# CLOSEOUT REPORT

Submitted by the AASHTO TIG Lead States Team for
the following technology:

# Utility Relocation Electronic Document Management System (UREDMS)

*Lead States Team Members and Agencies:*

**Larry Ditty, Chair, Pennsylvania DOT**

**Mike Bolden, Georgia DOT**

**Mollie Zauner, Minnesota DOT**

**Nick Lefke, Michigan DOT**

**JoAnn Kurts, Louisiana DOTD**

**Chuck Schmidt, New Hampshire DOT**

**Jesse Cooper, Texas DOT**

**Eric Felty, Pennsylvania DOT**

**Jeffrey Zaharewicz, FHWA**

Date: June 19, 2012

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the following technology:

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## Introduction

The responsibility assigned to the lead states teams was to help streamline utility coordination processes across the country by promoting the benefits and use of UREDMS to all other State DOTs as well as to other transportation agencies.

The UREDMS lead states team met in Harrisburg, PA on January 13-14, 2010 to prepare a Marketing Analysis and a Marketing Plan. The agenda for this meeting is included as Appendix A, and the Marketing Analysis and the Marketing Plan are attached as Appendices B and C, respectively.

This closeout report is divided into five sections:

    Marketing Activities
    Performance Measurement
    Lessons Learned
    Transition Plan
    Final Expenditure Summary

# Marketing Activities

The UREDMS lead states team put together a marketing plan designed to reach both State DOT decision makers and utility company executives. Within State DOTs, communication targets included the top administrators, second-level management at both the headquarters offices and the district offices, and also, importantly, the managers of the Utility and Permits Sections.

Methods of communicating included conference presentations, trade journal articles, website information, and FHWA-sponsored activities.

Information delivered to these audiences included:
System benefits
System costs
Political implications
FTE resource requirements
Other business processes impacted
System users
Training requirements

Actual and perceived barriers to be overcome to do a trial or to adopt this technology as a standard were identified as:
Management won't buy in
Cost is too high
Existing internal IT infrastructure may be inadequate
Reluctance or inability to automate
Lots of data entry/re-entry will be needed for initial set up
Lack of focus on transparency
Training requirements
Accepting a new way of doing business
Users see no value

Potential partners in marketing this technology include:
AASHTO SCOH and Subcommittees
Other State DOTs
FHWA
Manufacturers and Developers of existing systems

This report and additional information about UREDMS are available at
http://tig.transportation.org/Pages/UtilityRelocationElectronicDocumentManagementSystem.aspx .

### *Presentations at Conferences and Meetings*

| Conference or Meeting | Location & Date | Target Audience | Presenter |
|---|---|---|---|
| AASHTO Subcommittee on ROW & Utilities | San Diego – April 2010 | Mid-level HQ Managers and Utility/Permits Section Managers | Larry Ditty Chuck Schmidt Jesse Cooper |
| Joint Meeting AASHTO Subcommittee on ROW, Utilities & Design * | St. Louis – April 2011 | Mid-level HQ Managers and Utility/Permits Section Managers | Larry Ditty Chuck Schmidt Jesse Cooper |
| AASHTO SCOH * | Detroit – October 2011 | Top State DOT Administrators | Nick Lefke |
| Mid-Atlantic Regional Utilities Conference | Pittsburgh – September 2010 | Mid-level HQ Managers and Utility/Permits Section Managers | Larry Ditty |
| TRB Annual Meeting / AFB 70 Technical Committee Meeting | Washington DC – January 2011 | Members and Friends | Jesse Cooper |
| FHWA Every Day Counts (EDC) Regional Summits | 2010 | Mid-level HQ Managers and Utility/Permits Section Managers | Jeff Zaharewicz |
| State DOT Visit | North Carolina 2011 | Administration | Jesse Cooper |

*\*Exhibit booths were arranged for the SCOH meeting and the Subcommittee on ROW & Utilities meeting in St. Louis. The handouts provided at these booths were well-received.*

***Publications***

| Date Produced | Publication Type | Total Number Produced | Recipients and Distribution Method |
|---|---|---|---|
| May 2010 | FOCUS Journal Article | NA | FOCUS readers |
| 2011 | PowerPoint Presentations | NA | Conference Attendees and Website Visitors |
| 2011 | Tri-fold brochure | 500 estimated | Conference Attendees and Website Visitors |
| 2011 | List of FAQs | Local Reproduction | Conference Attendees and Website Visitors |
| January/February 2012 | Public Roads Article | NA | Public Roads readers |
| 2012 | Provide information to the NHI curriculum developers. | NA | NHI curriculum developers. |

# Performance Measurement

The following table compares responses to the initial and final technology experience surveys.

| Survey Information | Initial Survey | Final Survey |
|---|---|---|
| # of survey recipient organizations | 52 | 52 |
| # of survey responses received | 34 | 47 |
| # of agencies indicating use of this technology on a routine or standard basis | 6 | 20 |
| # of agencies that plan to implement this technology | 7 | 8 |

# Lessons Learned

### *Effective Tools and Methods*

Conference presentations and the discussion periods after presentations provided useful information and seemed particularly beneficial to participants.

AASHTO Subcommittee meetings offered best opportunity to communicate with potential implementing states.

Several lead states participated in a webinar with interested states during which the interested states could view UREDMS operation and capabilities. Georgia and Pennsylvania have training sites to allow other parties to experience the UREDMS technology.

Lead States Team members hosted and visited individual interested states upon request. There were limited opportunities but this method of communications was highly effective.

