

UTILITIES RELOCATION TRACKING SYSTEM (URTS)

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URTS Design Concepts

The Utilities Relocation & Tracking System (URTS) concept was jointly developed by XRiver Technologies LLC and the Louisiana Department of Transportation and Development (DOTD) to address the detail workflow tracking/processing needs that have been defined by the DOTD Headquarter Utilities Section and District Utilities Representatives. Because this group of DOTD personnel are responsible for the planning, negotiating, scheduling/coordinating, processing invoices, and tracking the progress of all Utility work (contracted with and performed by public/private utility operators) that is performed in support of DOTD Construction Projects, they face relatively large and complex management processes that can only be accurately and efficiently handled through an automated solution that:

- stores all utility tracking and relocation data in a single central database.
- allows assigned System Managers to control the entry and modification of all DOTD URTS User records so that they have at a minimum read-only access (in the form of standard reports) to all URTS data.
- allows assigned System Managers to control the entry and modification of standard URTS tables and to make administrative corrections to data contained in the URTS database.
- allows assigned System Managers to create new URTS Projects and then:
 - assign/re-assign an URTS User as the “URTS HQ User” for the new URTS Project.
 - an “URTS HQ User” will be granted authority by the system to update all data elements in URTS that are restricted to updating by the assigned “URTS HQ User”.
 - assign/re-assign an URTS User as the “URTS District User” for the new URTS Project.
 - an “URTS District User” will be granted authority by the system to update all data elements in URTS that are restricted to updating by the assigned “URTS District User”.

Basic URTS Design Concepts

The design of the “Basic URTS” application has evolved to address the individual needs of 4 different types of URTS Users.

The following summaries provide the reader with a brief description of the roles and responsibilities that are currently embedded in the URTS application:

System Manager

The System Manager component of URTS normally provides the ability for an assigned URTS System Manager to: 1) create and modify all centrally controlled application tables (user profiles, user group security, application picklists, etc), 2) create and modify header information for all URTS Projects, and 3) utilize URTS Utilities that can directly access the URTS database so that the URTS System Manager can modify URTS User entered data containing administrative errors.

Headquarter Utilities

The Headquarter Utilities component of URTS provides the ability for an assigned URTS Headquarter Utilities User to: 1) create and update certain Project information (those URTS data elements that are restricted to URTS Headquarter Utilities User access) that is related to an assigned URTS Project, 2) create and update information about Operator Agreements (with public/private utility organizations) that are related to assigned URTS Projects, 3) create and update Change Order information (those URTS data elements that are restricted to URTS Headquarter Utilities User access) that are related to assigned Operator Agreements, 4) create and update Invoice information related to assigned Operator Agreements, and 5) generate, view, and output over 30 DOTD standard Letters for assigned Operators that are the responsibility of the URTS Headquarter Utilities User to deliver.

District Utilities

The District Utilities component of URTS provides the ability for an assigned URTS District Utilities User to: 1) create and update detailed Project information (those URTS data elements that are restricted to URTS District Utilities User access) that is related to an assigned URTS Project, 2) create and update Change Order information (those URTS data elements that are restricted to URTS District Utilities User access) that are related to assigned Operator Agreements, 3) create and update Invoice information related to assigned Operator Agreements, and 4) generate, view, and output over 20 DOTD standard Letters for assigned Operators that are the responsibility of the URTS District Utilities User to deliver.

Report Manager

The Report Manager component of URTS normally provides the ability for an assigned Report Manager User to generate, view, and output real-time standard reports/charts using previously defined output and filtering options. DOTD's implementation of URTS currently contains over 20 standard report formats addressing the following traditional data areas: Project Lists, Assignment Lists, URTS Project Status, Agreement Change Order/Invoice Status, etc.

Additional URTS Implementation/Customization Areas

The original implementation of the URTS design at DOTD was made more complex due to the continuous evolution (during the implementation phase) of DOTD's Headquarter Utilities Section's perception as to what the URTS should track and control. For example, once the URTS went into production use at DOTD, the process of standardizing the generation and submission of DOTD Vouchers (for payments to Operators) became an urgent automation enhancement requirement. This automation enhancement (see URTS Voucher Facility below for further details) rose to an urgent level as a result of other URTS processes being streamlined (and creating new process bottlenecks) in the newly deployed release of URTS.

The following examples illustrate the type and complexity of customized enhancements that XRiver Technologies LLC has helped design, develop, and deploy into the URTS model at DOTD:

URTS Voucher Facility

This module was added to URTS so that all URTS Users would be able to automatically generate, view, and output (within URTS) 4 different Voucher types (Lump Sum, Actual Cost, URAF Lump Sum, and URAF Actual Cost) on any of their assigned URTS Projects that require these voucher types. This enhancement dramatically reduced the time required to generate and process the 500 + Vouchers that are produced by the Headquarters Utilities Section and District Utilities Representatives each year.

Link URTS Central Database Solution With Legacy Systems

Customized links to DOTD Legacy Systems (DB2, mainframe/standalone flat file systems, etc) were implemented so that the URTS Report Manager could generate and output URTS Reports that integrated both URTS and DOTD Legacy System data together in complex report formats that were needed in order to perform more detailed analysis on URTS processes.

Link URTS Central Database Solution With Geographical Interface System (GIS)

A GIS Interface was jointly develop and deployed by XRiver Technologies LLC and DOTD Information Technology Section so that a map based interface to the URTS could be put into production use that would allow DOTD executives to quickly access URTS data without being familiar with detailed level Project/Agreement tracking numbers.

Link URTS Central Database Solution With The Program & Project Management System (PPMS)

Customized links to PPMS were implemented so that Project progress entered into URTS could be automatically used (or modified at run time by the assigned Headquarter Utilities User) to update related summary Utility Activities in the PPMS.

Existing URTS Implementation At DOTD Can Be Demonstrated

Demonstration of DOTD's existing URTS implementation can be scheduled and conducted by XRiver Technologies LLC personnel. If such a demonstration would help your organization, please contact your XRiver Technologies LLC Sale Representative for assistance with this request.

Additional Information Request

For more information on this topic, please contact an XRiver Technologies Sales Representative at 703-480-4482.