



JIFX
Joint Interagency Field Experimentation



JIFX 15-4 Quicklook

From the Director:

The Naval Postgraduate School's Information Sciences Department hosted JIFX 5-4 Camp Roberts, CA from 10-14 August 2015. The Joint Agency Field Experimentation program creates a collaborative field experimentation venue once each quarter that brings together industry engineers, academic researchers and government technologists to explore the application of emerging technology. JIFX 15-4 continued the recent trend toward smaller, more integrated events. Participants conducted 17 individual experiments and also collaborated to develop procedures and protocols to let related technologies communicate with each other and with command, control and logistics systems. On Thursday most of the participants collaborated on a complex experiment based on an integrating scenario exploring how the technologies could be used to improve tactical performance and Command Center situational awareness in an operational setting. A particular emphasis for this event was the exchange of information via the Cursor on Target (CoT) protocols. Small, low-power devices were used to enable geolocation and messaging for personnel, ground equipment and UAVs. Low-to-ground RF equipment was used to develop detailed RF propagation maps to facilitate network planning for low profile ground units. Other experiments explored RF identification patches, autonomous delivery of equipment by parachute, multiple communications, unmanned systems and analytic technologies.

JIFX will continue to explore the increasing reliance on the network for existing JC4I as well as the requirements for future networks that will coordinate the actions, and incorporate the reasoning, of large numbers of non-human cognitive entities.



NPS student rocket (photo by Kevin Jones)



Stanford team launching S1000 (photo by Kevin Jones)

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

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By the Numbers

The JIFX 15-4 (10-14 Aug 2015) event was held at the Naval Postgraduate School's Field Laboratory at McMillan Airfield, Camp Roberts, California. The event was attended by 179 registered participants from 60 unique organizations.

- 82 Individuals from 26 Organizations within the Department of Defense
- 2 Individuals from 2 other Federal Organizations
- 1 Individuals from 1 State/Local Organization
- 21 Individuals from 5 Academic Organizations
- 73 Individuals from 28 Private Companies

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), NASA, and the Naval Postgraduate School. These evaluators, along with evaluations from the COCOM stakeholders, produced 92 individual evaluations currently with additional ones being finalized:

- 19 Stakeholder Evaluations
- 48 Uniformed End-user Evaluations
- 25 Naval Postgraduate School Evaluations

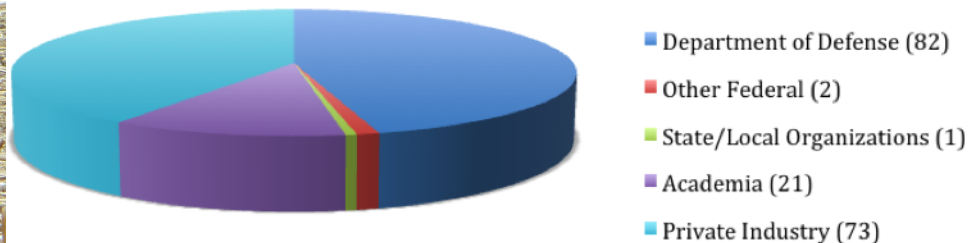
In addition to the COCOMs representatives from the National Guard Bureau J8, Joint Staff J7, and Special Operations Command – CENTCOM. University attendees from Stanford, Florida Atlantic University, University of Missouri – Kansas City and Georgia Tech conducted experiments.

Next Event

2-6 Nov 2015 at Camp Roberts, CA



JIFX 15-4 Registration by Individual



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

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Participation by Organization

