

Chemical and Biological (CB) Detector Placement Optimization



Rapidly assess and predict the best placement and number of detectors to maximize the effectiveness of CB assets.

The ENSCO integrated decision support tool protects warfighters by positioning the right detector, in the right place, at the right time

Protecting the warfighter from CB threats requires early and accurate detection of hazards to minimize casualties and reduce risk. Probability of detection can be significantly increased through optimal placement, performance and density of detectors. ENSCO, Inc. now offers an automated detector placement decision support tool that enables CB defense specialists and other designated personnel to optimize the location and number of detectors needed to fully increase the probability of detection of threats. Implementation of the tool increases the overall effectiveness of the CB detection system, improves reliability and maintainability, and reduces consumables and life-cycle cost.

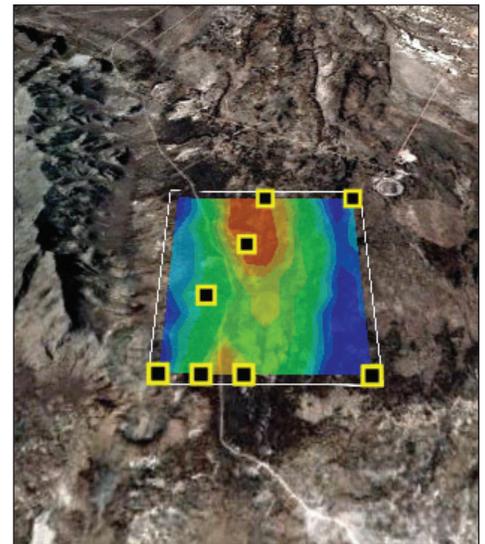
Early detection, accurate prediction

The ENSCO systems analytical tool integrates multiple sensor data into a proprietary detector network algorithm, providing more effective and reliable detection of CB threats. The software tool incorporates critical factors such as detector performance, meteorological sensor data, weather forecast data, GPS, and terrain information to predict the best placement of CB detectors. The model accurately calculates the required number of detectors, typically reducing the number needed thereby minimizing operational costs.

Precise placement

To accurately and effectively detect a CB threat, detectors must be properly positioned in the battlespace. ENSCO's integrated system tool analyzes factors such as current and forecasted weather conditions (wind speed and direction), and terrain information to automatically determine the optimal detector density and placement.

This modeling and simulation system accurately predicts the most effective deployment of detectors to maximize early warning and detection. This reduces the likelihood of casualties and adverse impact on equipment and operations. By incorporating pattern recognition techniques associated with detector alarms and wind pattern, false-alarm rates can be lowered, further reducing the labor burden and costs associated with consumable replacement.



Detector Placement



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Situational Awareness

Built into the ENSCO detector placement tool are models that predict the CB threat vulnerability for an occupied area. Accurate knowledge of the threat vulnerability provides critical information to commanders for locating personnel and equipment. Additionally, the tool calculates the source of the CB release, which can be used to identify contaminated areas and provide forensic information.

The ENSCO advantage

As with all ENSCO products and solutions, our automated detector placement software tool represents true ENSCO value – the benefit of four decades of advanced engineering, research and development combined with real-world industry experience. We stand ready to solve your most difficult CB detection and hazard prediction challenges.

Systems Specifications

- Detector optimization software is compatible with most chemical and biological detectors
- Software incorporates real-time meteorological sensors and standard weather forecast information
- Rapid operation with most simulations completed in less than 10 minutes
- Software compatible with standard computers operating with Windows OS
- Minimal training required with easy to use operator interface
- Set up time less than 15 minutes



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