



**Changing the Game: Equipping Ohio's Coal Inspectors with Cutting Edge
GIS capabilities in the Field**

By: Matt Riley

Action:

Ohio's Title 5 program recently expanded its use of GIS in daily operations by upgrading coal inspectors to a new tablet-based computer platform, the Panasonic FZ-G1 ToughPad. These rugged tablets bring the office to the field, and provide functionality that replaces multiple pieces of equipment. And with all data available to inspectors in the field, the amount of paper-based documents the inspector needs to bring with them on site has been significantly reduced.

An ArcPad-based Mobile GIS was developed that gives inspectors access to geo-referenced mine maps provided by the operator while in the field. The platform also gives inspectors the ability to take geo-tagged photos, make markups on a digital map, and easily provide that information to the mine operator.

Ohio Mineral Resources' GIS group evaluated hardware, examined business needs and current processes, and developed a system in-house that gives desired functionality to coal inspectors in the field without having to significantly alter normal business as usual operations within the organization.

Location:

This project was deployed to inspectors in Ohio's coal region, denoted in gray in the map below:



Results:

The system has enabled permitting and inspection staff a more accurate, simple, and robust means of providing reports and findings that need addressed to the mine operator. Inspectors now have the capability to tag a photograph with a GPS fix, giving regulators undisputable evidence of issues that may be on site.

Contacts:

Bob Johnson, IT Manager, Robert.johnson@dnr.state.oh.us
(614) 265-6778

Matt Riley, ToughPad Project Lead, Mathew.riley@dnr.state.oh.us
(740) 592-3748

Chris Freidhof, GIS Specialist, Chris.freidhof@dnr.state.oh.us
(330) 339-2207

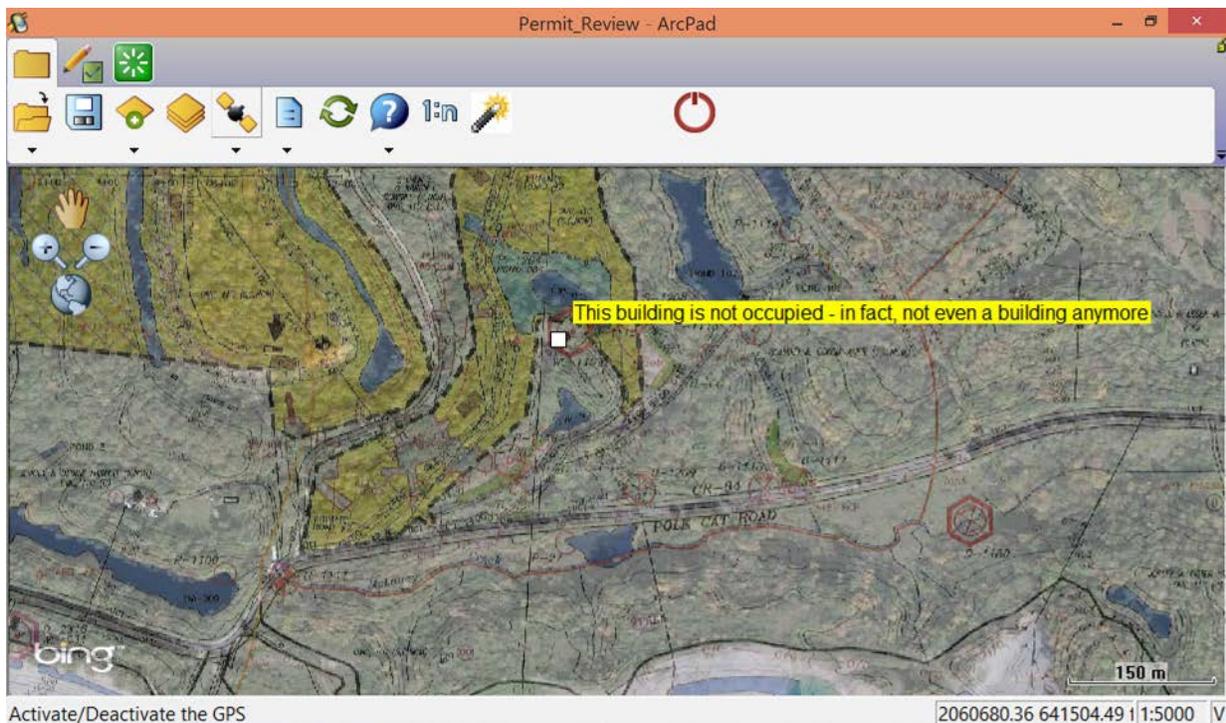


Figure 1: A discrepancy between the Application map contents and on-the-ground field observations is denoted in the Ohio ToughPad Mobile GIS.



Figure 2: Panasonic ToughPad FZ-G1 stock photograph, courtesy of Panasonic Corporation. This model of ruggedized tablet was chosen for its ability to work in tough environments, and the Windows 8.1 operating system integrates with all existing business workflows.