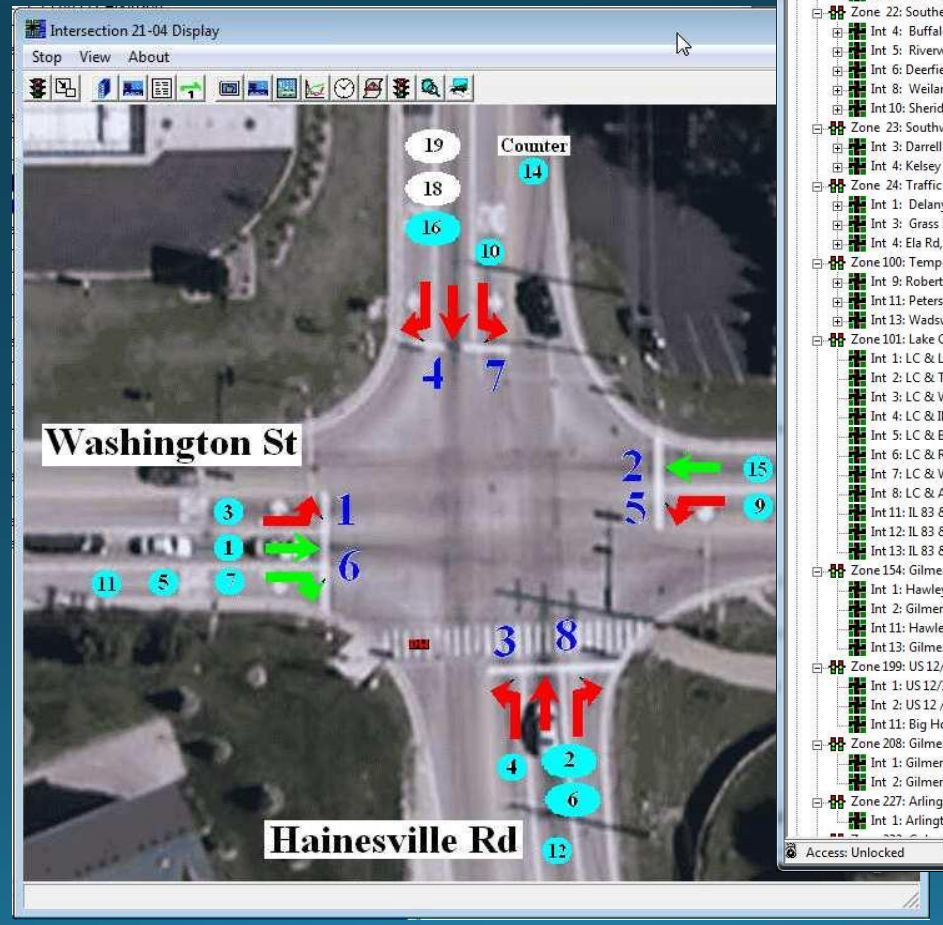


- Cook – 365 owned, 1557 IDOT, 2300 total (excluding Chicago)
  - Chicago – 2,820 owned
- DuPage – 340 owned, 314 IDOT, 1000 total
- Kane – 116 owned, 145 IDOT, 300 total
- Lake – 160 owned, 426 IDOT, 740 total
- McHenry – 42 owned, 94 IDOT, 200 total
- Will – 93 owned, 197 IDOT, 400 total

