Field Direct, A Field Inspection Application Designed to Improve Data Integrity and Accessibility for Management Oversight

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Our Discussion Topics

1. The Scenario: Reclaimed Mine for Historical Educational Use
2. The Challenge: Data Integrity & Accessibility
3. The Solution: Field Direct
4. Lessons Learned: What Worked? What Didn't?

The Scenario

- Reclaimed Mine
- Restored for Unique Occupancy
  - Structurally
  - Environmentally
- Risk Assessment
- Site-specific Cleanup Standards

The Scenario – Field Activities

- Record Observations
- Take Photos and Record Photo Details
- Collect Field Samples
- Take Measurements
- Record Coordinates
- Conduct Safety Inspections/Meetings

The Challenges

1. Unorganized and Inconsistent/Illegible Data
2. Coordinating with Field Staff in Remote Locations
3. Peer Reviewing and Editing Field Information
4. Sharing Collected Data with Stakeholders

Challenge #1: Unorganized and Inconsistent/Illegible Data

- Juggling Multiple Hardcopies
- Information Transcribed from Field Notes to Reports
- Assigning Recorded Observations to Corresponding Photographs

Challenge #2: Coordination with Field Staff in Remote Locations

- Communicate existing conditions and transmit site photos and coordinates.
- Share photos and observations without leaving the field due to time and location constraints.
- Decide what samples need to be collected and where, then communicate back to the field.

Challenge #3: Peer Reviewing and Editing Field Information

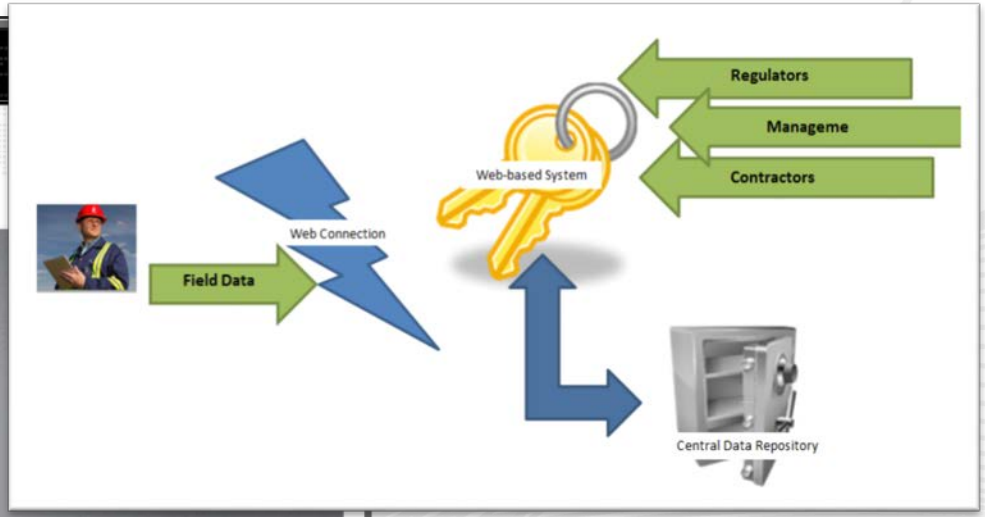
- Reviewing uploaded data in the database for accuracy, continuity, and completeness.
- Editing data that has been loaded to the database.
- Controlling which team members can review and edit the data and maintain the edited versions.

Challenge #4: Sharing Collected Data with Stakeholders

- Project status reports on a weekly basis ate up the budget and schedule.
- Regulators wanted to approve the sample locations, but don't have the software to view or GIS maps and cannot electronically receive large files.
- Contractors needed visuals of site conditions.