### *Unique Tools and Methods*

The webinar efforts are worthy to note in this section. For this IT-type of technology, participating states could experience a UREDMS in a full and robust manner via webinar.

Also worthy of mention are the Georgia and Pennsylvania training websites which allowed other parties to experience the UREDMS technology more easily.

Lead States Team members hosted and visited individual interested states upon request. There were limited opportunities but this method of communications was highly effective.

### *Ineffective Tools and Methods*
NA

### *General Comments*

The Lead State Team had regular conference calls throughout the period of high activity. The LST chair followed up the conference calls with minutes to remind team members of promised activities between conference calls. The result was an effectively managed team and efficient completion of the team's Marketing Plan.

# Transition Plan

## *Reference Materials*

| Reference | URL |
|---|---|
| AASHTO TIG UREDMS Website | http://tig.transportation.org/Pages/UtilityRelocationElectronicDocumentManagementSystem.aspx |
| Tri-Fold Brochure | http://tig.transportation.org/Documents/UREDMS/brochure.pdf |
| FAQ | http://tig.transportation.org/Documents/UREDMS/UREDMS-faq.pdf |
| System Sharing Examples and PowerPoint Presentations in UREDMS Webpage Library | http://tig.transportation.org/Pages/UtilityRelocationElectronicDocumentManagementSystem.aspx |

## *Technology Transfer*

*(Name and contact information for the primary FHWA office to become the on-going contact for technology transfer for this technology.)*

| Contact | Office Name, Location | Phone | Email |
|---|---|---|---|
| Ken Leuderalbert | FHWA Office of Program Administration | 317-226-5351 | Ken.leuderalbert@dot.gov |

## *Primary On-going Implementation Responsibility*

*(Name and contact information for the technical committee/group/association to assume primary responsibility for continuing implementation of this technology.)*

| Contact | Committee Name, Organization | Phone | Email |
|---|---|---|---|
| Matt DeLong, Chair (pending approval on date of this report) | Subcommittee on ROW & Utilities | (517) 373-2200 | delongm@michigan.gov |
| Nelson Smith, Vice Chair for Utilities (pending approval on date of this report) | Subcommittee on ROW & Utilities | (443) 572-5267 | nsmith@sha.state.md.us |

### Other Planning Efforts for On-going Implementation

| Contact | Committee Name, Organization | Responsibility Discussed and Response |
|---|---|---|
| Martha Ross | Curriculum Developers, NHI | To incorporate UREDMS concepts into updated training program. |

### Specific Future Actions

| Future Activity | Time Frame | Recommended Organization to Perform |
|---|---|---|
| Design and Project Delivery discipline meeting | 2013 | FHWA |
| Booth with Handouts - AASHTO ROW and Utility Subcommittee Meeting in Georgia | 2013 | Georgia DOT |
| Continued education of interested states | When contacted | Lead States |
| Any regional conference opportunities | Open | Local state DOT |

### On the Web

http://tig.transportation.org/Pages/UtilityRelocationElectronicDocumentManagementSystem.aspx

# Final Expenditure Summary

*Remaining Expense Claims*

| Date of Expense | Service Type | Claimant | Estimated Claim Amount |
|---|---|---|---|
| June 19, 2012 | Closeout Meeting Travel Claims | Mike Bolden, JoAnn Kurts, Nick Lefke, Chuck Schmidt | 3,800 |
| June 18, 2012 | Shipping cost to ship mementos to Harrisburg | AASHTO office | 30 |
| June 2012 | Shipping cost to ship brochures to Georgia DOT | AASHTO office | 30 |
| TOTAL ESTIMATED REMAINING EXPENSE CLAIMS | | | $   3,860 |

*Total Expenses*

$26,500 (estimated, including final expenditures listed above)

# Appendix A: Initial Meeting Agenda

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**AGENDA** TIG

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## Initial Meeting
## Utility Relocation Electronic Document Management Systems (UREDMS)
## Lead States Team

**Pennsylvania Department of Transportation**
**400 North Street**
**Harrisburg, Pennsylvania, 17120-0094**
**January 13-14, 2010**

**January 13, 2010  -  8:00 P.M. to 4:30 P.M.**

**Task Assignment**

**Lead Person**

- Welcome ...…………………………………….……..………….....  Larry Ditty
- Self Introductions ……………………………………….……..……………  All
- Review Agenda and Goals of the Meeting ………......  Larry Ditty and Paul Krugler
- QA about the Process …..………………………………………….....  Paul Krugler
- TIG Executive Committee Perspective on the Technology and LST Tasks …….. ……  Paul Krugler

**Develop Market Analysis**  (See Chapter 3 and appendix E of the lead states team guidebook for detailed information about what we will need to develop. The Marketing Analysis is largely in simple tabular format.)

> We hope to be able to expedite development of the market analysis. The plan is for the chair and facilitator to consolidate all pre-meeting question responses from LST members and provide this consolidated information to team members several days prior to the meeting. Each member will also be asked at that time to take a lead role in preparing one of more of the below listed tables or sections of the plan when we meet in Harrisburg. While the consolidated information should go a long way toward establishing the information needed for each part of the plan, time is allowed on the agenda for each member to obtain additional input from other team members.

- Discussions led by each LST member. (Suggest discussions be limited to 5 to 15 minutes.)

  - Defining the Need for and Benefits Provided by the Technology …LST Member
  - Identifying Broad Target Audiences …….…………………………LST Member
  - Identifying Decision Makers ……………………………………… LST Member
  - Information Needed by Decision Makers ………………………… LST Member
  - Identifying Perceived and Actual Barriers to Implementation …… LST Member
  - Identifying Existing Marketing Opportunities …………………..…LST Member
  - Identifying LST Partners ………………………………………… LST Member

- Optional Breakout Approach – Individual work time (possibly 30 minutes) to prepare draft tables or paragraph based on group discussions. Provide drafts to facilitator to compile into a first draft Market Analysis document during lunch or break.

