

Site Optimization Services (SOS)

Radio communication can be the difference between life and death in emergency situations. For this reason, users expect reliable communication at all times. Obtaining reliable signals is often complicated and difficult to accomplish. Any one of the many forms of noise or interference is capable of making a would-be loud and clear message impossible to receive. It's no surprise that users and installers alike seek out the experts to make sure everything works. That's where Bird comes in.

Bird® Site Optimization Services (SOS) has been performing services for Land Mobile Radio and Wireless systems for over 10 years. With a staff sporting a strong technical background and over 40 years of experience in RF field services, we have identified and solved problems of all kinds. Services include long-term monitoring for interferers, noise floor and spectrum analysis and monitoring, interference mitigation, system validation, and re-banding.

► INTERFERENCE MITIGATION

One of the most frustrating problems with any RF system is when some external interference causes loss of coverage, dropped calls, or degradation in the quality of audio. The sources for these problems could be as simple as another licensed RF transmitter in the vicinity, or as complex as severe multipath or electrical noise.

Bird RF Engineers possess a large base of knowledge from which to work and access to a wide variety of specialized equipment ideally suited for interference deployments. Our engineers are prepared to travel to your location, investigate the interference, and offer suitable solutions when applicable.

► NOISE ANALYSIS AND MONITORING (NAM)

Identifying the noise floor around the site is just as important as making sure that you are getting enough power out. If the noise floor at a site is not properly identified, it could lead to reduced coverage from what was predicted.

Bird has specially designed equipment for measuring the noise floor for frequencies of interest at a site. Our Noise Analysis and Monitoring (NAM) equipment is designed to log RF noise levels for 24 hours. We supply a report showing the noise over time, which helps ensure the coverage needed will be available during high traffic times. This test focuses on signals below -80 dBm and is often run in conjunction with Spectrum Analysis and Monitoring (SAM).

► SPECTRUM ANALYSIS AND MONITORING (SAM)

As technology improves and wireless communication becomes more prevalent, the RF spectrum becomes more crowded. It's very important to have an understanding of the various transmitters in your area before setting up a site. This allows for you to provide proper filtering for your receivers keeping out unwanted signals.

Bird has equipment designed for collecting RF spectrum data typically for 24 hours and providing that data in a condensed format. Our Spectrum Analysis and Monitoring (SAM) will identify carriers exceeding levels commonly associated with interference or reduced sensitivity as well as any high level activity that may appear on channel at the receiver. This test focuses on signals above -80 dBm and is often run in conjunction with Noise Analysis and Monitoring (NAM).

► OTHER SERVICES

Bird Site Optimization Services also offers several other services, depending on your needs. We deliver mobile signal analysis to help identify problem areas for mobile and portable units. Our field personnel work in conjunction with other technicians during re-banding, giving you a fully optimized system without having to ship equipment back to the factory. We perform Intermodulation Studies and give detailed combiner designs.

Bird utilizes self-contained trailer systems that can perform our various services before the infrastructure is installed. This helps avoid unnecessary expenses should significant changes be required, such as complex filtering or changes to your frequency plan.