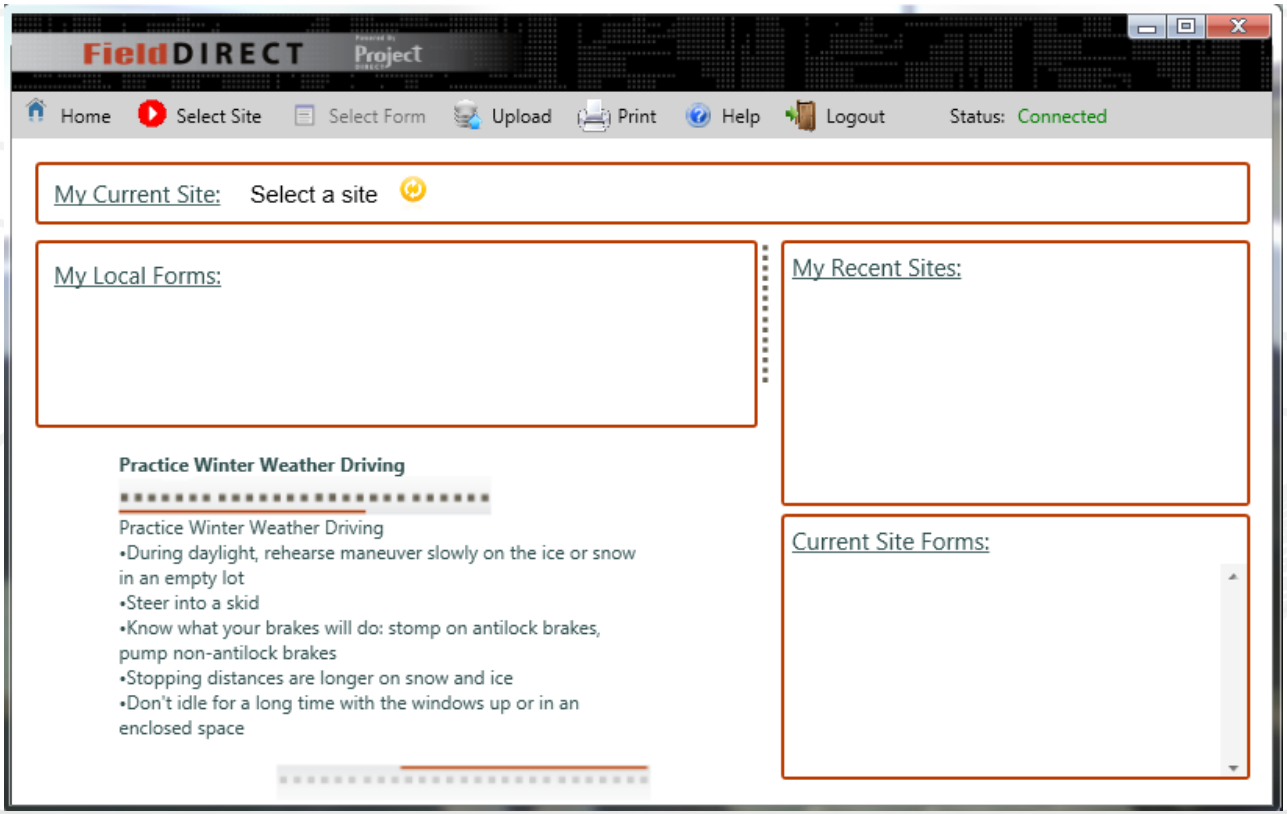
The Solution!

- Field Direct - dynamically driven, mobile data collection application designed to capture field data, including photos of the site, and global positioning satellite (GPS) data.