Sacramento OES
 NASA National Guard Bureau
 Bacoloni Enterprises SPAWARSSCPacific Mashable
 Leidos Microwave Monolithics Inc Lockheed Martin
 Vision Technologies Inc Jennings Aeronautics Inc Stryke Industries
 Sonitus Technology Defense Intelligence Agency TerraGo Technologies USASOC
 Second Front Systems JVAB I Marine Expeditionary Force Strategic Mobility 21 Inc
 Brooklyn Small Business Development Joint Non-Lethal Weapons Directorate
 Navy Special Warfare Dell Inc Naval Air Warfare Center Weapons Division USCENTCOM
 National Geospatial Intelligence Agency Georgia Tech Research Institute USA Army Aviation Center of Excellence
 In-Q-Tel Joint Staff Robotics and Autonomous Systems Toyon Research Corporation Advanced Union
 Aerospace Corporation University of Missouri-Kansas City Naval Sea Systems Command
 Florida Atlantic University Air Force Research Laboratory Physical Optics Corporation
 USSTRATCOM Integrated Wave Technologies Applied Research Associates SCEO
 Voxer NORAD-USNORTHCOM Naval Postgraduate School
 SOCCENT National Science Foundation USTRANSCOM
 Stanford University Harris Corporation Contractor
 Orions Systems USSOCOM
 NAVAIR Areturus UAV Promia



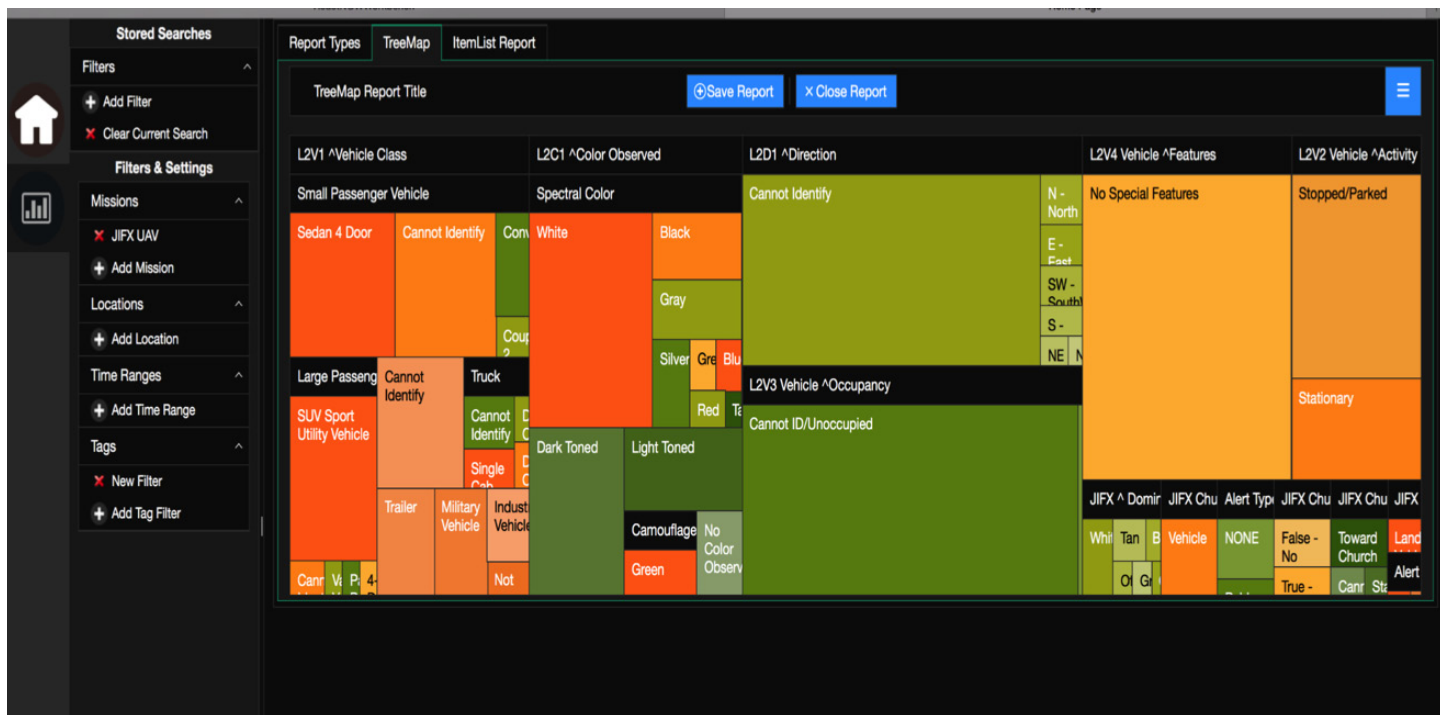
Prototyping a future experiment by having participants navigate a maze with a robot using only the robot's camera. On the left is a participant controlling the robot. On the right is the actual maze, which is hidden from the operator. (photos by Kevin Jones)

