ESRI GIS based Transmission Right Of Way Management

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Agenda

- Introduction
- Business need
- Methodology
- Benefits
Introduction

Alabama Power

- Alabama power is the second largest subsidiary of Southern Company, serving homes, businesses and industries in the southern two-thirds of Alabama.
- Its strong base includes transmission, distribution and approximately 37,000 megawatts of regulated generation.

RMSI

- India’s “Best company to work for**, 2015 survey
- Best in class GIS services and solutions provider, since 1992
- Offering end to end GIS solutions covering data, engineering design, application development and consulting services to utilities and communications
- CMMI Level 5, ISO 9001-2008 & ISO-27001 Certified processes
Alabama Power Company

- Provides electricity supply to 1.4 million customers
- Part of the Southern Company group of companies
- One of the nation's largest producers of electricity
- Owns or operates 81 electric generating units with total name plate capacity of + 13 million kilowatts.
Alabama Power Company

- Alabama Power Ranked No. 1 Overall in Customer Service according to Southern Company’s Customer Value Benchmark study for 2016
- No. 1 in 2016 Large Businesses and Residential Categories
- No. 4 in General Businesses Category
- Alabama Power named Regional Corporation of the Year for 2016 by the Women in Business Enterprise Council
- J.D. Power ranked Alabama Power in top two in the South for residential customer satisfaction among large electric utilities for 2016 & among top three large electric utilities across the nation.
- Ranked as "India’s Best Company to Work For" by the Great Places to Work For Institute, USA
- Established in 1992, a startup incubated at Stanford University
- More than 1000 people from 19 nationalities work with us
- Key markets – Utilities, Telecom, Navigation & LBS, Natural Resources, Land & Infrastructure, Insurance, & Funding Agencies
- Process driven culture - CMMI level 5, ISO 9001:2008, ISO 27001 certifications
- Subsidiaries in – USA, Canada, Australia, UK, UAE
Business Need

- Consolidation of various permission level reports stored in different locations.
- Analyze every report in detail for necessary rights such as adjacent guy rights, ingress/egress, station details encroachment issues, etc.
- Bring in owner, beginning and end station details with improved encroachments.
- Identifying anomalies between various permission reports
- Develop single digital source for right-of-way researching.
Solution

Purchase reports
- Purchase database development
- Purchase Parcel GIS data development

Permit reports
- Permit database development
- Permit Parcel GIS data development

AX-Centerlines
- Centerline parameter recording
- Centerline - GIS data Development

Condemnation reports
- Condemnation GIS database development
- Court orders - Final order Review

High level ROW database development Process
Methodology – Ax Maps Data base

Permits – Ax maps digitization
**Methodology – Purchase ROW DB**

**Purchase report – Data compilation**

<table>
<thead>
<tr>
<th>Beginning Station</th>
<th>End Station</th>
<th>Owner</th>
<th>Parcel</th>
<th>Width</th>
<th>Remarks</th>
<th>Condemnation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Image of a table with columns for Beginning Station, End Station, Owner, Parcel, Width, Remarks, and Condemnation.]
Methodology – Permit ROW DB

Permits – Database update
Methodology – Condemnation Data DB

Condemnation final order and parcel development

Parcel extents

A strip of land 60 feet in width shall lie within the southwest quarter of northeastern quarter (NEQ of NEQ) of Section 13, Township 17 north, Range 10 east, Cullman County, Alabama, such strip being more particularly described as follows: To reach a point of beginning, commence at the northeast corner of Section 25, Township 17 north, Range 10 east, thence run south along the west boundary line of such Section 15 a distance of 693.4 feet to a point; thence turn an angle to the left of 45 degrees 49 minutes and 42 and 47 minutes east a distance of 3933.2 feet, more or less, to a point on the west boundary line of the property of the condemnation named in this paragraph, such point being the point of beginning of the right of way herein described and sought to be condemned; thence, the strip to be condemned 39 feet on each side of a center line and the continuance thereof which begins at such point of beginning and runs south 47 degrees 47 minutes east a distance of 157 feet, more or less, to a point on the south boundary line of the inverse of the condemnation field in the direction of improvement.
ROW – Parcels from various reports

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FID</td>
<td>24</td>
</tr>
<tr>
<td>Name</td>
<td>Parent</td>
</tr>
<tr>
<td>LEGDTA</td>
<td>370+73.3</td>
</tr>
<tr>
<td>DEEP</td>
<td>420+64.2</td>
</tr>
<tr>
<td>Owner_1</td>
<td>KENTUCKY CLARK CORP. COCA COLA NEWS PRINT DEP.</td>
</tr>
<tr>
<td>PARCEL</td>
<td>22+01.4</td>
</tr>
<tr>
<td>FEATURE_1</td>
<td>60 FT RIGHT OF WAY PERPET</td>
</tr>
<tr>
<td>CONDITED</td>
<td>No</td>
</tr>
<tr>
<td>ALONGMINT</td>
<td>Yes</td>
</tr>
<tr>
<td>BARRIERS</td>
<td>Yes</td>
</tr>
<tr>
<td>PUBLICROW</td>
<td>No</td>
</tr>
<tr>
<td>INGRESSOR</td>
<td>Yes</td>
</tr>
<tr>
<td>COUNTY</td>
<td>CLEMBREW</td>
</tr>
<tr>
<td>DOCUMENTCO</td>
<td>BUII</td>
</tr>
<tr>
<td>DataLayer</td>
<td>No</td>
</tr>
</tbody>
</table>
ROW – Parcels from various reports

- Purchase and permit matching parcels
- Purchase exist and Permit missing
- Condemnation parcels
- No Anchor and Guy rights
- Danger trees locations
On-line Dash board

Search by Kv

Search by status

Export to xls
Benefits

- Cleaned data anomalies across the reports
- Improved inventory of initial land acquisitions
- Reduced survey time for new construction
- Improved encroachment data
- More accurate land base information for corporate real estate research
- Provided a single resource for researching right-of-way data and information as well as a method for displaying visual representations of the data via mapping applications
- Online system access as per the Parcel Rights
- Quick query clarification to any department
- Fast retrieval of legal documents
- Effective Vegetation Management
- Legal framework for Right-of-Way and Utility processes
- Promotes visualization techniques to communicate anticipated project impacts