- Review of draft document by full team, revise as needed, and approve for submission to the AASHTO TIG Executive Committee ……………………………..……..…… Larry Ditty
  **Develop Marketing Plan** (See Chapter 3 and appendices D and F of the lead states team guidebook as well as the Marketing Plan template provided in a separate MSWord document.)

- Select Marketing Methods ……………………………… Larry Ditty and Paul Krugler

  - Rank probable effectiveness of marketing methods and tools. (Consideration should include but is not limited to the methods described in appendix D of the lead states team guidebook.)
  - Compare tentative list of marketing methods to the list of broad target audiences. (Are all audiences adequately addressed using one or more methods?)
  - Compare tentative list of marketing methods to the list of target decision makers. (Do selected marketing methods adequately communicate to all decision makers?)
  - Prioritize perceived and actual barriers to implementation.
  - Prioritize existing marketing opportunities.
  - Compare tentative list of marketing methods to prioritized lists of barriers and opportunities. (Are prioritized barriers adequately addressed by one or more marketing methods, and have marketing methods been selected to take best advantage of existing marketing opportunities?)

- Determine the Message …………………………….…… Larry Ditty and Paul Krugler

  - Review information that was gathered while defining the need for the technology. Determine how each need or benefit can best be communicated, and which marketing methods should emphasize or include each need or benefit.
  - Review list of information needed by decision makers. (Assign each information item to each marketing method where it should be part of the message.)
  - Review prioritized barriers and opportunities. (Attempt to address every prioritized barrier and opportunity with factual information and assign information items to appropriate marketing methods.)
  - Review list of partners. Determine how each partner can best assist with the need and marketing methods.

- Determine the Marketing Activities …………………… Larry Ditty and Paul Krugler

    o Brainstorm potential marketing activities considering the market analysis, the prioritized barriers and opportunities, the potential marketing methods/tools, and the intended message.
    o Prioritize and select potential marketing activities.
    o Develop the goal and scope of each selected marketing activity.
    o For each selected activity, determine promotional tools and information distribution methods.
    o Decide which LST member will coordinate each selected activity.
    o Show each selected activity as a task in the work plan section of the Marketing Plan. Clearly state the goal and scope of each activity, including planned promotional tools and information distribution methods. Provide adequate detail to substantiate the associated cost estimate in the budget. The last task should be the closeout report. Identify the coordinator for each task.

- Schedule the Marketing Activities ……………………… Larry Ditty and Paul Krugler

    o Determine the length of time required for each task and the relative timeline among tasks for the duration of your LST's activities.
    o Place each task in chronological order on the Activity Schedule in the Marketing Plan.  A rearrangement of tasks may be required to achieve an appropriate chronological order of tasks.  Consider audience and message priorities and continuity when scheduling.

**If time permits, proceed to items on the day two agenda.**

**Adjourn for the Evening**


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**January 14, 2010  -  8:00 A.M. to noon.**

- Prepare the Budget ……………………………….……… Larry Ditty and Paul Krugler

    o Estimate expenditures to accomplish each task.  Separately tabulate expenses for which the AASHTO TIG will be invoiced and those that the lead states or other organizations will cover. See appendix F of the lead states team guidebook for the budget worksheet. The final step in the budgeting process is to determine the individual fiscal year budgets by assigning each task's budget or portions of each task's budget to the AASHTO fiscal year into which the activities are planned to occur.

- Develop the Communications Plan …………….…… Larry Ditty and Paul Krugler

    o Develop the communications plan by completing the table of information shown in the Marketing Plan template separately provided. Show the offices to be contacted within large organizations. For example, under the category of all AASHTO member agencies, show the offices to be contacted, such as the chief engineers, the state bridge engineers, the state materials engineers, etc.

- Develop the Performance Measurement Plan …………… Larry Ditty and Paul Krugler

    o Select the means by which the LST plans to determine the degree of success achieved at the end of planned activities by completing the table of information shown in the Marketing Plan template separately provided.

**Assemble the Marketing Plan**

- Assign LST members to prepare each section of the Marketing Plan in final form as may still be needed. …………………………………………………………...…... Larry Ditty

- Individual work time, as needed, to prepare draft sections of the plan based on earlier team discussions. Provide drafts to LST Chair or facilitator to compile into a first draft Market Plan document. ……………………………..…..……………………… All

- Full LST review, revision, and approval of the proposed Marketing Plan to be submitted to the AASTHO TIG Executive Committee. ………………….………… Larry Ditty

**Travel Claim Submittal Guidance** ……………………….…….………………….. Paul Krugler

**Next Steps for the LST Team** ………………….…..………… Larry Ditty and Paul Krugler

**Adjourn**

# Appendix B: Marketing Analysis

**AASHTO TIG**
**Lead States Team**
**Marketing Analysis**

**for**

**UTILITY RELOCATION ELECTRONIC DOCUMENT**
**MANAGEMENT SYSTEM (UREDMS)**

# MARKETING ANALYSIS

**What is the need for this technology?**

Types of benefits that organizations and individuals may derive from using UREDMS are:

Streamlined processes involving utility coordination and utility relocations
- Expedited project delivery
- Saved time and money
  - Reduced delays
  - More efficient utility section office operation
  - Reduced number of change orders
- Efficiencies from standardization of processes used throughout agency
- Faster completion time for reviews
- Reduced potential for inappropriate permitting of new facility placement on existing planned projects
- Quicker document submissions/revisions
- Facilitated billing and payments through invoicing module
- One-stop shop for utility information
- Reduced number of unplanned relocations and encounters with unknown utilities

Inventory/storage document retention improvements
- Comprehensive information – mapping, photography, and all file types are available
- Transparent process
- Improved tracking capability
- Improved asset management
- Facilitated reporting for management and project applications
- Going "green" – this is move toward being paperless
- Reduced physical storage space requirements

System also benefits utility company partners. They like it.
- Ready access to templates and forms
- Expedited document submissions/revisions
- Electronic signature approval is allowed
- Minimized potential for legal aspects

Information in system is adequate to be useful for project selection and project cost estimation.

