



JIFX
Joint Interagency Field Experimentation

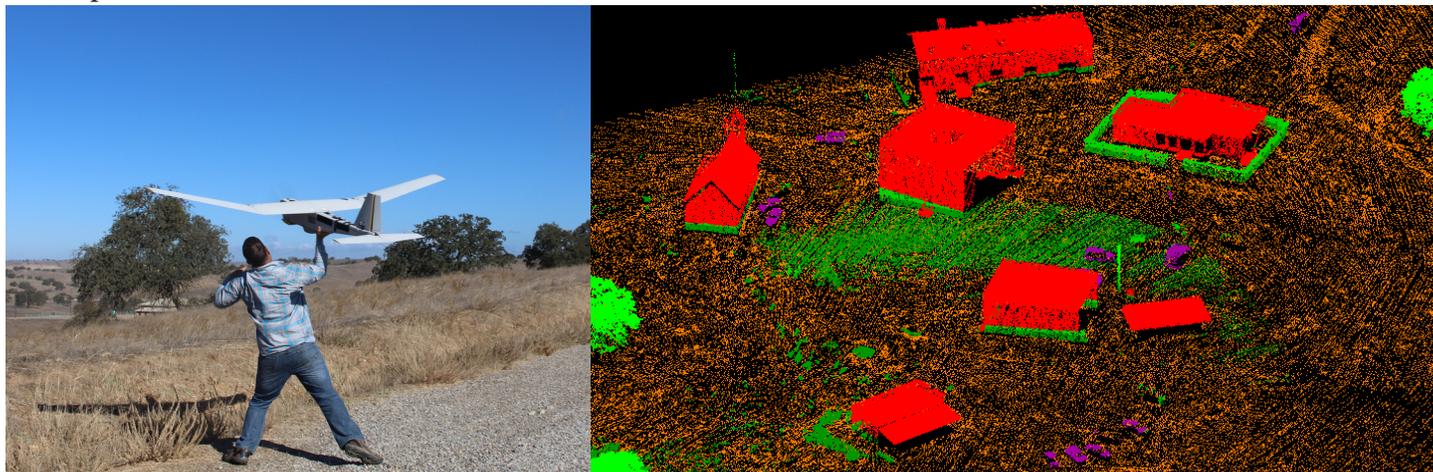


JIFX 16-1 Quicklook

From the Director:

Completing the 4th year of operations, the 13th Joint Interagency Field Experimentation event occurred 2-6 November 2015 at the Naval Postgraduate School's Field Laboratory located within Camp Roberts, CA. Continuing the mission to provide quarterly collaborative field experimentation benefiting the Department of Defense and its interagency partners, JIFX 16-1 hosted 27 experiments with representation from an array of federal, private and academic organizations. In addition to the usual participation from private industry and government, JIFX 16-1 benefited from a large presence of government representatives from partner nations. Military officers included 10 British officers and officers from Saudi Arabia, Pakistan, Turkey and Indonesia. Additionally they were joined by a Norwegian officer and large contingent of Swedish officers visiting from the Swedish Defense University.

With the stated focus on Unmanned Systems and Robotics, the event had 118 sorties from 12 different Unmanned Aerial Systems (UAS) with varied applications including GPS jammer location, cellular network strength surveying, long endurance surveillance, personal reconnaissance, and target engagement. The emerging capability of 3D printing was put to test replicating replacement parts for UAS and electronic circuitry. Additional experiments varied in focus from improved sights and aim correction for combat battle rifles to exploring big data analytics for the Department of Defense.



AeroVironment flew a new, advanced LiDAR payload in its Puma UAV generating detailed images of the CACTF site.

<http://my.nps.edu/web/fx>

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By the Numbers

The JIFX 16-1 (2-6 Nov 2015) event was held at the Naval Postgraduate School's Field Laboratory at McMillan Airfield, Camp Roberts, California. The event was attended by 251 registered participants from 88 unique organizations.

