AIRBORNE MALFUNCTION AUTOMATIC DETECTION & NOTIFICATION

NDCEE
National Defense Center for Energy and Environment

PROJECT OVERVIEW

The Airborne Malfunction Automatic Detection and Notification project will develop automatic malfunction detection logic by sensing parachute system performance in real time. Status updates and alerts will be sent to Drop Zone (DZ) Safety Officers (DZSO), medical personnel and Commanders to provide immediate medical care. This effort will include the development of an Android Tactical Assault Kit (ATAK) plugin that monitors the location and inertial measurements of Airborne personnel during their descent and automatically identifies a malfunction based on parachute performance observed.

BENEFITS

The Airborne Malfunction Automatic Detection and Notification effort increases DZSO Situational Awareness with automatic detection and notification in near real-time. This increases safety by reducing response time in the event of malfunction/injury, and can direct medical personnel directly to the location. This also reduces the assembly time required on the DZ, which increases the survivability of Airborne Soldiers by reducing their exposure to enemy forces.

PATH FORWARD

Project will develop software to create Airborne Malfunction Automatic Detection and Notification capability as an ATAK plugin using commercial/government off the shelf radios. Project has received FY24 funding and is awaiting contract award to being development activities. Project will conclude in FY25.
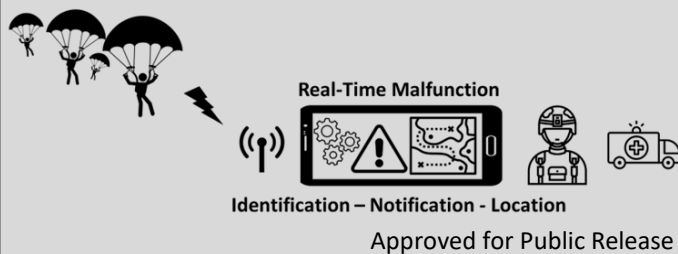
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High Altitude Stand-off Airborne Insertion (Top)
Mass Tactical Airborne Insertion (Bottom)

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Real-Time Malfunction

Identification – Notification - Location

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Android Tactical Assault Kit (ATAK) Plugin

FOR FURTHER INFORMATION

National Defense Center for Energy and Environment
http://www.denix.osd.mil/ndcee/
U.S. Army Combat Capabilities Development Command (DEVCOM) Soldier Center, Soldier Sustainment Directorate
https://sc.devcom.army.mil/