**Who are the broad target audiences for the LST?**

| Agency | Primary Target | Secondary Target |
|---|---|---|
| State DOTs | X | |
| Local Participating Agencies | | X |
| Utility Companies | | X |

**Who are the decision makers in the primarily targeted agencies?**

| Agency | Decision-making Offices |
|---|---|
| State DOTs | Top Executive Administration and Management |
| | Second-Level State DOT Management (HQ and District Office Chiefs) |
| | Office Manager of Utility/Permits Sections |

**What information will decision makers want to know to reach a conclusion about trying or adopting this technology?**

| Information | Interest Level | |
|---|---|---|
| | Critical | Desirable |
| System benefits<br>• Expedited project delivery<br>• Resolves physical storage area issues<br>• This is a move to "green"<br>• Others | X | |
| System costs<br>• Initial costs<br>• Maintenance costs | X | |
| Are there political implications? (What do utility companies think about this?) | X | |
| Will new FTE resources be needed? | X | |
| Are FTE reductions possible? | | X |
| Are other business processes improved or otherwise affected? | | X |
| Who will use the system? | | X |
| What are training requirements? | | X |

**What are actual and perceived barriers to be overcome to do a trial or to adopt this technology as a standard?**

| Barrier | Type | |
|---|---|---|
| | Actual | Perceived |
| Management buy in | X | |
| Cost | X | |
| Adequacy of existing internal IT infrastructure to handle the system | X | |
| Reluctance or inability to automate | X | X |
| Lots of data entry/re-entry will be needed for initial set up | X | X |
| Lack of focus on transparency | X | X |
| Training requirements | | X |
| Accepting a new way of doing business | | |
|     • Internal | | X |
|     • External | | X |
| Users see no value | | X |

**What marketing opportunities already exist?**

| Opportunity | Dates |
|---|---|
| AASHTO Subcommittee on ROW and Utilities Meeting – San Diego<br>• Ice Breaker Session<br>• Director's Meeting | April 18-22, 2010 |
| AASHTO SCOH Annual Meetings | Fall, 2010 and/or fall, 2011 |
| AASHTO SCOH Spring Meeting | May, 2011 |
| TRB Utilities Committee – Mid-year Meeting | Tentatively April 22, 2010 |
| TRB Annual Meeting | January 2011 |
| AASHTO Subcommittee Meeting – ROW and Utilities – Oregon | April 2011 |
| Inclusion in NHI Course | TBD |
| Mid-Atlantic regional utilities conferences | September 2010 |
| Mississippi Valley and other regional conferences | TBD |
| FHWA Sponsored Opportunities | TBD |
| Professional Journals and Magazines | Periodic |

**Who are our potential partners in marketing this technology?**

| Potential Partner | Possible Supporting Activities |
|---|---|
| AASHTO SCOH and Subcommittees | |
| Other State DOTs | |
| FHWA | |
| Manufacturers and Developers of existing systems | |

# Appendix C: Marketing Plan

# AASHTO TIG
# Lead States Team
# Marketing Plan

## for

# UTILITY RELOCATION ELECTRONIC DOCUMENT MANAGEMENT SYSTEM (UREDMS)

_____

**Lead States Team:**

Larry Ditty , Chair, Pennsylvania DOT
Mike Bolden , Georgia DOT
Mollie Zauner , Minnesota DOT
Nick Lefke , Michigan DOT
JoAnn Kurts , Louisiana DOTD
Chuck Schmidt , New Hampshire DOT
Jesse Cooper , Texas DOT
Eric Felty , Pennsylvania DOT
Jeffrey Zaharewicz , FHWA

_____

January 16, 2010

**WORK PLAN**

| Task 1. | Title: **Develop Communication Tools** |
|---|---|

<table>
<tr><td colspan="2">Task Description:</td><td><strong>LST Member(s) to Lead Subtask</strong></td></tr>
<tr><td colspan="2">Subtask 1.1.  Develop two comprehensive PowerPoint presentations: one for the SCOH target audience (15-20 minutes) and one for the Utility Section Manager target audience (approximately 45-60 minutes).</td><td>Mike Bolden<br>Chuck Schmidt<br>Jesse Cooper<br>(Consultant)</td></tr>
<tr><td colspan="2">Subtask 1.2.  Gather existing PowerPoint presentations describing individual state systems and place on the AASHTO TIG web site.</td><td>Nick Lefke</td></tr>
<tr><td colspan="2">Subtask 1.3.  Prepare short article for submission to trade journals.</td><td>Larry Ditty<br>Mollie Zauner<br>(Consultant)</td></tr>
<tr><td colspan="2">Subtask 1.4.  Gather testimonials from State DOT administrators and utility company executives to support subtasks 1.1, 1.3, and 1.6.</td><td>Jesse Cooper</td></tr>
<tr><td colspan="2">Subtask 1.5.  Prepare FAQ list for distribution at appropriate conferences and placement on the AASHTO TIG web site.</td><td>JoAnn Kurts</td></tr>
<tr><td colspan="2">Subtask 1.6.  Prepare brochure specifically designed for the SCOH audience.</td><td>Larry Ditty<br>Mollie Zauner<br>(Consultant)</td></tr>
<tr><td colspan="2">Subtask 1.7.  Prepare poster for SCOH and other meetings.</td><td>Larry Ditty<br>Mollie Zauner<br>(Consultant)</td></tr>
</table>

| Task 2. | Title: **Publish Trade Journal Articles** |
|---|---|

Task Description:

