A Statewide Mobility Information Management System (MIMS) for Rural Alabama

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Prepared by
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University Transportation Center for Alabama
The University of Alabama, The University of Alabama at Birmingham, and The University of Alabama in Huntsville
UTCA Report Number 04403
January 2008
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Final Report 10-1-03 – 1-31-07

Mobility Management, Rural Transportation, Information System

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Executive Summary

Rural Public Transit Operators are entering an era when they must become more than transit providers; they must become mobility managers. But, to think in a narrowly-defined range such that mobility management would be limited to one-county or even a ten-county area would be as short-sighted as a policy that would ignore public transportation as an integral part of the transportation infrastructure. Mobility management must be a statewide effort. The heart of this effort would be an information system that contained the elements necessary to manage a statewide trip database using public and private transportation resources; A ”Mobility Information Management System” (MIMS). The goal of this research was to take the previously developed methodology for development of the MIMS system and deploy a statewide version of the system.
1.0 Introduction

At its simplest level, a Mobility Information Management System it is a printed compendium of all transportation providers statewide providing accurate contact information. At its grandest level, it is both a web-interactive and a dial-in interactive system that both professionals and the general public can access and utilize to chart a trip from A to B. The Department of Civil and Environmental Engineering at The University of Alabama in Huntsville has been working towards a statewide MIMS system in Alabama. This project focused on the deployment of a MIMS methodology, database, and Internet pages to a statewide implementation so all of this transportation information can be understood and utilized by the general public. The implementation of the project was on a statewide level as the researchers worked closely with planners and transit coordinators from all regions of the state.

This report presents a description of the study area and a methodology and design for the statewide rural transportation Mobility Information Management System. The methodology consists of information received from the various transportation providers, both public and private; a database designed to maintain, query, and update the information built in Microsoft Access; and an Internet-based system for service providers and the public to learn about what services are offered and assist them in making informed transportation choices. The completion of the system provides a convenient mechanism to educate the public on transportation services and allows transportation service agencies to help passengers arrange needed transportation services.
2.0 Design of the Mobility Information Management System

The rural transportation Mobility Information Management System (MIMS) designed for Alabama was developed following the case study effort begun in the Northwest Alabama region. The steps included the design of the system for statewide implementation and the collection of data from the various providers in Alabama.

The initial step in the development of the statewide MIMS system was the creation of the web pages. This effort was developed using the original pilot study, Northwest Alabama, which was used in the first attempt. The MIMS system was developed as http://almims.uah.edu and the homepage identified the various regions in Alabama, based on the Regional Planning Organizations, where the data would be collected (see Figure 2-1).

Welcome to the State of Alabama Mobility Information Management System
Please select a region to learn more about the transportation services provided in those counties

Figure 2-1. Welcome page for the statewide MIMS
From each region, making the selection would direct the user to a sub-page highlighting the specific transportation services available within the region (see Figure 2-2).

Please choose either a city or type of transportation service. To return click here

<table>
<thead>
<tr>
<th>Select City</th>
<th>Transportation type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home-to-work</td>
<td></td>
</tr>
<tr>
<td>Shopping</td>
<td></td>
</tr>
<tr>
<td>Demand response</td>
<td></td>
</tr>
<tr>
<td>Special needs</td>
<td></td>
</tr>
<tr>
<td>Non emergency medical</td>
<td></td>
</tr>
<tr>
<td>Air</td>
<td></td>
</tr>
<tr>
<td>Intercity bus</td>
<td></td>
</tr>
<tr>
<td>Taxi</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 2-2. Regional page of cities and services**

At this point, the user could either select a specific city/county or a specific type of transportation to receive the information from the system (see Figures 2-3 and 2-4).
Figure 2-3. Results for Colbert County
At this point the user could proceed through the system and find the information of interest to understand the services provided and/or contact the agency to obtain more information or arrange service. It is important to note that the system was not intended to be an online reservation service, only a portal for information distribution.

Additionally, pages were developed for all areas to allow for the update of information in the system. From the homepage for the MIMS system, a login was available for administrative users to update the data within the MIMS system (see Figure 2-1). The login screen requires a username and password to prevent outside users from tampering with the data (see Figure 2-5).
Once the user has been verified, they will be directed to a screen where the different types of transportation service that can be modified are displayed. After the user selects the type of service they are interested in changing, another screen will appear prompting the user to decide what changes are necessary, add a route, modify a route, or view an existing route (see Figure 2-6).