TOTAL = 7,760 Traffic Signals

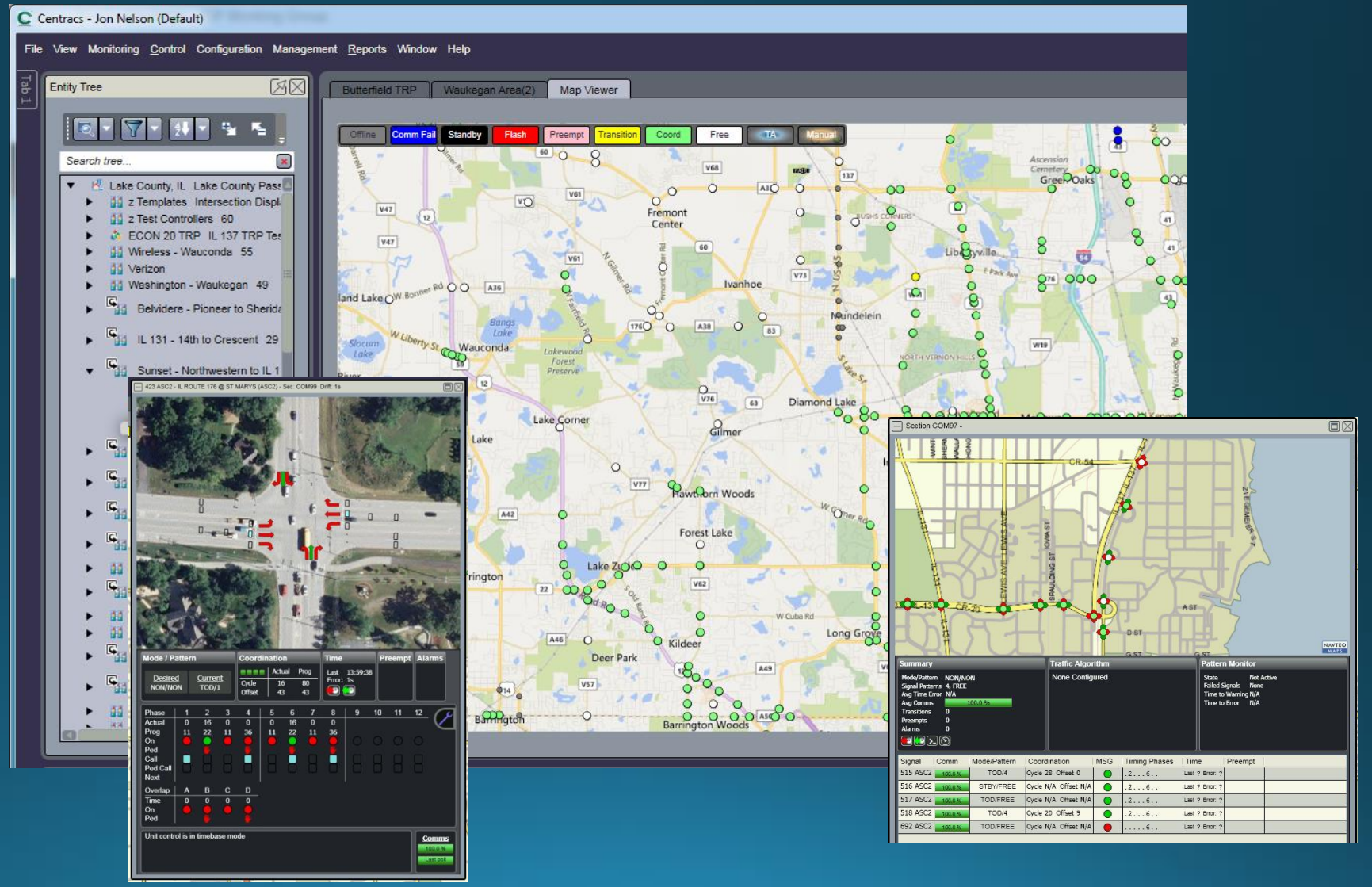
Original System Communication

- Master Controller communication using phone line and modem
- Communication method established in the 1980's.
- Utilize phone line connections



Central System Communication

- Current industry practice
- Real-time communication
- Email alarms
- Adjust signals for incidents, special events.



Traffic Management Benefits

- Chicago Area was pioneer for traffic management on expressways.
- Very limited on the arterial system

Today

- Expands upon the existing traffic signal fiber optic infrastructure that has been put in for decades
- Real-time traffic system monitoring
- Monitor traffic through cameras on arterial traffic system
- Communication with 911 dispatch centers

Traveler Information

- Website
- Highway Advisory Radio Station
- Email Notification
- Social Media
- Smart Phone app
- 3rd Party users (Waze, Google)
- Regional Media (TV, Radio traffic reports)

Traffic Management Centers (TMC)