Subtask 2.1.  Identify utility-interest trade journals. (Coordinated by LST Chair)

Subtask 2.2.  Submit subtask 1.3 article to trade journals for consideration. (LST Chair)

| Task 3. | Title: **Presentations at Conferences and Meetings** |
|---|---|

Task Description:

Attend and give PowerPoint presentations developed in Subtask 1.1 to target audiences. Distribute brochures and FAQ lists developed in subtasks 1.5 and 1.6. Provide information booth at selected conferences with poster developed in subtask 1.7.

Targeted conferences and meetings include:

| Conference/Meeting | Location & Date | Target Audience | LST Member to Coordinate with Meeting Chair |
|---|---|---|---|
| AASHTO Subcommittee on ROW & Utilities | San Diego – April 2010 Oregon – April 2011 | Mid-level HQ Managers and Utility/Permits Section Managers | Chuck Schmidt Jesse Cooper – Tech Council |
| AASHTO SCOH Meetings | TBD – Fall 2010 TBD – Spring 2011 TBD – Fall 2011 | Top State DOT Administrators | Larry Ditty |
| Mid-Atlantic Regional Utilities Conference | TBD – September 2010 | Mid-level HQ Managers and Utility/Permits Section Managers | Larry Ditty |
| Mississippi Valley and other regional utilities conferences | TBD-TBD | Mid-level HQ Managers and Utility/Permits Section Managers | Mollie Zauner JoAnn Kurts Nick Lefke |
| TRB Annual Meeting Session or Utilities Technical Committee Meeting | Washington DC – January 2011 | All of above | Chuck Schmidt Jeff Zaharewicz |
| FHWA Sponsored Opportunities | TBD-TBD | Mid-level HQ Managers and Utility/Permits Section Managers | Jeff Zaharewicz |

Estimated reimbursable travel requirement is one person per conference/meeting with the exception of SCOH Meetings. Budget is based on presenting at approximately 12 conferences/meetings.

| Task 4. | Title: **NHI Training Development** |
|---|---|

Task Description:

Provide information to the NHI curriculum developers.  (Coordinated by Jeff Zaharewicz.)

| Task 5. | Title: **Individual State Assistance** |
|---|---|

Task Description:

Individual state assistance will be offered during Task 3 presentations and possibly also in brochures. States requesting individual assistance will be offered several options:

- Telephone discussions with individual LST members. (All)
- Conference call between LST and selected staff members from requesting state DOT. (Coordinated by LST Chair)
- Webinar for selected staff of requesting state DOT provided by one or more LST members. PowerPoints prepared in subtask 1.1 may be used. (Coordinated by LST Chair)
- One-day visit by one or more LST members selected based on expressed information needs from requesting state. (Coordinated by LST Chair)

| Task 6. | Title: **Closeout Meeting and Report** |
|---|---|

Task Description:

Review activities and prepare closeout report. (Coordinated by LST Chair)

# UREDMS Team Activity Schedule

| | Key |
|---|---|
| O | Original Schedule |
| R | Work Completed |
| X | Revised Schedule |

Revision Date: January 14, 2010

| Activity | FY 2010 | | | | | | FY 2011 | | | | | | | | | | FY 2012 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J |
| Task 1.1 | O | O | O | O | O | O | | | | | | | | | | | | | | | | | | | | | | |
| Task 1.2 | O | O | O | O | O | O | | | | | | | | | | | | | | | | | | | | | | |
| Task 1.3. | O | O | O | O | O | O | | | | | | | | | | | | | | | | | | | | | | |
| Task 1.4 | O | O | O | O | O | O | | | | | | | | | | | | | | | | | | | | | | |
| Task 1.5. | O | O | O | O | O | O | | | | | | | | | | | | | | | | | | | | | | |
| Task 1.6. | O | O | O | O | O | O | | | | | | | | | | | | | | | | | | | | | | |
| Task 1.7. | O | O | O | O | O | O | | | | | | | | | | | | | | | | | | | | | | |
| Task 2.1 | O | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 2.2. | | | | | | | | | | O | O | O | O | O | O | O | O | | | | | | | | | | | |
| Task 3. | | O | | | | | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | | | | | | | |
| Task 4. | O | O | O | O | O | O | O | O | O | O | | | | | | | | | | | | | | | | | | |
| Task 5. | | | | | | | | | | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Task 6. | | | | | | | | | | | | | | | | | | | | | | | | | | | | O |

## COMMUNICATIONS PLAN

| Communication Targets | Method(s) | Purpose |
|---|---|---|
| SCOH members and other top State DOT administrators | SCOH Meeting Presentations, FAQs List, Testimonials | Make aware of benefits available from improved utility-related electronic document management and communications with utility companies. Obtain buy in. |
| Second-level managers (HQ and District office chiefs) | AASHTO Subcommittee and Regional Meetings, Webinars, State Visits | Provide detailed information about options and benefits. Obtain buy in. |
| Office managers of utility/permit sections | Regional Meetings, Conference Calls, Webinars, State Visits | Provide detailed information about options and benefits. Obtain buy in and provide information necessary for initiating detailed planning. |
| Utility company executives | Trade journal articles | Make aware of benefits available from improved utility-related electronic document management and communications with State DOT. Obtain buy in. |

