WILDLAND FIRE INCIDENT RESPONSE RISKS

In wildfire incident response, all disciplines and jurisdictions need to be able to share information rapidly to create a common operating picture. Until now, fire services have lacked precise, blue force personnel and resource tracking capabilities that can span all responding agencies and levels of government. Filling this gap will expedite operations and lower risks to first responders.

SYSTEM APP FOR SITUATIONAL AWARENESS

Analysis by the Department of Homeland Security Science and Technology Directorate (S&T), in collaboration with project stakeholders, has identified a communication system that can help first responders identify, track, and coordinate resources during a rapidly developing wildfire incident. The Android Team Awareness Kit (ATAK) is a government-off-the-shelf application for Android smartphones. ATAK was originally developed in 2010 by the U.S. Air Force Research Laboratory for U.S. Special Forces and is widely deployed across the Department of Defense.

ATAK is a cloud-native server application that facilitates exchange of situational awareness data. Intermittent radio transmissions from unknown responders at unknown locations are replaced with visual elements shown on a mobile screen. The app uses GPS and maps to give the user a real-time view of the incident. This new situational awareness capability includes weather conditions and first responder tracking to see where units are located, as well as terrain and other topographical elements.

As an information broker, ATAK provides bridging adapters to inject and export situational awareness data securely and in real time. ATAK enables collaboration across multiple components using different equipment, radio frequencies or encryption—supporting multiple types of encrypted data for text, files, photos, and video. The system also stores the situational awareness information that flows through it for auditing and after-action analysis.

The ATAK app can be downloaded onto any Android phone or tablet. That device can be handheld, strapped to a forearm or thigh (if seated), or even mounted to the chest of a tactical vest so it flips down for hands-free viewing.

TECH OUTREACH TO USERS

The U.S. Fire Administration is working with S&T on options to assist state, local, tribal, and territorial organizations to acquire, operationally integrate, train, and maintain high-impact technologies. ATAK is a priority technology for transfer.

PROJECT PARTNERS

- U.S. Fire Administration
- ATAK/Team Connect