Experiment Evaluations

The end users were represented by military personnel from US Army Special Operations Command (USASOC), 1st Reconnaissance and 1st Intelligence Battalions, First Marine Expeditionary Force (I MEF), and the Naval Postgraduate School. These evaluators, along with evaluations from the COCOM stakeholders, produced 92 individual evaluations currently with additional ones being finalized:

- 16 Naval Postgraduate School Evaluations
- 20 Stakeholder Evaluations
- 56 Uniformed End-user Evaluations

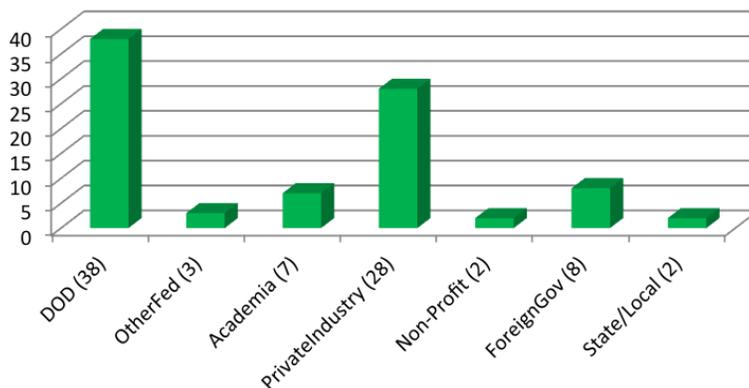
Next Event

9-12 Feb at Alameda, CA

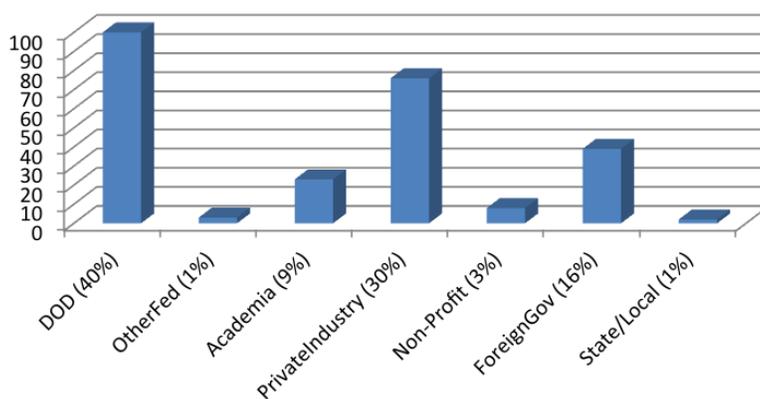


Proxdynamics experimented with its ultra-small Black Hornet UAV

Unique Organizations Present



Total Registrations by Individual



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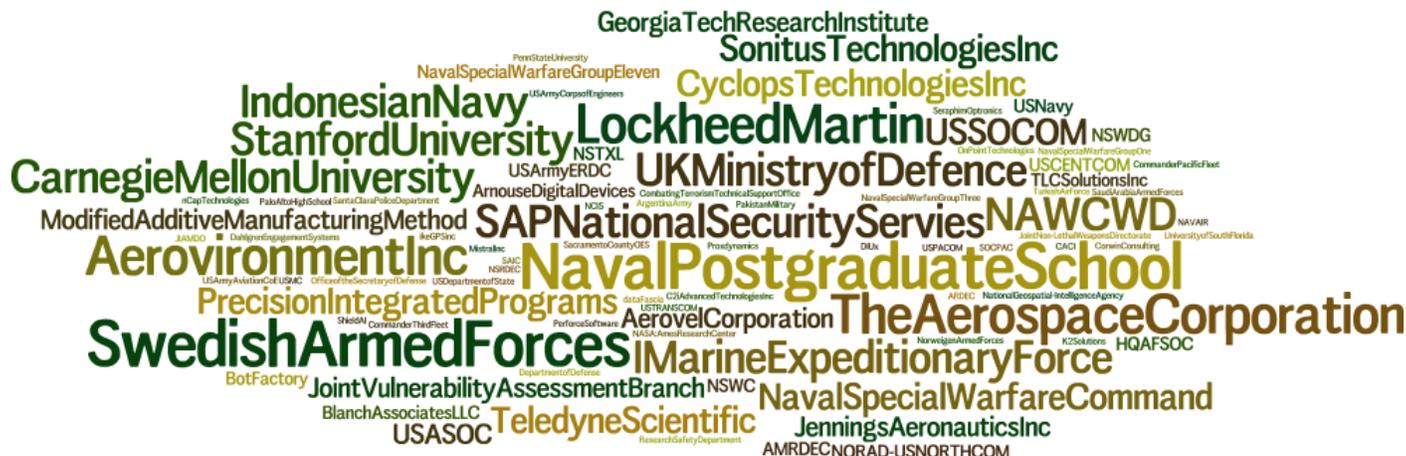


