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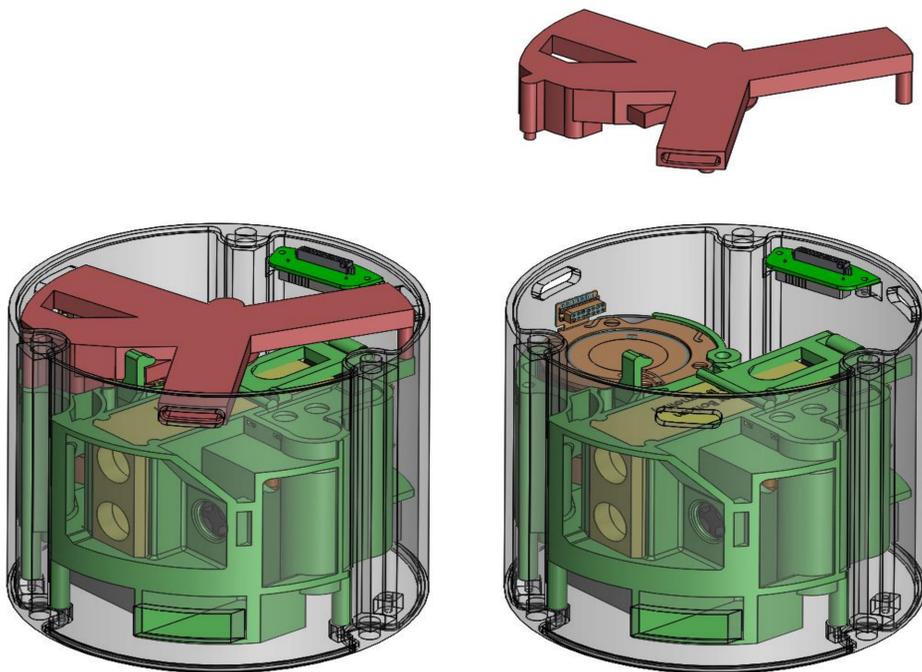
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Background

Remote sensor arrays can provide point detection capabilities, but current systems do not have the ability to easily be configured. An “all-in-one” modular sensor system would be able to remotely measure seismic, acoustic, chemical, biological, radiological, nuclear (CBRN) data at the post-strike site, thus keeping the warfighter out of harm’s way.

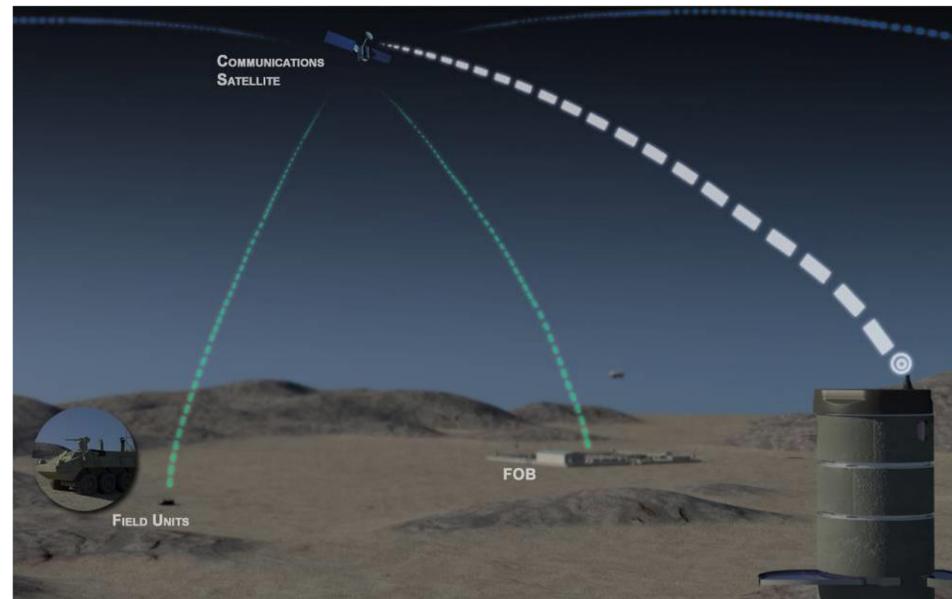
Approach

A modular sensor system was developed using stackable and tailorable components based on a common electrical and mechanical interfaces. The size was based upon the BLU-108 munition payload dimensions to provide a stable footprint when stacked yet small enough to be mounted on (or deployed by) Unmanned Ground Vehicles, Unmanned Aircraft Systems, and personnel. The completed unit consists of a number of modules, including power, control, communications, and the tailorable sensors.



Relevance

The new capability addresses requirements for both standoff detection and standoff collection, while keeping the warfighter at a safe distance from the threat.



Potential for Transition

The interface mechanism developed by ECBC to support the novel sensor array capability could be adopted as a standardized interface to support limitless applications requiring remote sensors, collection devices, including suspended and releasable payloads. Possible transition partners include the Warfighter, DHS, FDA, NOAA, EPA, DoE, and various other national and local entities.

Results

Systems integration testing is scheduled to be conducted in September and October. The system will perform flight tests at University Multispectral Labs through a metered methyl salicylate cloud (a commonly used simulant for sulfur mustard) to determine effectiveness of detection and collection in realistic field conditions.

Future Directions

Additional sensing capabilities include: Chemical, Biological, Radiological, Camera Arrays (Still/Video), Motion Detection and Warning, Acoustic, Seismic, Meteorological, Collection, Water Sampling, VOC Kit, Sono Bouy, Smoke Generator, Explosive Detection, Magnetometer.

Could be deployed from: BQM-109 Tomahawk, SM-2 Land Attack STANDARD Missile, MGM-140 Army Tactical Missile System (ATACMS), AGM-84H Standoff Land Attack Missile - Expanded Response (SLAMER), AGM-158 Joint Air-to-Surface Standoff Missile (JASSM).

