The team also conducted a one-day workshop, which gathered 60 stakeholders to discuss and review the architecture draft. The architecture is defined by three outputs: technical documentation, a database and a hypertext linked web site.

You may view these outputs by logging onto the CATS web site at www.catsmpo.com. Navigate to "Programs" and select "Regional ITS Architecture."

U.S. DOT Architecture Requirements

- A description of the region, participating agencies and other stakeholders.
- A description of the needs and ITS services that the regional ITS architecture will provide.
- An operational concept that identifies the roles and responsibilities of participating agencies and other stakeholders in the operation and implementation of the elements included in the regional ITS architecture.
- System functional requirements.
- A description of the interface requirements and information exchanges with planned and existing systems and subsystems and architecture flows as defined in the National ITS Architecture.
- Projects that may require sequencing for implementation.
- Existing ITS standards to support regional and national interoperability.
- Agreements that may need to be considered for operations, including those affecting ITS project interoperability, utilization of ITS related standards and the operation of the projects identified in the regional ITS architecture.
- A maintenance plan to respond to the dynamic nature of the architecture and to address the ongoing ITS-related activities

Communications Infrastructure

In addition to the architecture outputs, the project developed a communication white paper to indicate, in general terms, how the Northeastern Illinois transportation agencies can create a reliable, cost-effective communication system for exchanging information among themselves and with the public. Such a system would incorporate communication media, such as fiber optic cables, equipment to send and receive the data, and software to handle the data at each end of the transmission. A detailed regional communications study will be required to take that next step.

For more information about this project, please contact Mark Thomas at (312) 793-3467 or David Zavattero at (847) 705-4800.

Regional ITS Architecture for Northeastern Illinois
Project Summary

Spring 2003

Chicago Area Transportation Study

The Northeastern Illinois Regional Intelligent Transportation Systems (ITS) Architecture is a 15 year roadmap for transportation systems integration in the Northeastern Illinois region. The architecture has been developed through a cooperative effort by the region's roadway and transit agencies, with a strong focus on emergency operations centers and other public service answering points. The architecture represents a shared vision of how each agency's systems will work together in the future, sharing information and resources to provide a safer, more efficient, and more effective transportation system for travelers in the region.

The architecture is an important new tool that will be used by:

- **Planning Agencies** - to better reflect integration opportunities and operational needs into the transportation planning process.
- **Operating Agencies** - to recognize and plan for transportation integration opportunities throughout the region.
- **Other public service organizations and individuals** - that use the transportation system in the Northeastern Illinois region.

The architecture provides an overarching framework that spans all of these organizations with a focus on individual transportation efforts. Using the architecture, each transportation project can be viewed as an element of the overall transportation system, providing visibility for the relationship between individual transportation projects and ways to cost-effectively build an integrated transportation system over time.

What is a Regional ITS Architecture?

It is a plan for the deployment of electronic technology throughout a region with a focus on integration of systems within the region. The architecture identifies stakeholders, systems or "elements" they operate and the information to be exchanged between stakeholder elements. The architecture also provides selected standards for information exchange.

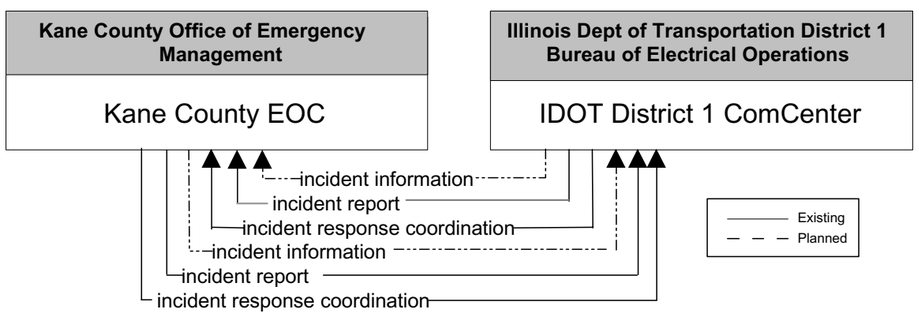

Figure 1. Example of Architecture Flows between Elements

Why create a Regional ITS Architecture for Northeastern Illinois?

1. Architecture serves as a transportation-planning tool that looks beyond projects that are currently planned. It provides a plan for the evolution of transportation services and is extremely important for the sequencing of technology deployments.
2. Architecture defines integration opportunities between the ITS elements in the region. Integration means not just defining what systems talk to each other, but what information they share.
3. Coordinated agency plans offer additional opportunities to leverage funding.
4. The architecture can serve as a forum for institutions to meet and discuss their mutual needs and concerns.
5. The U.S. DOT requires the development of a regional architecture if agencies intend to use the Highway Trust Fund to finance ITS projects.

The Northeastern Illinois Regional ITS Architecture was developed through a project funded by the Chicago Area Transportation Study (CATS), the Illinois Department of Transportation (IDOT) and the Federal Highway Administration (FHWA).

The architecture is built on previous efforts:

- CATS, Northeastern Illinois Strategic Early Deployment Plan
- FHWA, Tier 2 Architecture
- GCM, Gary-Chicago-Milwaukee Corridor Program Plan
- RTA, Regional Transit ITS Plan
- Illinois Tollway, Traffic and Incident Management System
- Chicago, ITS Plan
- Chicago, Traffic Management Center Plan
- Cicero Avenue Corridor
- Northwest Indiana Regional ITS Architecture

How was the architecture created?

Using the documentation available, a base architecture draft was developed in a hypertext format and placed on the internet. This draft architecture was used as an outreach tool to meet with the key stakeholders in the region to get their contribution to verify and modify the architecture.

The development team conducted a total of 14 group meetings with stakeholders from state and federal highway and transit, emergency management and county agencies.

Chicago	GCM Coalition	Lake Co.	Pace
Cook Co.	IDOT	McHenry Co.	RTA
CTA	ISTHA	Metra	SWRPC
DuPage Co.	Kane Co.	NIRPC	Will Co.