

WORKING TOGETHER

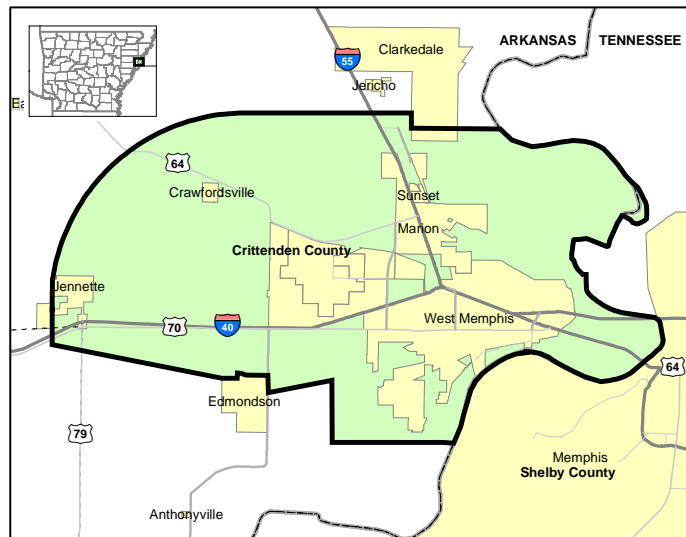
The development of the West Memphis Regional ITS Architecture and Deployment Plan was successful due to the collaboration and continuous participation of the stakeholders representing the communities of the West Memphis Region. These stakeholders participated in a series of four workshops in late 2005 and early 2006.

Regional Stakeholders

- AHTD District 1
- AHTD Highway Police
- AHTD Planning and Research Division
- City of Marion
- City of West Memphis
- Crittenden County
- Crittenden County Sheriff's Department
- Federal Highway Administration Arkansas Division
- Shelby County Tennessee Department of Regional Services
- Tennessee Department of Transportation Region 4
- West Memphis Metropolitan Planning Organization

Overview of the West Memphis Region

The West Memphis Region encompasses approximately 500 square miles in eastern Arkansas. It includes the majority of Crittenden County, Arkansas. The Crittenden County population was 51,488 in 2004 and the largest city in the area is West Memphis.



West Memphis Regional Boundaries

PROJECT CONTACTS



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West Memphis Regional ITS Architecture and Deployment Plan

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Project Approach

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Development of a regional intelligent transportation system (ITS) architecture is one of the most important steps in planning for and implementing ITS in a region. ITS architectures provide a framework for implementing ITS projects, encourage interoperability and resource sharing among agencies, identify applicable standards to apply to projects, and allow for cohesive long-range planning among regional stakeholders. The ITS architecture allows stakeholders to plan for what they want their system to look like in the long-term and then break the system into smaller pieces that can be implemented in the short-term.



What is ITS?

Intelligent Transportation Systems are the application of electronic technologies and communications to improve the operation of roadway and transit systems.



What is an ITS architecture?

An ITS architecture is a framework for the deployment and operation of ITS in a region.

In order to be eligible for funding of ITS projects from the Federal Highway Administration or the Federal Transit Administration, regions must show that their projects conform to their regional ITS architecture. This requirement became effective in April 2005 and was continued by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFTEA-LU), the 5-year federal transportation authorization bill.

What is a market package?

Market packages are groups of ITS services that address one or more needs for a region.

High Priority Market Packages in West Memphis

- Network Surveillance
- Traffic Information Dissemination
- Regional Traffic Control
- Traffic Incident Management System
- Standard Railroad Grade Crossing
- Railroad Operations Coordination
- Emergency Call-Taking and Dispatch
- Roadway Service Patrols
- Transportation Infrastructure Protection
- Wide-Area Alert
- Early Warning System
- Disaster Response and Recovery
- Disaster Traveler Information
- Roadway Maintenance and Construction
- Work Zone Management
- Maintenance and Construction Activity Coordination
- HAZMAT Management
- Roadside HAZMAT Security Detection and Mitigation
- Broadcast Traveler Information
- ITS Data Mart

