

Did you also see the recent advances in acoustic listening devices to hear and evaluate sounds to identify lost people shouts, cries and banging through artificial intelligence?

The primary goal of the challenge 3.1 is to detect and communicate the location of missing hikers. The lost hikers may be incapacitated and/or have degraded ability to communicate, so any proposed sensor solution would need to be capable of finding a stationary and relatively quiet person.

For FastFind challenge 3.1, do we get a dataset or a peek at the environment where UAS will be deployed to help find missing persons?

The total search area will not exceed 1200' x 2400'. Maximum height of trees in this forest is approximately 30', and the composition of the forest is predominately pine. Each contestant should design a solution that can deploy the system, perform the search and return the UAS to the launch area within an hour or less.

For 3.1 can we build a swarm of UAVs or only one UAV is allowed?

All operations at the MSU site must be conducted in accordance with 14 CFR Part 107; 107.35 states : "*A person may not manipulate flight controls or act as a remote pilot in command or visual observer in the operation of more than one unmanned aircraft at the same time.*" Therefore, a single operator controlling more than one UAS is explicitly prohibited for this event. Given these FAA Part 107 parameters, the UAS solution can assess design trade-offs in accordance with contest requirements, as outlined in the UAS Design Specification table beginning on page 5 of the Official Challenge Rules. UAS requirements of particular note: The Total System Weight must be under the 120 lbs. weight limit, the Maximum Gross Takeoff Weight must be less than 55 lbs. per UAS in the system (FAA Part 107 compliance), and the total system cost must be under \$20,000.