



# Multi-Sensor Data TAK Experimentation Platform

**Cameras, radios, and sensors are products that, when combined, can help track and monitor areas when and where a person cannot. But what happens when the technology's data is incompatible when combined? MITRE's solution: Multi-Sensor Data TAK Experimentation (MSDTE) Platform.**

## **Multi-Sensor Data TAK Experimentation Platform**

MSDTE was developed to support concept exploration, technology evaluation, and requirements definition activities for multi-modal sensor data fusion applications. MSDTE combines communications and artificial intelligence (AI) for faster response times, moving away from heavy reliance on centralized C2.

For example, if someone walks near a monitored area surveilled by radar, underground sensors (UGS), and camera sensors, the radar or the UGS will sense the presence of a potential item of interest and cause the camera to skew to that position. The camera takes a photo and AI classifies the object in the image with a percentage of certainty. This information is translated into a common format that can be ingested by the Team Awareness Kit (TAK) application and displayed on a handheld device such as an Android cell phone.

## **So What?**

MSDTE improves decision making for agents or officers by keeping the information local and displayable on a handheld device, simplifying the typical system made up of separate sensor feeds from different vendor technologies displayed on multiple video monitors in a centralized C2 center. MSDTE can be used as a sandbox to “try before you buy” for insight and experience in designing and implementing an integrated enterprise of sensor, communications, and AI technology solutions.

## **What's Next?**

MITRE is working to enrich communication capabilities to include land mobile radio and 5G to the existing cellular, mesh radio, and SATCOM components to simulate complex communication issues (e.g., signal fading, terrain, environment effects, automatic failover, etc.) and quantify performance and system availability in complex operating conditions.

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**MITRE's MSDTE is a  
force multiplier for agents  
and officers, simplifying  
information for reaction  
and response.**

*MITRE's mission-driven teams are dedicated to solving problems for a safer world. Through our public-private partnerships and federally funded research and development centers, we work across government and in partnership with industry to tackle challenges to the safety, stability, and well-being of our nation.*