



INTERFERENCE MITIGATION

PROACTIVELY OPTIMIZE SYSTEM FUNCTIONALITY AND CONTROL RISKS

Interference can and will compromise LMR communication systems. Identifying the interference caused by licensed carriers may be found through Spectrum Analysis and Monitoring followed by an FCC Database Query, but the difficult job of finding interference caused by unlicensed or unknown sources requires a different approach.

The data gathered using these techniques may form the foundation for further investigation and may speed the process of interference mitigation, but many times finding an interferer is more closely related to detective work and includes the meticulous attention to detail and the accumulated experience of the engineer to successfully resolve interference problems.



Interference mitigation is a rigorous methodology that requires the collection of on-site data as well as the interpretation of customer information and then correlating the two. The tools required will include spectrum analyzers, receivers, directional antennas and Doppler direction finding. The primary goal is to determine the location of the source of the interference.

Often interference sources are found to be the intermodulation of several carriers, signal boosters, LNA oscillation, or other non-coherent wide band noise. Identify, isolate, locate - the steps of Interference Mitigation.

As in any detective work, interference mitigation requires experience, knowledge and discipline. The engineers tasked with the mitigation effort need to ignore all preconceived notions prior to arrival at the site. The final step of interference mitigation may require diplomacy and the use of regulation enforcement to bring about a resolution.

WHY IS INTERFERENCE MITIGATION SO VALUABLE TO YOU?

INTERFERENCE MITIGATION

Determine the presence or absence of licensed carriers on any channel. Information includes user site information based on the latitude/longitude of the location of the site. The latitude, longitude and distance to the interferer, licensee info including contact data and an ERP analysis of the interferer.

RISK REDUCTION

Knowledge of what transmitters may be at a site, legal or illegal, is crucial to any site implementation. Data supplied through interference mitigation will help reestablish reliable communication.

IDENTIFICATION OF HARDWARE DESIGN ISSUES

Known signals in close spacing to current or proposed system frequencies will present design challenges. Unknown carriers will present erratic communication. Interference mitigation helps locate and alleviate both.

This end user-driven technology delivers the information you need at the right time - when and where it can be of most use to you.

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**TX RX SYSTEMS INC. 8625 INDUSTRIAL PARKWAY, ANGOLA, NY 14006-9696
TELEPHONE 716-549-4700 • EMAIL: FIELDSEVICES@TXRX.COM**