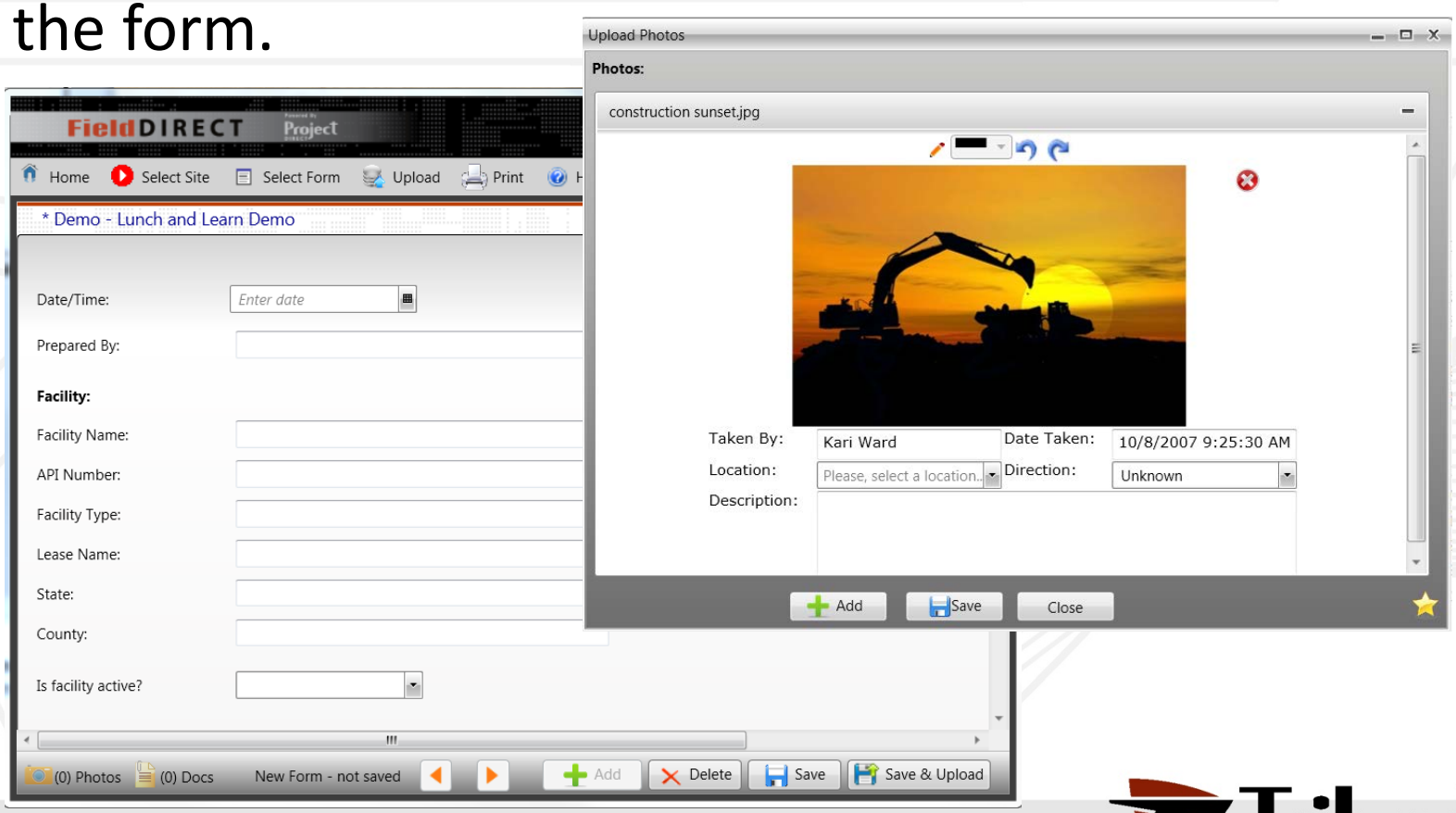
Solution #1: Mobile Electronic Forms

- Field forms were set up in electronic form and accessed through the mobile application



