Show Me the Edits!
Enterprise Audit Tracking at CenterPoint Energy
Agenda

- Introductions
- Business Challenges
- Solution Overview
- Business Benefits
Introductions

Skye Perry | SSP Innovations
• Principal Consultant
• Esri & Schneider Electric Technical Architect

Jacob George | CenterPoint
• GIS Manager
• PM for All Edits Project
Business Challenges - Common GIS Questions

- How do we view ALL Edits in a version?
- What’s the easiest way to verify edits against a work order, plat, or field survey?
- How do we know the user didn’t edit anything else (on the other side of the map)?
- Can we QAQC ALL Edits in a version?
- Is there any way to Audit the edits in GIS?
- Who did What, When, and Where?
Business Challenges - CenterPoint Challenges

- **Editing 24x7** including offshore staff
- Posting **100's of Sessions**/Versions per Day
- Do Not Have Time to Review Each Version
- Custom Batch Reconcile & Post (BRP)
- Need Ability to Query Edits by Version / Editor after Posting has Occurred
- Need to Keep History of Version Edits Indefinitely
- Need to Query for Feature Level Edits Across Posted Versions based on Attribution
  - Ex: Work Order / Service Request
Solution: **ALL Edits Report & QA Tool**

Total Control and Tracking Capabilities of Edits
- Esri Versions
- Schneider Electric Sessions / Designs

Interactive Analysis Before Posting
- Text-based Reports
- Graphical Representation on the Map

**ALL Edits are Captured:**
- Additions
- Changes / Updates
- Deletes

Save Full Report to Database For Later Viewing
ALL Edits Report & QA Tool

Run Automatically on Versions Prior to Post

- Schneider Electric PX Subtask
- Schneider Electric GDBM Action Handler
- CenterPoint uses SSP API via custom Batch Reconcile & Post Application

Edit Report & Shape Data Saved to Database

- Saved in SSP Format
- Version can be Posted
- Report can be Viewed AFTER Posting Has Occurred
- Includes Shape Data
- Allows For Review of Edits After the Fact
Retrieve All Edits for Posted Version

Form to Query the Posted Versions

SSP Retrieve All Edits

Search Criteria

Version Name: [No Preference]  Owner: [No Preference]

Create Date: 9/23/2014  Report Date: 9/23/2014

Field Name  Field Value

SR Number  Job Cost #

Search Against All Edits Datastore:  Active Archive

Select a Report:

Version Name  Owner  Create Date  Report Date

Records found: 0 Please modify your search criteria.

OK  Cancel
Search on Version Name

Configure as a dropdown or as a text box that supports wildcard characters

- Search for all Versions with Work Order Number
  - Ex: WO_1234
  - Ex: SN_ or DN_
Search on Version Owner

Dropdown of all owners of posted versions:
- Search for all Versions posted by a specific user
Search on Feature Attributes

Configurable list of attributes searched across all tables/feature classes

- “OR” SQL search applied because of storage format
- Will locate all versions with a match
Provide Archival of Edits

Active tables get large over a period of months

- Searching active tables slows down
- Batch DB job provided to move edits from active to archive based on a schedule
- Moves edits older than a configured timeframe
  - Ex. Older than 3 months
- Archive is slower but searches run much less frequently
Version Search Results

All matches displayed
- Select any version to load All Edits Report
- Loaded on top of SDE.Default in ArcMap
- Shows Full Edit Report for Version
  - (though version no longer exists)
Simple User Interface

Shows ALL Edits in the Current Version
Text-based Edit Report

**Deletes:** Record Type, ObjectId, and all attributes of the deleted record

**Adds:** Record Type, ObjectId, and all attributes of the added record

**Updates:** Record Type, ObjectId, and list of all fields that changed with the original AND updated values

- Quickly and Effectively Review the Edits
- Toggle the checkboxes to update the report
- Useful when QA’ing against other sources
Report Visualization

View the full extent of the edits in the version

- Additions – Blue
- Deletions – Red
- Updates - Green (with Orange showing original geometry)

Allows QA to easily identify edits outside of designated area
Report Visualization

Select Any Item in the Report to:
- Zoom to Selected
- Flash Selected
- Visualize Selected
- Visualize Clear
Report QA & Historical Tracking

View Attributes
- See changed fields
- Current Version vs. Parent Version

Edit Selected
- Selects the record on map
- Activates Attribute Editor
Report QA & Historical Tracking

Run 3rd Party QAQC
- Esri/ArcFM
- QA All Edited features & objects

Export Report
- Text-based Report
- Named with Version Name and Date

Save to DB
- Stores Report in Geodatabase
- Saves Edited Features
- Saves Edited Shapes
Quick way to recreate records that were incorrectly or inadvertently deleted...

Uses deleted report data to **recreate the record**
- Creates a new record matching deleted record
- ObjectId is reset
- GlobalId is reset
- AU’s Disabled to recreate record as it previously existed

Relationships Work:
- Rels not based on OID or GlobalId
- Destination objects in relationships
Enhanced Confidence in the GIS Data

- All Versions Written to All Edits Reports in GDB
- Fully Automated Reporting via GDBM
- Ability to Review Versioned Edits AFTER Posting
- Ability to Locate Versioned Edits by Attribute
- Active & Archive Data Store

Allows CenterPoint to maintain their high volume of version editing and posting while spending time in the most efficient areas (i.e. not on QAQC of every version).
Show Me the Edits!

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