Integrating GIS with Enterprise Utility Management Systems

Presented By:
Bryan Comer and Barry Trader
34,000 + Students
13,000 + Employees
1,262 Acres
Over 200 Buildings
14 Million sq ft

ENERGY MANAGEMENT - ENERGIZING MIZZOUM
STAFFING
- (1) Full Time Employee
- (2) Part Time ME or CE Students (over 35 students in past 20 years)

PRIMARY RESPONSIBILITIES
- GIS management
- Maintain GIS data for all underground utilities
- Asbuilt all new utility construction (survey)
- Maintain and support UtiliVIEW web-based GIS application
- Produce and distribute Utility Atlas Maps
- Provide on-site utility identification support to contractors
- Provide engineering support related to design and maintenance projects
- Special projects as required
5 ArcGIS Licenses

6 Toughbooks w/ Cell Cards

Energy Management - Energizing Mizzou
"Everything is Something Somewhere"
Facts:
Electric Capacity = 66.5 MW (6 Turbines)
Steam Capacity = 1,095,000 PPH (8 Boilers)
Water Capacity = 5,050 GPM (5 Wells)
Reservoir Capacity = 2,515,000 Gal
Staff = 63

EM HAS THE ABILITY TO INTERNALLY PRODUCE ENOUGH ENERGY TO COVER PEAK CAMPUS LOADS
OVER 225 MILES AND 15,000 EQ
- Survey All New & Exposed Utilities During Construction
- Trimble Total Workstation & GPS Unit
- Over 5,000 Surveyed Points/Yr
- Over 25,000 Surveyed Points Total
- Accurate Utility Maps & Locates
- Data Usable for Design
- Construction Project Support
SYSTEM CONFIGURATION

ORACLE®

- Future Data Logger
  - Equipment Status & Operational Information
- Geodatabase
  - Spatial Information
- Billing Data
  - Utility Meter Information
- AMP Data
  - Equipment Information
Steam Meter

 Meter Site ID
 Facility
 Org 1
 Org Split
 Org 2
 Org 2 Split
 Monthly Readings

 Meter Site ID
 X
 Y
 Z

 Meter Site ID
 Meter EQ_ID
 Size
 Manufacturer
 Ser Number
 Model Number
 Vendor
 Year Purchased

 GIS

 UTILITY
 BILLING

 Campus Facilities
 University of Missouri

 DATA INTEGRATION

 ENERGY MANAGEMENT - ENERGIZING MIZZOU
### Equipment Selection

<table>
<thead>
<tr>
<th>EQ ID</th>
<th>EQ Type</th>
<th>Description</th>
<th>Utility System</th>
<th>Serial Number</th>
<th>Manufacturer</th>
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<tr>
<td>WV-0001</td>
<td>Valve-Water</td>
<td>Service valve to Psychology Building</td>
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### Equipment Info

- **EQ ID**: WV-4452
- **EQ Type**: Manhole - Steam
- **Description**: Northwest of Provine Center
- **Parent EQ ID**: 4451
- **Parent Description**: No Parent
- **Utility System**: Steam
- **Department**: Steam & Water Distribution
- **Manufacturer**: NE.
- **Model Number**: Installed: New Non-Asbestos
- **Number of Links**: 0
- **Vendor**: Saint Louis Gas & Electric
- **Purchase Date**: 0
- **Extended Cost**: 0
- **Warranty End Date**: 0
- **Install Date**: 0
- **Location (Building)**: NE.
- **Floor**: 0
- **Room**: 0
- **Owner**: 0
- **Warehouse Location**: 0
- **Operational Status**: Active
- **In Service**: 0
- **Condition**: 0
- **Feature**: 0
- **Manual?**: 0
- **Model Key Field**: 0
- **Serial Number**: 0
- **Length [ft]**: 0
- **Width [ft]**: 0
- **Height [ft]**: 0
- **Utility (Billing Meter)**: 0
- **Field Config**: 0
- **Columns**: 0
- **Deficiencies**: 0
Revenue Meters
Meter Readings
Meter Histories
Dept. Splits
Floor Plans Rectified To Building Outlines
Provides Ability to Map Interior Features
Facility Management Tool
UtiliVIEW WEB APPLICATION

- Flex Application Developed in 2010
- Currently Over 120 Users
- Desktop and Toughbooks
- Controlled Access
- Dynamic Data Link
- One Stop Map Shop
UtiliVIEW - AMP INTERFACE

Equipment ID: SMH-105
Description: West of Schweitzer Hall

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Equipment ID: SMH-105
Description: West of Schweitzer Hall

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Submit Request
FOR MORE INFORMATION CONTACT:

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