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Participation by Organization:



Integrated Scenario:

As with all JIFX events, the Naval Postgraduate School staff brought together many of the experiments in a common integrating Scenario on Thursday afternoon. Serving as a contextual framework, the scenario was not designed to address a specific mission need but rather to provide an informal way for different technologies to explore their ability to contribute to enhanced performance in a distributed collaborative environment. Operators from the Army Special Operations Command, Naval Special Warfare, and I Marine Expeditionary Force worked as role players using the technologies at hand to identify, locate, and intercept a package of interest. Lasting almost two hours, the integrated scenario allowed experimenters and military operators hands-on interaction and produced a variety of suggestions for improvement and suggestions for further exploration.



The TOC & Collaboration Station in the SIP Hut during the Integrated Scenario

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Experiment Updates:

First Time Participant – BotFactory

Following a JIFX presentation at a technology transfer event in New York City the BotFactory applied to participate in the 16-1 event. After a week in the field at Camp Roberts, they learned a great deal about how the military is looking at new innovations, some of the challenges the government faces, and how they might address some of them. The BotFactory and its desktop electronic circuit factory received a great deal of attention as participants tried to imagine potential applications of this unique capability. This was an excellent example of how companies can shape our understanding of future solution sets even when the capability they have created might not appear to have national security implications.



Rapid Remote Measurement Acquisition of Building Structures

While at JIFX 16-1, ikeGPS tested Spike for its ability to rapidly measuring buildings and capture dimensions within a defense/intelligence environment. Spike was observed by a wide variety of participants, with end users able to use Spike to capture their own measurements with 5 minutes of training.

The goal of the experiment was to determine if users could grasp the concept of Spike and take useful measurements quickly, and determine if Spike was useful in the conduct of special operations type missions.

Two scenarios were tested using a smartphone and Spike device:

1. Discreetly capture a photograph of a building and then rapidly determine the dimensions of the structure or important features of the building.
2. Discreetly capture photographs or multiple point-to-point measurements to rapidly determine the size or dimension of a structure.

During the training there was a lot interest in measuring the height and area of windows, heights to windows, as well as measuring the distance between many targets in view, all to increase situational awareness.

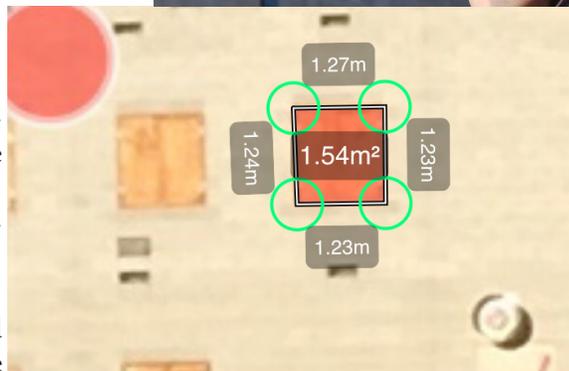


Image taken with Spike of an accurately measured window of a CACTF building at a 100m range.

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