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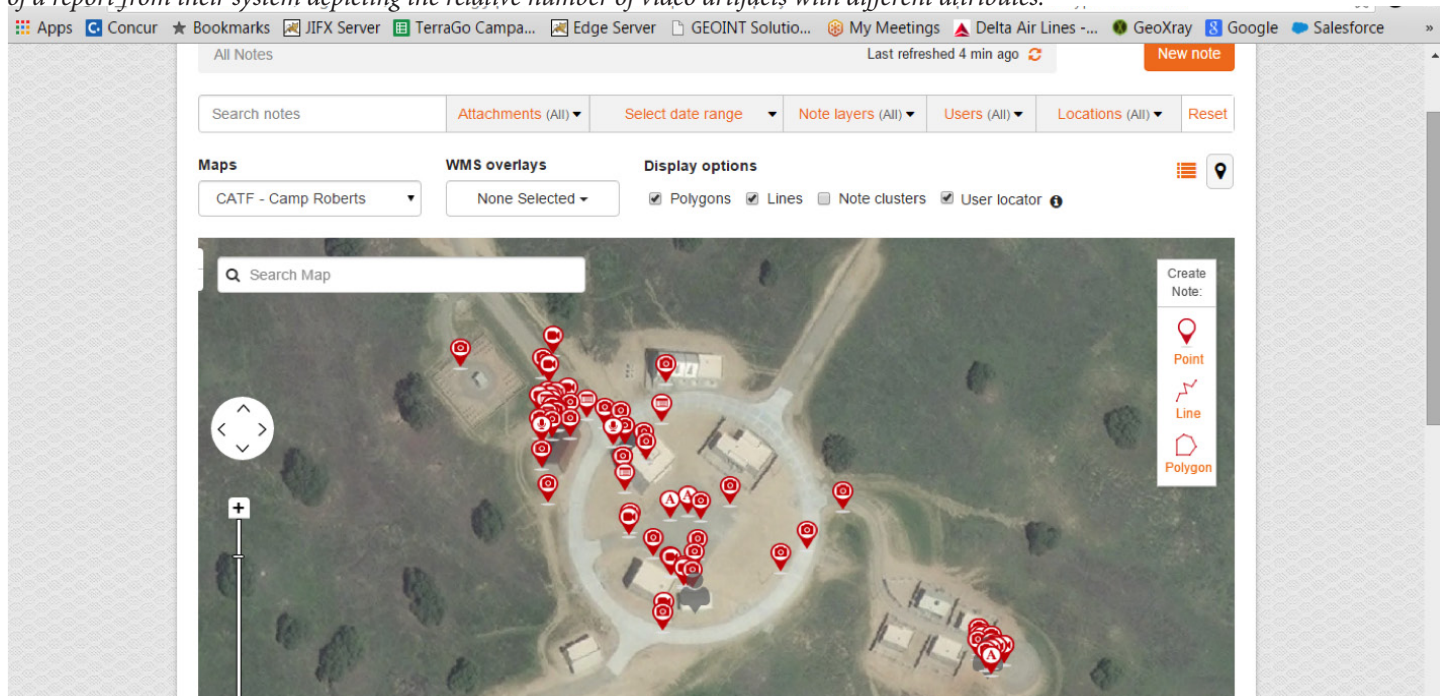
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During the Integrated Experiment, Orion system used their technology to facilitate crowd-sourced analysis of video streams. This picture is of a report from their system depicting the relative number of video artifacts with different attributes.



During the Integrated Experiment, TerraGo used their system to allow observers to geotag activities, equipment and personnel and merge that data with maps and satellite imagery.

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