## PERFORMANCE MEASUREMENT PLAN

| Performance Measure | Measurement Method |
|---|---|
| Number of agencies that have developed this type of system as of the date of the closeout report, relative to the number existing at initiation of the lead states team. | Initial and final surveys of all AASHTO agencies. |
| Number of agencies that are planning to develop this type of system as of the date of the closeout report, relative to the number existing at initiation of the lead states team. | Initial and final surveys of all AASHTO agencies. |
| Number of agencies reporting familiarity with UREDMS as of the date of the closeout report, relative to the number at initiation of the lead states team. | Initial and final surveys of all AASHTO agencies. |

# ANNUAL BUDGETS

## FY 2010 Annual Lead States Team Budget

**Focus Technology:** **Utility Relocation Electronic Document Management System (UREDMS)**

**Budget Period:** **March 1, 2010 through June 30, 2010**

| Cost Type / Description | Estimated Non-reimbursed Costs to Lead States | Costs to be Reimbursed by AASHTO | Additional Description | Subtotals of Costs to AASHTO |
|---|---|---|---|---|
| **Labor** | | | | |
| Lead States Team Members | | | | |
| Others from Lead States | | | | |
| Other | | | | |
| **Total Labor** | $ - | | | |
| **Expendable Goods & Supplies** | | | | |
| | | | | |
| | | | | |
| **Total Expendable Goods & Supplies** | $ - | | | $ - |
| **Operating and Other Expenses** | | | | |
| Travel for Task 3 - Conference Presentations | | $ 6,500 | | |
| Long Distance Telephone Charges | | | | |
| Reproduction of Brochures | | $ 3,000 | Publishing by AASHTO if possible. | |
| Shipping | | | | |
| Equipment Rental | | | | |
| **Total Operating and Other Expenses** | $ - | | | $ 9,500 |
| **Equipment Purchases** | | | | |
| | $ - | | | |
| | | | | |
| **Total Equipment Purchases** | $ - | | | $ - |
| **Subcontracts**\*\* | | | | |
| Preparation of PowerPoints, Brochure, Poster, Trade Journal Article | | $ 12,000 | | |
| | | | | |
| **Total Subcontracts** | $ - | | | $ 12,000 |
| **TOTAL LEAD STATES CONTRIBUTION** | $ - | | | |
| **TOTAL AASHTO BUDGET REQUEST FOR THIS FISCAL YEAR** | | | | $ 21,500 |

\* AASHTO's fiscal year is July 1 through June 30.

\*\* Subcontracts should be established directly with AASHTO. Contact the AASHTO TIG Program Manager for assistance.

**Notes:**

1. The proposed AASHTO reimbursed budget is not to include salary and fringe benefits for lead states team members providing services.

2. Travel expenses for lead states team members representing industry are not reimbursable by AASHTO.

3. Appropriate indirect charges may be included in the individual cost estimates above.

# FY 2011 Annual Lead States Team Budget

**Focus Technology:** <u>Utility Relocation Electronic Document Management System (UREDMS)</u>

**Budget Period:** <u>July 1, 2010 through June 30, 2011</u>

| Cost Type / Description | Estimated Non-reimbursed Costs to Lead States | Costs to be Reimbursed by AASHTO | Additional Description | Subtotals of Costs to AASHTO |
|---|---|---|---|---|
| **Labor** | | | | |
| Lead States Team Members | | | | |
| Others from Lead States | | | | |
| Other | | | | |
| **Total Labor** | $          - | | | |
| **Expendable Goods & Supplies** | | | | |
| | | | | |
| | | | | |
| | | | | |
| **Total Expendable Goods & Supplies** | $          - | | | $          - |
| **Operating and Other Expenses** | | | | |
| Travel for Task 3 - Conference Presentations | | $    10,400 | | |
| Travel for Task 5 - State Visits | | $     7,800 | | |
| Long Distance Telephone Charges | | | | |
| Reproduction | | | | |
| Shipping | | | | |
| Equipment Rental | | | | |
| **Total Operating and Other Expenses** | $          - | | | $    18,200 |
| **Equipment Purchases** | | | | |
| | | | | |
| | | | | |
| | | | | |
| **Total Equipment Purchases** | $          - | | | $          - |
| **Subcontracts\*\*** | | | | |
| Completion of Marketing Tools Development | | $     3,000 | | |
| | | | | |
| | | | | |
| | | | | |
| **Total Subcontracts** | $          - | | | $     3,000 |
| **TOTAL LEAD STATES CONTRIBUTION** | $          - | | | |
| **TOTAL AASHTO BUDGET REQUEST FOR THIS FISCAL YEAR** | | | | $    21,200 |

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**Notes:**

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2. Travel expenses for lead states team members representing industry are not reimbursable by AASHTO.