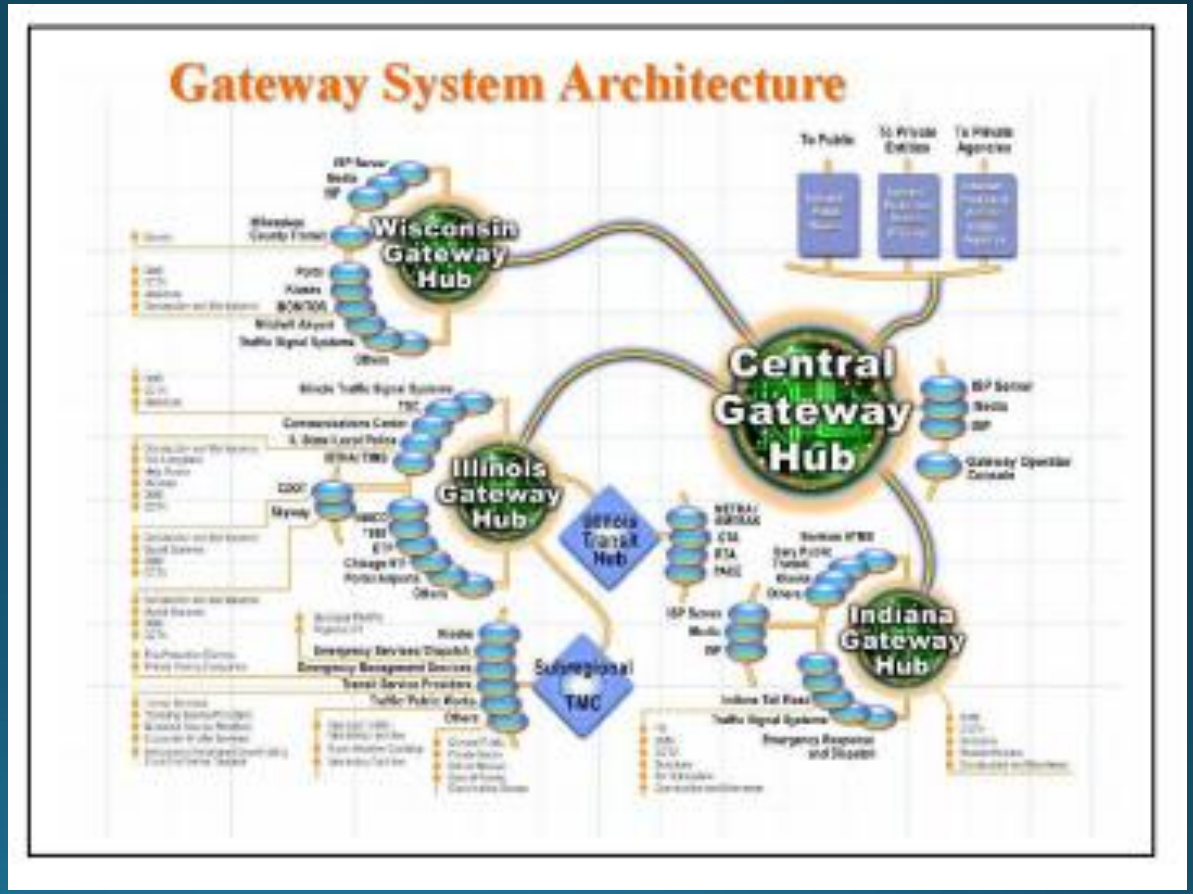
How many more Traffic Management Centers do we need?

Kane County Arterial Operation Center

Lake County Transportation Management Center

Regional Communication

Gateway established to allow for communication between various transportation hubs.



Benefit of Regional TMC

- Provide shared service amongst participating agencies to realize better performance and efficiencies.
- Provide platform to further regional priorities.
- Real Time connection to transit agencies
- Position the region for connected vehicle/ autonomous vehicle

Staff Level Questions

Regional Arterial Traffic Management items to consider

- Monitor traffic signals
- Receive incident data from Dispatch centers
- Adjust traffic signals for incidents if camera nearby to confirm traffic condition
- Publish traffic related information to website, social media, customizable email alert system

Next Steps

- Move forward with:
  - Agreements
  - Staffing
  - Funding
  - Project selection
  - Implement Test Case
- Participation from IDOT & Illinois Tollway
- Support from CMAP