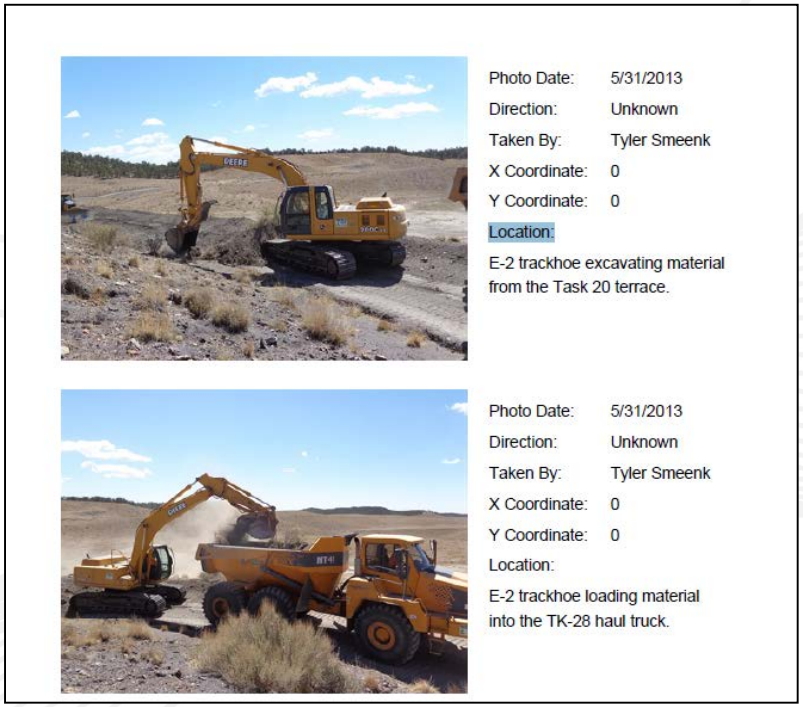
Solution #1: Mobile Electronic Forms (continued)

- Site photos can be opened, edited and saved within the form.



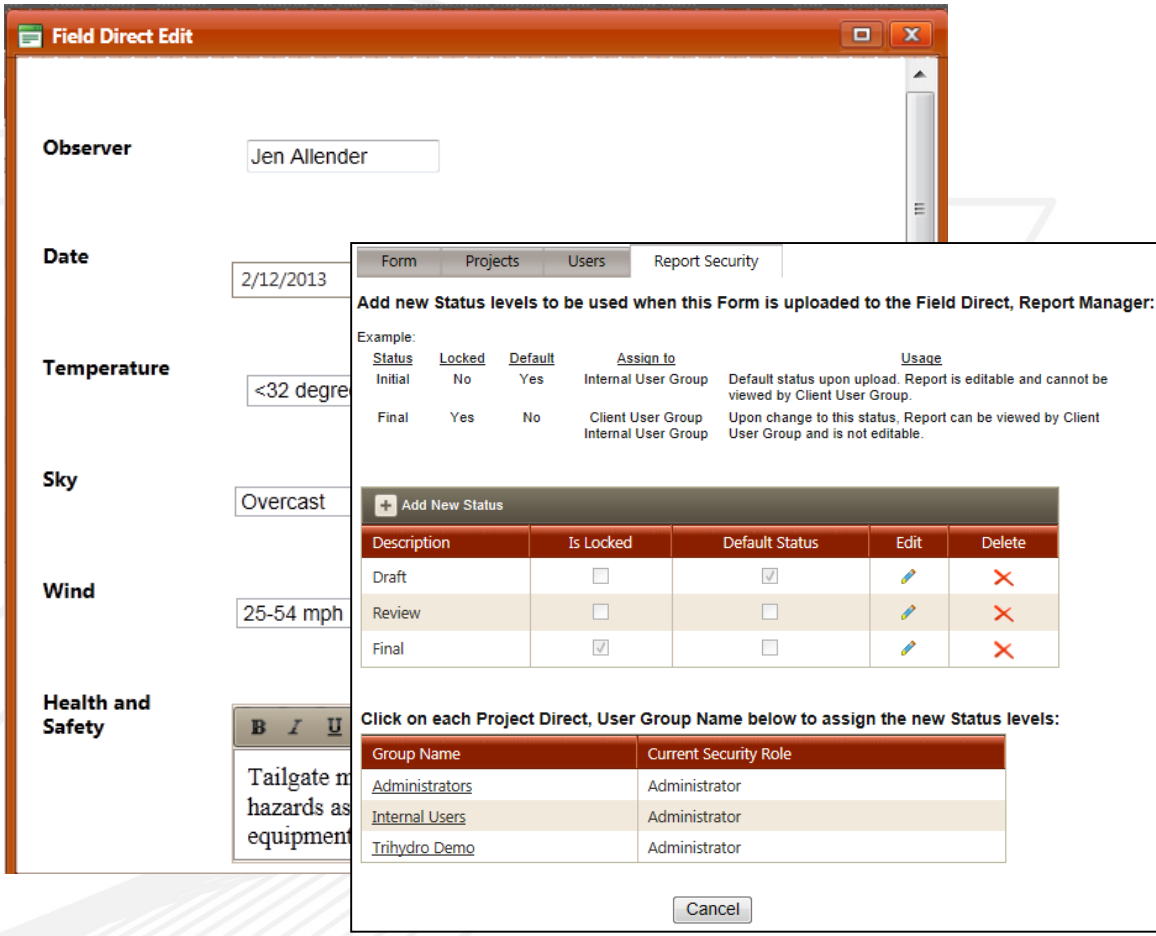
Solution #2: Coordination with Field Staff in Remote Locations