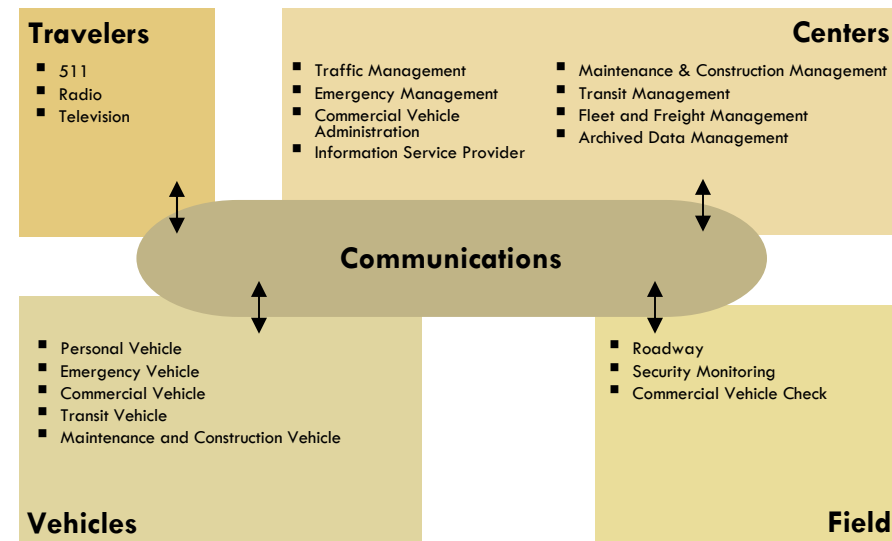
ITS Architecture

Market Packages

Market packages outline the functions that stakeholders envision ITS to perform in coming years. Stakeholders selected and prioritized market packages into high, medium, and low priorities based on regional needs, feasibility, likelihood of deployment, and overall contribution of the market package in meeting the goals and vision for ITS functionality in the Region. The high priority market packages identified by stakeholders in the West Memphis Region are included in the margin.

West Memphis Architecture Diagram

The architecture diagram shows the communication relationship between existing, planned and future systems in the West Memphis Region. The arrows represent information being exchanged between systems. Examples of information being communicated are: alerts and messages about incidents, broadcast advisories about travel conditions, and video images shared between traffic and emergency management agencies.



Communications

One of the primary purposes of an ITS architecture is to identify the data that needs to flow between agencies. Resource sharing between agencies can often be a very cost effective way to deploy or maintain communications systems.

Standards

Standards establish the format requirements for data being transmitted between elements.

ITS Deployment Plan

What is an ITS deployment plan?

A plan that outlines the projects that need to be implemented in order to meet needs identified in the ITS architecture.

Recommended Projects

A list of recommended ITS projects for the West Memphis Region was developed through input from stakeholders during the architecture process. Stakeholders grouped projects into timeframes for deployment based on priority, dependence on other projects, technology, and feasibility. Below is a summary of the projects recommended for deployment in the short term. A complete listing of all the projects identified is found in the ITS Deployment Plan.

Travel and Traffic Management Projects

- AHTD District 1 Traffic Management Center
- AHTD-Crittenden County Traffic Operations Center
- AHTD Closed Circuit Television Cameras and Dynamic Message Signs on I-40 and I-55
- AHTD Amber Alert Dynamic Message Signs on I-40
- AHTD Speed Detection on I-40 and I-55
- AHTD Highway Advisory Radio on I-40
- Tennessee Department of Transportation ITS Equipment on I-40 and I-55
- AHTD West Memphis Regional Traveler Information Web Site
- AHTD/City of West Memphis Signal Study
- AHTD/City of West Memphis Signal System Coordination and Upgrades
- Regional Communications Master Plan
- Regional Communications Implementation Phase 1

Emergency Management Projects

- AHTD Motorist Assist Patrol Dispatch
- AHTD Infrastructure Security Monitoring Phase 1
- West Memphis Regional Mutual Aid Agreements
- Amber Alert Dissemination

Maintenance and Construction Management Projects

- Maintenance and Construction Activity Coordination
- AHTD Portable Dynamic Message Signs

Projects of Statewide Significance

- AHTD/TDOT Communications Connection
- Arkansas 511 Implementation
- AHTD Statewide TMC
- Dynamic Message Signs Amber Alert Message Dissemination System
- CVISN Implementation

Maintenance Plan

The Regional ITS Architecture and ITS Deployment Plan developed for the West Memphis Region addresses the Region's current vision for ITS implementation. As the West Memphis Region grows, changing needs and technology will prompt new ITS opportunities. Stakeholders will schedule reviews to examine and update the Plan as appropriate to reflect the status of the implemented projects, the addition of any new projects, changes in project priorities, and the addition of any new services to the National ITS Architecture.

ITS Technologies



Traffic Management Center



Dynamic Message Signs



Closed Circuit Television Cameras



Flood Detection and Closure Systems



Traffic Signal System Coordination

