



# Acoustic-based Technology to Detect Buried Pipes

DTPH56-10-T-000020

## PHMSA ACCOMPLISHMENTS

Pipeline and Hazardous Materials Safety Administration

Pipeline Safety Research and Development

Technology Development for the Excavation Damage Threat

### Project Abstract

To improve performance of the current acoustic locator to detect multiple buried pipes, integrate components into a pre-commercial device, and test at gas utility sites. The current Emulator consists of a laptop computer, off-the-shelf data acquisition module, high power class D amplifier, deep cycle car battery, and exchangeable sensor modules. The project will improve, develop and build an integrated, hand-held device – pre-commercial unit – to detect buried pipes. The integrated device will be tested at field sites. The detection of buried natural gas pipes, especially Polyethylene Pipe.

### NET Improvement

This project improved the Ultra-Trac® APL acoustic pipe locator through multiple validation demonstrations at several urban utility sites. As part of the research an algorithm for improved locating of pipes without tracer wire (or broken wire) was developed and tested. The improvements will assist the pipeline operators in detecting buried metallic and non-metallic pipes, reduce excavation damages.

US Patent under DOT Contract:

N/A

PHMSA Funding: \$ 279,773

Public Project Page  
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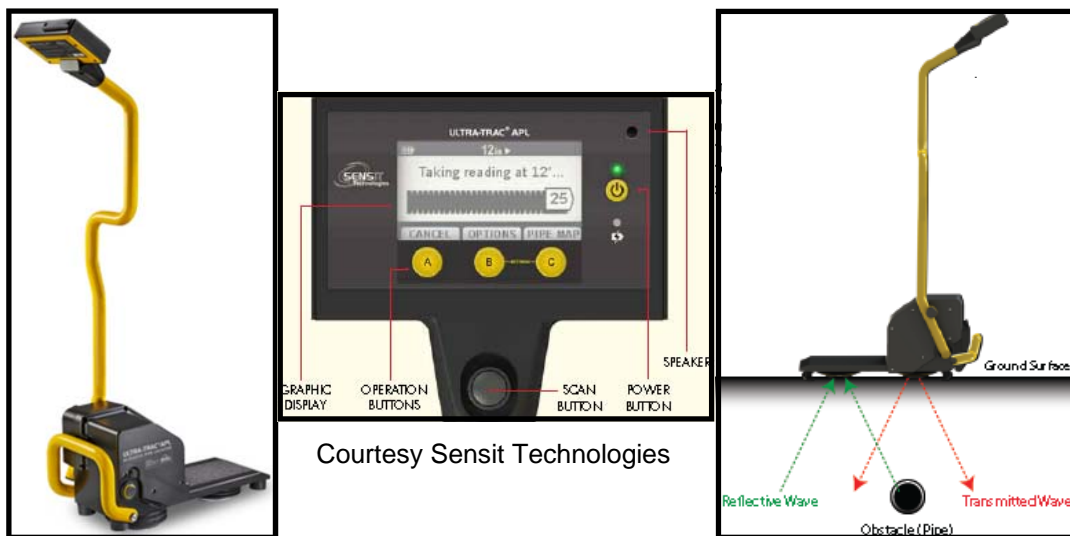
### Commercial Partner

Sensit Technologies  
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Courtesy Sensit Technologies

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