- Immediately access information and coordinates after forms and photos are uploaded



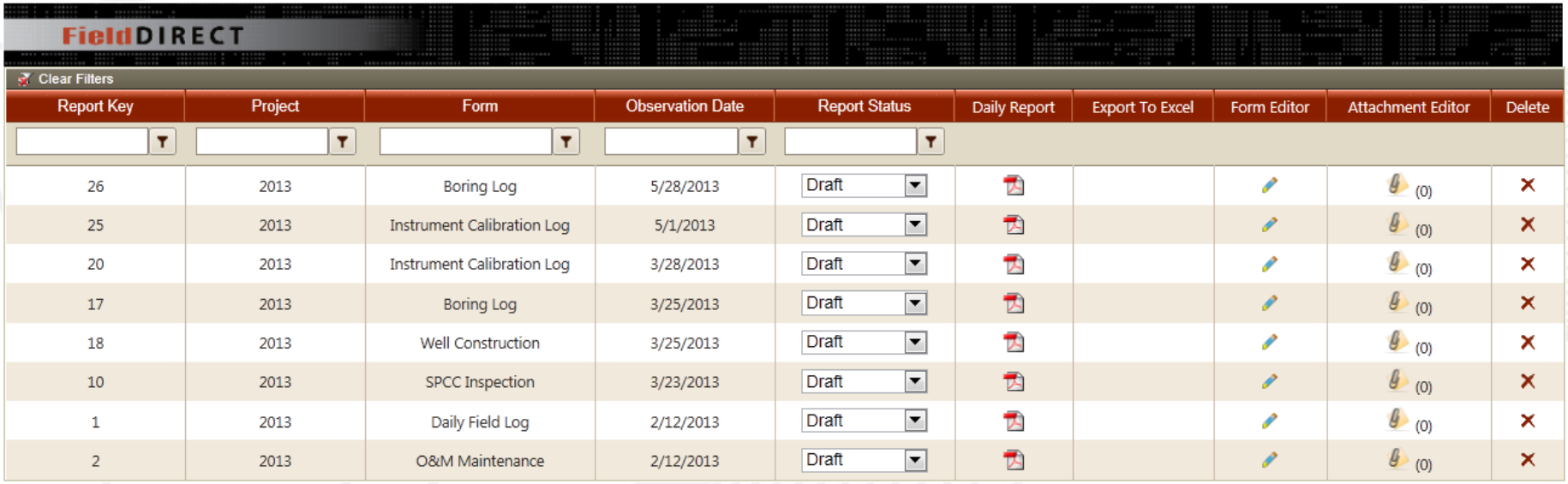
Solution #3: Peer Review and Editing Field within the Database

- Forms that have been uploaded can be reviewed and edited by assigned project team members.
- Project Managers can assign editing or reading rights.



Solution #4: Share Collected Data with Stakeholders

- A variety of project-specific reports can be generated through the web database system and shared with multiple stakeholders.



Lessons Learned – What Worked?

- Ease of Use - Simplification
- Immediate Capture of Photo Details
- Daily Connection to Field Activities
- Form Library
- Laptop Computers
- Mobile Offline Use

Lessons Learned – Things to Improve Upon

- Tablet Computers
  - Intrinsically safe units
  - Weather constraints
  - Ruggedness
  - Hardware technology not keeping up with software capability
- Units with Other Features
  - Accessories (cases, styles)
  - GPS, camera, transducers