3. Appropriate indirect charges may be included in the individual cost estimates above.

# FY 2012 Annual Lead States Team Budget

**Focus Technology:** **Utility Relocation Electronic Document Management System (UREDMS)**

**Budget Period:** **July 1, 2011 through June 30, 2012**

| Cost Type / Description | Estimated Non-reimbursed Costs to Lead States | Costs to be Reimbursed by AASHTO | Additional Description | Subtotals of Costs to AASHTO |
|---|---|---|---|---|
| **Labor** | | | | |
| Lead States Team Members | | | | |
| Others from Lead States | | | | |
| Other | | | | |
| **Total Labor** | $ - | | | |
| **Expendable Goods & Supplies** | | | | |
| | | | | |
| | | | | |
| | | | | |
| **Total Expendable Goods & Supplies** | $ - | | | $ - |
| **Operating and Other Expenses** | | | | |
| Travel for Task 3 - Conference Presentations | | $ 2,600 | | |
| Travel for Task 5 - State Visits | | $ 5,200 | | |
| Travel for Task 6 - Closeout Meeting | | $ 9,100 | | |
| Long Distance Telephone Charges | | | | |
| Reproduction | | | | |
| Shipping | | | | |
| Equipment Rental | | | | |
| **Total Operating and Other Expenses** | $ - | | | $ 16,900 |
| **Equipment Purchases** | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| **Total Equipment Purchases** | $ - | | | $ - |
| **Subcontracts*** * | | | | |
| | | | | |
| | | | | |
| | | | | |
| **Total Subcontracts** | $ - | | | $ - |
| **TOTAL LEAD STATES CONTRIBUTION** | $ - | | | |
| **TOTAL AASHTO BUDGET REQUEST FOR THIS FISCAL YEAR** | | | | $ 16,900 |

 * AASHTO's fiscal year is July 1 through June 30.

** Subcontracts should be established directly with AASHTO.  Contact the AASHTO TIG Program Manager for assistance.

**Notes:**

1. The proposed AASHTO reimbursed budget is not to include salary and fringe benefits for lead states team members providing services.

2. Travel expenses for lead states team members representating industry are not reimbursable by AASHTO.

3. Appropriate indirect charges may be included in the individual cost estimates above.

# Appendix D: Marketing Media

## About The AASHTO Technology Implementation Group (TIG)

Dedicated to sharing high-payoff, market-ready technologies among transportation agencies across the United States, TIG promotes technological advancements in transportation, sponsors technology transfer efforts and encourages implementation of those advancements.

For more information visit www.aashtotig.org



## What Does The Lead States Team Offer?

- Knowledge and experience related to UREDMS implementation
- Customized state visits, as time and money permit
- Webinars to share experiences and educate others

## LEAD STATES TEAM

TIG's Lead States Team includes representatives with UREDMS experience in their states who can help you evaluate the use of the technology in your agency. Turn to team members for insight, expertise and advice.

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# UTILITY RELOCATION ELECTRONIC DOCUMENT MANAGEMENT SYSTEMS (UREDMS)

*The Web-Based Project Planning
and
Construction Facilitator*

## AASHTO TIG and UREDMS

The TIG chose Utility Relocation Electronic Document Management Systems (UREDMS) as a focus technology because these systems have proven of great benefit in facilitating internal and / or external utility-related communications between the State DOT, municipalities and utilities as projects are planned, designed and constructed.



## Why UREDMS?

Greater emphasis on utility coordination early in the project development process streamlines utility relocations, expedites project delivery, reduces impacts to construction schedules and minimizes contractor overruns due to utilities. These communication and document management systems allow secure communications, document submissions, access to stored documents and report generation wherever web access is available.



## How It Works

While UREDMS can vary between State Departments of Transportation, here's an example of how a UREDMS may work:

Electronic documents, ranging from application forms and engineering drawings to checks and photos, are imported into UREDMS. Paper documents are scanned and imported as electronic images. Indexing then organizes documents for quick retrieval.

UREDMS workflow allows interaction with utility relocation data and documents to perform specific tasks related to utility relocation. Work items move through a series of work queues. When the user completes a step, the system removes the work item from the current queue and creates a work item in the next work queue. For example, when the district completes the step to initiate a cost-sharing utility request, the system creates a work item for the central office to process the request.

The system displays and allows data from other databases or systems to be used to assist in completion of workflow tasks.



## Benefits

- Streamlined Processes
- Expedited Project Delivery
- Construction Delays Reduced
- Utility Relocation Planning Delays Reduced
- Efficient Office Operation
- Manpower Savings
- Change Orders Reduced
- Inappropriate Permitting Reduced
- Expedited Submission/Review
- Expedited Invoicing/Payments
- One-Stop-Shop for Utility Information
- 24/7 Access to Templates
- Electronic Signature Approval
- Potential for Legal Challenge Reduced
- Improved Document Retention
- Improved Decision-Making with Electronic Storage
- Transparency
- Tracking
- Asset Management
- Management Reporting
- Application Reporting
- Physical Storage Space Reduced
- "Green" Paperless Agencies

AMERICAN ASSOCIATION OF
STATE HIGHWAY AND
TRANSPORTATION OFFICIALS

AASHTO
THE VOICE OF TRANSPORTATION

DRIVING INNOVATION FOR TRANSPORTATION
TIG
AASHTO TECHNOLOGY IMPLEMENTATION GROUP

# AASHTO Technology Implementation Group
## UTILITY RELOCATION ELECTRONIC DOCUMENT MANAGEMENT SYSTEM
## UREDMS FAQS

## FUNCTIONS

UREDMS –

- What is it?

   It is an electronic document management system used for utility relocations. Some states use it to assist in project utility coordination and relocation while others use it for utility permitting and preconstruction certification. The functionality of the systems for each state ranges from tracking submittal due dates and actual submission dates to tracking utility-related correspondence from project inception through payment of all invoices. A UREDMS has no predefined requirements; instead, each state designs, develops and implements the system that will be most beneficial.

