



## Digital Mapping of Buried Pipelines with a Dual Array System DTRS56-02-T-0005

### PHMSA ACCOMPLISHMENTS

Pipeline and Hazardous Materials Safety Administration

Pipeline Safety Research and Development

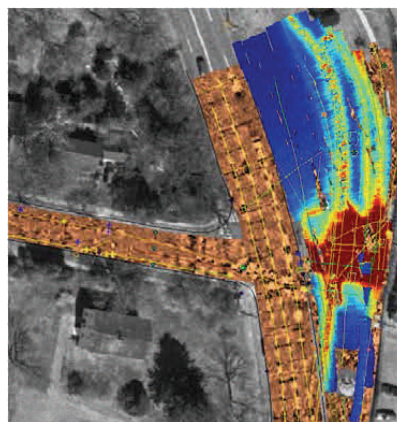
Technology Development for the Excavation Damage Threat

#### Project Abstract

This purpose of this research project was to develop technology to detect all underground utilities, including plastic pipelines and provide high quality location information. The solution must be non-invasive for detecting, mapping and inspecting steel and plastic pipelines. The system combines measurements from ultra-wideband radar and electromagnetic induction arrays with precise positioning and advanced image processing.

**PHMSA Funding:** \$469,060

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Vehicle mounted or smaller hand walked system by operator for rural or urban deployment.

#### NET Improvement

Witten's patented technology was at the time, the first commercial system capable of producing highly accurate, three-dimensional maps and images efficiently and noninvasively (without digging) in conditions as much as ten feet underground and based on rapid computer analysis of radar images.

#### Commercial Partner

This technology was offered by Witten Technologies Inc. of Jacksonville, FL until 2010. No current company information is available.

#### Contact

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**US Patent under DOT Contract:**  
6,525,539; 6,766,253; and 6,667,709

<https://primis.phmsa.dot.gov/rd/performance.htm>