GIS in the field
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October 12, 2004
EGUG – Williamsburg, VA.
WHY?

“Why do we want to change?”

“We have ALWAYS done it this way.”

“The little end of the pole has ALWAYS gone into the ground.”
What we intend to cover in this presentation:

• Definition of the “problem”
• Desired solution
• Who is WIN Energy REMC
• The WIN Energy REMC approach
• How is it working?
The “Problem”

There are many stakeholders when it comes to data.
The Problem:

Accounting needs/wants information for:

– Property Taxes (CPR’s)
– Plant value
– Material Management
– Foreign Attachments (REVENUE !!!)
The Problem:

Operations Needs:
- What unit do you want built?
- Where do you want this unit?
- List of material required for this job.
- Cost estimates
The Problem:

Engineering wants:
- Connectivity for both EA and OMS
- Certain units (Wire size for EA and location of OCR’s and fuses for OMS)
The Problem:

These are just a FEW of the normal utility requirements.

All of this, of course, is to be done w/ less staff !!
The Desired Solution

Do **ALL** of the above without anyone knowing they are doing it.

WHY ??

BECAUSE WE CAN !!
The WIN Energy REMC Approach
Who is WIN Energy REMC?
More than 16,000 Electric Customers

More than 110 MW NCP

31 Substations

43 TOTAL Employees
Return On Investment (ROI)

• First:
  – Is a GIS System part of your organizations strategic plan?
    • (If NOT, skip to the conclusion)
  – What do you intend to do with a GIS system?
  – How will you maintain and update this system?
  – What resources are at your disposal to accomplish dissemination of information, maintaining and updating the GIS?
• Once you have decided that a GIS is part of your corporate goal, is ROI really the issue? Or is this just an exercise?
One of the first things an ROI is intended to do is **NOT** to focus on payback!!!

An ROI is intended to see if the process, or goal of the process, is really a fit to the company strategic goal.
If an ROI is required by management, you will need to assign values to interdependent processes.

The following chart would be a start.
ROI – Field Data

• Data taken to the field daily:
  – Full Facilities Management Database, which includes: pole height and class, station units, wire size and type, gps coordinates, span distance, ….
  – Foreign attachments: Cable company and number of cable attachments as well as Telephone company and number of telephone attachments. (For both pole loading and joint use billing data)
  – Mapping backgrounds
## Cost Benefit Analysis

<table>
<thead>
<tr>
<th>Work Order Task</th>
<th>Manual</th>
<th>StakeOut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Customer Relations</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Mapping target area</td>
<td>0.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Survey/retire existing system</td>
<td>1.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Design new system</td>
<td>0.5</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Subtotal: Field Time</strong></td>
<td>3.8</td>
<td>2.4</td>
</tr>
<tr>
<td>Verify calculations</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Legibly re-sketch job in office</td>
<td>1.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Complete staking sheet</td>
<td>1.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Tabulate unit data</td>
<td>0.5</td>
<td>0.0</td>
</tr>
<tr>
<td>Key data, produce reports</td>
<td>0.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Update maps</td>
<td>1.0</td>
<td>0.1</td>
</tr>
<tr>
<td>Reduced error rates</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Closeout and final clean-up</td>
<td>0.5</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td><strong>8.1</strong></td>
<td><strong>2.5</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Manual</th>
<th>StakeOut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wages and benefits</td>
<td>$26</td>
<td>$63.70</td>
</tr>
<tr>
<td><strong>Savings:</strong></td>
<td></td>
<td><strong>146.38</strong></td>
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</table>

5 Pole Job

StakeOut

Manual
<table>
<thead>
<tr>
<th></th>
<th>w/o StakeOut</th>
<th>Using StakeOut</th>
<th>Total Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Savings:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New customer builds</td>
<td>30% 360 1278 720 468 $21,060</td>
<td></td>
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<tr>
<td>Small Jobs</td>
<td>45% 540 4363 2025 1323 $79,045</td>
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<tr>
<td>Medium Jobs</td>
<td>24% 282 4456 3102 1382 $79,919</td>
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</tr>
<tr>
<td>Large Jobs</td>
<td>2% 18 623 450 155 $12,168</td>
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</tr>
<tr>
<td>Total Savings</td>
<td>100% 1200</td>
<td></td>
<td>$192,192</td>
</tr>
</tbody>
</table>

**System Cost:** $150,000  
**Payback:** 0.78 years
In Conclusion
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