- Who uses it?

   Department of Transportation staff involved with utility coordination use internal systems. Utility companies and local governments use external systems.

- How much time does it take?

   Dependent on the function the user is performing, but minimal, measured in minutes.

What are the benefits and advantages of using the system?

   A UREDMS saves time and money. The specifics depend on the capabilities currently included in the system.

Internal System benefits include:
- Interfaces with other Department systems
- Eliminates multiple exchanges with several applications to complete simple tasks
- Stores utility company and contact information
- Automates document creation for standard business documents
- Improves statewide consistency
- Tracks project and invoice payments
- Searches and reports
- Allows a check and balance for utility coordinators to insure projects stay on schedule
- Easily identifies delays

External System benefits include:
- Enhances security of stored documents
- Provides faster submissions, quicker reviews and issuance of documents which allows utilities to start work sooner and reduces the number of delays during construction
- Enables routing to other departments for review and comment
- Saves time and money compared to using U.S. Postal Service
- Provides quicker turnaround when changes are required
- Makes data statistics easily available for management

What process was used before implementing UREDMS?
- A non-web based system with limited capabilities
- The Department and Utilities would mail plans and documents back and forth
- All tracking and monitoring was performed by hand without consistency

What are the obstacles to getting utility companies using it?
Budget constraints and people reluctant to change

## START UP

Why was the UREDMS set up?

To help track the progress, communication and documentation related to Utility Coordination and Relocations, standardizing the process in an effort to speed up project delivery.

How much did the system cost to start up and maintain?

Costs varied from $300,000 for internal IT personnel to write the system to $500,000 to hire a consultant programmer. Costs will be dependent on the complexity of the system and the programmers chosen. However, the cost to create a UREDMS could be less than the costs of a construction delay caused by utility issues. Yearly maintenance cost varies. For those that knew, it ranged from $50,000 to $80,000 per year.

How long did it take to get UREDMS up and running?

For most, it was a multi-phased process over several years. Internal systems were designed and running first. External systems, for those that have it, were included after funding became available.

How was the program designed and implemented?

Some states followed a set department procedure for implementation of IT systems. Others gathered information from the users or formed a committee with the users.

## SYSTEM SUPPORT

How difficult is it to use the system and what kind of training is required?

Most systems are user friendly with limited training required. Some provide manuals while others have online training. A few provide in person training by department staff. Training does not last more than half a day.

Who maintains the UREDMS?

Department IT staff maintain most systems. A few states have an outside consultant maintain their systems.

What storage and computer systems are needed?

This depends on the system's functions. A PC is needed for internal systems. External systems require internet and Adobe capability.

**For more information about UREDMS visit**

www.aashtotig.org

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AASHTO TECHNOLOGY IMPLEMENTATION GROUP

# FOCUS

**Accelerating Infrastructure Innovations**

**Publication Number: FHWA-HRT-10-013**
**Date: May 2010**

## TIG Announces 2010 Focus Technologies



The Utility Relocation Electronic Document Management System streamlines the process of coordinating utility relocations. Among the projects that have fast tracked utility relocations in recent years is the Minnesota Department of Transportation's replacement of the
I-35W Bridge over the Mississippi River.

The American Association of State Highway and Transportation Officials' (AASHTO) Technology Implementation Group (TIG) has selected the Utility Relocation Electronic Document Management System (UREDMS), Grade Crossing Electronic Document Management System (GCEDMS), and Environmental Planning Geographic Information System (GIS) tools as its focus technologies for 2010. TIG's goal is to promote high payoff, innovative technologies that State and local transportation agencies and industry can use to improve the Nation's highway system.

UREDMS streamlines the process of coordinating utility relocations, expediting project completion and saving both time and money. It offers comprehensive information, including mapping and photography files, improved tracking capability, and enhanced asset management. The system also reduces physical storage space requirements, assisting agencies as they move toward paperless systems, and facilitates

# *Public Roads*

*Featuring developments in Federal highway policies, programs, and research and technology.*

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Federal Highway Administration > Publications > Public Roads > Vol. 75 · No. 4 > Along the Road

January/February 2012
Vol. 75 · No. 4

## *Electronic Document Management Improves Utility Coordination*

Each year millions of dollars are spent to relocate or adjust utility facilities prior to road construction projects. Greater emphasis on coordination early in the process can facilitate streamlined utility relocations, expedite project delivery, and reduce the potential for construction delays and extra costs.

Toward that end, a technology implementation group within the American Association of State Highway and Transportation Officials (AASHTO) recently selected the Utility Relocation Electronic Document Management System (UREDMS) as one of its focus technologies. The UREDMS technology facilitates communications and document management to help expedite utility relocation.

A Web-based project planning and construction program, UREDMS provides secure communications, document submission, access to stored documents, and report generation. In addition to a paperless process, UREDMS reduces the need for physical storage space, minimizes lost or misplaced files, and offers a secure environment for transportation agencies and utilities to share information. Further, the system provides a platform to enhance coordination, cooperation, and communications among all stakeholders to help ensure project success.



A Georgia Department of Transportation (GDOT) project in Atlanta, GA, is relocating these utilities.

To encourage use of the UREDMS technology, the AASHTO technology implementation group and FHWA have formed a Lead States Team with representatives from the Georgia, Louisiana, Michigan, Minnesota, New Hampshire, Pennsylvania, and Texas DOTs. Team members are available to provide guidance and answer questions as agencies consider use of this technology.

*For more information, visit*
*http://tig.transportation.org/Pages/UtilityRelocationElectronicDocumentManagementSystem.aspx.*

AASHTO