

NFER[®] Technology

Near-Field Electromagnetic Ranging (NFER[®]) technology is a radically new form of wireless tracking that brings real-time locating systems (RTLS) to difficult indoor and outdoor environments. NFER[®] systems operate under Part 15 power levels in the AM broadcast band. By exploiting near-field properties of electric and magnetic waves, this breakthrough technology provides a unique combination of **Long Range, High Accuracy, and Low Cost**

Why Low Frequency and Near-Field?

Low frequency systems have significant advantages over incumbent high frequency systems.

- 🔍 **More trackable parameters:** Near-field transmissions have twelve trackable parameters. More trackable parameters mean more location data, more sophisticated algorithms and more precise solutions.
- 🔍 **Better Propagation:** Near-field systems are virtually immune from multipath. With wavelengths much longer than the typical range, near-field signals can't fade or cancel like high frequency signals. Minimal multipath impact means more accurate location measurement. The long wavelengths also yield superb non-line-of-sight performance.
- 🔍 **Lower Cost and Complexity:** RF circuits are simpler and cheaper when frequencies are measured in kilohertz instead of gigahertz. NFER[®] receivers and transmitters don't need synchronization and can communicate wirelessly back to the location server.

THE QT[™]-500 SYSTEM SPECIFICATIONS

- Typical Accuracy: 30cm-1m (1-3ft)
- Typical Range: 30-60m (100-200ft)
- Typical Infrastructure Cost: <\$0.50/sqft for most installations
- 250 kb/s data exchange between Tag and Server
- Flexible software architecture for writing customized applications or plug-ins using the Q-Track Software Suite GUI
- Rugged tag for industrial environments

The QT[™]-500 System

From Nuclear Training to Worker Safety, Indoors and Outdoors, the NFER technology based QT[™]-500 System can meet the demands of your application



The QT[™]-500 Tag Transmitter provides industrial strength real-time location and data feedback in the most difficult indoor environments.



The QT[™]-500 Locator-Receiver requires no synchronization and can communicate wirelessly back to the Location Server.



The Q-Track Position Server hosts the Q-Track[®] Software Suite and can communicate wirelessly or over Ethernet to real-time location applications or databases.



The Q-Track Position Server hosts the Q-Track® Software Suite and can communicate wirelessly to provide real-time location, tracking history (shown), and *heat-maps* for evidentiary use.

Features:

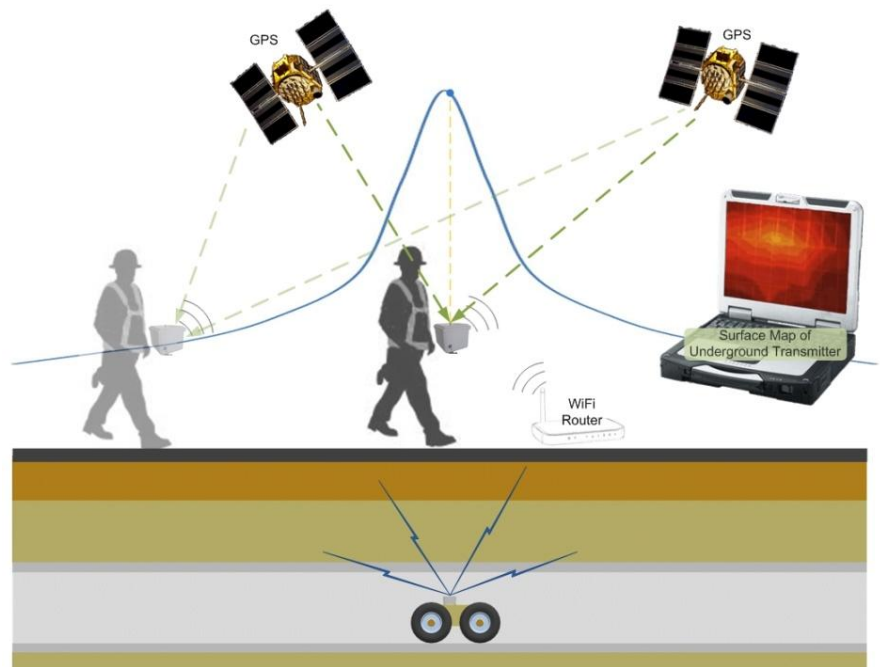
- Location of Underground Equipment/Assets
- 2 ft. accuracy within minutes.
- Real Time Updates on position.
- Penetration Depth up to 60 ft.
- Seek Mode to Locate Objects
- Map Mode for High Accuracy and Evidence
- Integrateable with any robotic platform (PacBot, Talon, Matilda).

ABOUT US

Q-Track is a high-tech startup corporation developing an innovative tracking technology NFER®. Excelling in environments where other tracking systems fail, this technology meets the strenuous demands of numerous applications. From the ingenuity of its three founders, Q-Track has become home to a unique corporate environment formed from the drive, expertise, creativity, and self-motivation of its growing team of employees.

GEOSPATIAL UNDERGROUND TRACKING SYSTEM (GUTS)

Increasingly, clandestine tunnels under our southern and northern borders continue to be a problem for counter-smuggling operations. The Q-Track Geospatial Underground Tracking System provides real time positioning of robotic equipment and first responder personnel operating in a GPS and short range radio-frequency denied areas. GUTS is capable of deployment in a variety of underground environments from sewage systems to interdicted, cross-border tunnels up to 50 ft. underground. Easy to operate, the underground asset can be located in minutes and a spatial map generated for evidentiary usage as well as tunnel remediation efforts such as drilling. GUTS has been developed under DHS contract N10PC20209 and is ready for use in CBP/ICE operations.



GUTS top-level Architecture when integrated onto a robot underground, the above ground locator is small enough to be hand-held or mounted to a vehicle. The system can also be integrated with GPS to provide real-world coordinates.

View the Video of this Technology Online:

www.Q-Track.com

Contact: Eric Richards; (256) 489-0075; info@q-track.com