Once the user selects the option of interest, the screen will display an existing route to be modified, a blank data entry screen, or a screen prompting the user to select the route to view. The entry and modification screens are all designed to match the view screens in the system, with some having blank entry locations for the user to type the information into the system and others having check boxes to identify the appropriate information. Example screens for entering data for a special needs route and a demand response route are shown in Figures 2-7 and 2-8.
Welcome to the Special Needs Update Page! To return to the main update menu, press back.

**Special Needs**
- Service Provider: 
- Contact: 
- Description of Service: 

**Pick Up Location**
- Lawrence: Okfuske, Franklin, Marvin, Winona
- Anderson: Cherokee, Hedges, Bear Creek, Addison
- Horace: Light, Pal Campbell, Belott, Ashby
- Tilden: Leslie, Red Bay, Ola, Double Springs
- Lexington: Midway, Hooper, Hartsburg, Lynn
- Jasperville: Sand, Van, Harts
- Wittman: Tuscumbia

**Drop Off Location**
- Lawrence: Okfuske, Franklin, Marvin, Winona
- Anderson: Cherokee, Hedges, Bear Creek, Addison
- Horace: Light, Pal Campbell, Belott, Ashby
- Tilden: Leslie, Red Bay, Ola, Double Springs
- Lexington: Midway, Hooper, Hartsburg, Lynn
- Jasperville: Sand, Van, Harts
- Wittman: Tuscumbia

*Figure 2-7. Screen for entering data for a special needs route*
Welcome to the Demand Response Update Page! To return to the main update menu, press back.

### Demand Response

<table>
<thead>
<tr>
<th>Service Provider</th>
<th>Contact</th>
</tr>
</thead>
</table>

### Pick Up Location

<table>
<thead>
<tr>
<th>Pick Up Location 1</th>
<th>Pick Up City Location 1</th>
<th>Pick Up County Location 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pick Up Location 2</td>
<td>Pick Up City Location 2</td>
<td>Pick Up County Location 2</td>
</tr>
<tr>
<td>Pick Up Location 3</td>
<td>Pick Up City Location 3</td>
<td>Pick Up County Location 3</td>
</tr>
<tr>
<td>Pick Up Location 4</td>
<td>Pick Up City Location 4</td>
<td>Pick Up County Location 4</td>
</tr>
<tr>
<td>Pick Up Location 5</td>
<td>Pick Up City Location 5</td>
<td>Pick Up County Location 5</td>
</tr>
</tbody>
</table>

### Drop Off Location

<table>
<thead>
<tr>
<th>Drop Off Location 1</th>
<th>Drop Off City Location 1</th>
<th>Drop Off County Location 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drop Off Location 2</td>
<td>Drop Off City Location 2</td>
<td>Drop Off County Location 2</td>
</tr>
<tr>
<td>Drop Off Location 3</td>
<td>Drop Off City Location 3</td>
<td>Drop Off County Location 3</td>
</tr>
<tr>
<td>Drop Off Location 4</td>
<td>Drop Off City Location 4</td>
<td>Drop Off County Location 4</td>
</tr>
<tr>
<td>Drop Off Location 5</td>
<td>Drop Off City Location 5</td>
<td>Drop Off County Location 5</td>
</tr>
</tbody>
</table>

### Timings

- **Sunday**
  - Sunday Pick-up Time
  - Sunday Drop-off Time
- **Monday**
  - Monday Pick-up Time
  - Monday Drop-off Time
- **Tuesday**
  - Tuesday Pick-up Time
  - Tuesday Drop-off Time
- **Wednesday**
  - Wednesday Pick-up Time
  - Wednesday Drop-off Time
- **Thursday**
  - Thursday Pick-up Time
  - Thursday Drop-off Time
- **Friday**
  - Friday Pick-up Time
  - Friday Drop-off Time
- **Saturday**
  - Saturday Pick-up Time
  - Saturday Drop-off Time

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**Figure 2-8. Data entry screen for demand response**
3.0 Conclusions

The rural transportation Mobility Information Management System (MIMS) developed for Alabama provides a unique method to maintain and access transportation data. The system has been designed to be easily understood by both the transportation agencies that need to maintain the data and the general user that desires information on transportation related services offered in the state. The completion of the system provides a convenient mechanism to educate the public on transportation services and allows transportation service agencies to help passengers arrange needed transportation services. Overall, the Mobility Information Management System is attempting to assist rural transit providers become mobility managers and provide a mechanism for individual travelers to obtain access to a wealth of information related to transportation services and providers.