Leveraging Collector & UtiliSync to Manage Utilities Better
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- Is your road blocked trying to maintain your utilities?

YOU KNOW YOU ARE FROM UTAH IF...

YOU ONLY KNOW 2 SEASONS: WINTER & CONSTRUCTION
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• Are you buried in paperwork trying to get that information to your GIS?
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• It’s time to break the chains and go digital
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- **Goals**
  - Get more organized
  - A solution to collect maintenance/inspections on our utilities
  - Make it easier to get everyone on the same page
  - Collect more data in the field *while* removing burden from office personnel
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- Advantages to going digital
  - Data is loaded real time
  - Analysis can be done at anytime
    - No more waiting for data entry
    - Field workers can see where they’ve already been
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• Advantages (Cont)
  – Managers can track progress
  – Lightens the load on GIS staff
  – Data entry improves
    • Ownership takes place
      – The crews working with the utilities every day have direct access to the data, see the mistakes and get them fixed
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• What did we need to make it work?
  – ArcGIS for Desktop (We already had 3-Advanced & 4-Basic Licenses)
  – ArcGIS for Server (We already had)
  – ArcGIS Online Account (We already had)
  – ArcGIS Collector Licenses (We already had due to our desktop licenses)
  – Enterprise Geodatabase (We already had capability due to ArcGIS for Server – SQL Server Express)
    • Including creating Related Tables to track all the maintenance
  – The ability to collect data with forms for some data (Utilisync)
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• How is it done?
  – Setup an Enterprise Geodatabase
  – Create a map using data located out on the web
  – Publish that map to the internet as a feature service
  – Import that map to ArcGIS Online
  – Make an ArcGIS Online Map
  – Open that map in ArcGIS Collector & start collecting
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• Spanish Fork’s GIS Setup

Note: Because of our slow network we created everything as replicas. If you have a fast network you will be better off using versions.
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- Spanish Fork’s Database Setup

  - Feature Dataset (FD)
  - Feature Class (FC)
    - (Main Features)
    - (Global ID)
  - Relationship Class (RC)
  - Related Table (RT)
    - (Multiple Inspections/Maintenance)
    - (Related Global ID)

- The Feature Classes are tied to the Related Tables via a Relationship Class which ties the Global ID field on the Feature Class and the Related Global ID on the Related Table together in a 1 (FC) to Many (RT) Relationship. This allows inspectors or maintenance workers to do multiple inspections/maintenance activities on a single feature.

- Every night a Python Script is called from a .bat file which is called by a Windows Task Schedule which grabs the last inspection/maintenance that was done on that feature and puts it into the main FC table.
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- What is Spanish Fork Doing With This?

- Cemetery Maintenance
- Storm Maintenance
- Weed Abatement Tracking
- Construction Proj Mgmnt
- Water & PI Valve Exercising
- Asphalt Inspections
- Bluestake Maintenance
- Street Sweeping Tracking
- Communications Editing
- Construction Project Viewer
- Water & PI Maintenance
- Asphalt Maintenance
- Sewer Maintenance
- Street Striping Maintenance
- Communications Maint Tracking
- Snow Removal Tracking
- Viewer Map For Public
- Development & Project Management
- Sign Maintenance
- Water & PI Maintenance
- Concrete Inspect Tracking
- Snow Removal Priority
- Concrete Maintenance
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- Field View Example: Sewer Maintenance
  - Live Demo (Collector)

- Manager View Example: Asphalt Maintenance
  - Live Demo (Web App)
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• When do we use Collector/Utilisync?

• Collector
  – Anything that only requires attribute updates/new feature creation

• Utilisync
  – Anything that requires forms/documentation
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• Workflow With UtiliSync
  – User completes form in field
  – UtiliSync
    • Updates GIS Attributes
    • Saves data to related table
    • Saves forms to Google Drive
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- Example: Development Review
  - GIS Configuration
  - General/Contact Information

<table>
<thead>
<tr>
<th>OBJECTID</th>
<th>66</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Name:</td>
<td>River Point Subdivision</td>
</tr>
<tr>
<td>Inspector :</td>
<td>Shawn Jones</td>
</tr>
<tr>
<td>Contractor :</td>
<td>Big D</td>
</tr>
<tr>
<td>Contractor Phone :</td>
<td>435-789-7894</td>
</tr>
<tr>
<td>Contractor Email:</td>
<td><a href="mailto:joe@bigd.com">joe@bigd.com</a></td>
</tr>
<tr>
<td>Impervious Area:</td>
<td>0.89</td>
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</tbody>
</table>
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- Example: Development Review
  - GIS Configuration

- Dates of Major Milestones

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary Plat Approval Date:</td>
<td>1/16/2016</td>
</tr>
<tr>
<td>Final Plat Approval Date:</td>
<td>4/24/2016</td>
</tr>
<tr>
<td>Site Plan Approval Date:</td>
<td>5/25/2016</td>
</tr>
<tr>
<td>Pre-Construction Date:</td>
<td>9/13/2016</td>
</tr>
<tr>
<td>Underground Utilities Completion Date:</td>
<td>12/12/2016</td>
</tr>
<tr>
<td>Underground As-Builts Date:</td>
<td>2/4/2016</td>
</tr>
<tr>
<td>Streets Pre-Pave Date:</td>
<td>4/15/2017</td>
</tr>
<tr>
<td>Streets Completion Date:</td>
<td>5/15/2017</td>
</tr>
<tr>
<td>Electric Completion Date:</td>
<td>5/15/2017</td>
</tr>
<tr>
<td>As-Builts Completion Date:</td>
<td></td>
</tr>
<tr>
<td>Final Walk-Through Date:</td>
<td></td>
</tr>
<tr>
<td>Date Approved And Entered One Year Warranty:</td>
<td></td>
</tr>
<tr>
<td>One Year Warranty Inspection Date:</td>
<td></td>
</tr>
<tr>
<td>Final Acceptance Date:</td>
<td></td>
</tr>
</tbody>
</table>
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• Example: Development Review
  – Live Demo
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Contact Information:

Shawn Beecher
GIS Administrator
City of Spanish Fork
(801) 804-4571
sbeecher@spanishfork.org

Matt Stayner, P.E.
Founder
UtiliSync
Mobile GIS Forms
Office: (385) 275-2700
Direct: (385) 275-5535
mstayner@utilisync.com