

USF Deploys Unmanned Aerial Vehicles To Katrina Rescue Operation

Tampa, FL (Sept. 7, 2005) -- Using two types of small unmanned aerial vehicles (UAVs) - one fixed wing and one helicopter - scientists from the Center for Robot-Assisted Search and Rescue (CRASAR) at the [University of South Florida](#) worked with other Florida rescuers in hard-hit Mississippi immediately in the aftermath of Hurricane Katrina. The first known use of small UAVs for an actual disaster, the UAVs demonstrated their usefulness as well as providing a wealth of scientific and engineering data.

The small fixed wing vehicle, looking much like a four-foot-long model airplane, provided video and thermal imagery from 100 to 1,000 feet, giving rescuers an overview of the disaster area. The vehicle is launched by manually throwing it into the air. It requires only a small clearing, about the length of five cars, to take off or land.

Carrying a camera, the miniature, electric powered T-Rex helicopter from Like90 (<http://www.like90.com>) gave a hummingbird's eye view while hovering up to 250 feet high. It was also able to zoom its camera in to explore roof tops and look in windows.

"The platforms, which require less than 10 minutes to set up and fly, were designed to be easily carried by responders as they hike into the debris," said Robin Murphy, CRASAR director. "The UAVs were provided in partnership with a National Science Foundation industry/university consortium that focuses on new safety, security and rescue technology."

CRASAR has been focusing on developing and testing small UAVs since being called up by Florida Task Force 3 during Hurricane Charley in 2004.

"We learned that seeing whether people were trapped on their roofs just beyond sight along a flooded road was critical," said Murphy. "It takes too long for manned helicopters to get there - if the radios are working."

At the request of the Louisiana State University Fire Emergency Training Institute (FETI), CRASAR was deployed Aug. 30 from Tampa to assist with rescue efforts just east of the French Quarter in New Orleans. However, because of destroyed or flooded freeways, and lack of secure surface roads, the team had to turn around just short of the city limits, said Murphy.

In response to reports of survivors stranded by flood waters, the team was then deployed by Florida responders working out of Stennis Space Center to survey nearby Pearlinton, Miss. With progress into Pearlinton blocked by complete houses that had been pushed by the storm surge into the middle of the main street, the team launched from an open patch of road surrounded by downed trees and power lines. Within two hours, the responders had the data from the UAVs showing that no survivors were trapped and that the flood waters from the cresting Pearl River were not posing an additional threat.

"Katrina was so much worse than Charley," added Murphy. "Even though Charley cut a wide swath through Florida, only a few houses in a neighborhood were totally destroyed and a few lucky ones looked largely untouched. In contrast, with Katrina most of the houses were completely gone and only a very few remaining even looked like houses."

Murphy and Chandler Griffin of Like90, and other team members, flew over Bay St. Louis Sept. 1 collecting data near the destroyed US 90 bridge while returning to Tampa.

CRASAR was responsible for the introduction of small ground mobile robots into emergency response at the World Trade Center in 2001. USF has pioneered sensor, robot, public health and information technology development and insertion for emergency response and preparedness.

Editor's Note: The original news release can be found [here](#).

Related News Stories



Small, Unmanned Aircraft Search For Survivors In Katrina Wreckage (September 15, 2005) -- Providing the benefits of speed, portability and access, a pair of unmanned aerial vehicles (UAVs) surveyed storm-damaged communities in Miss. as part of the search for trapped survivors of Hurricane ... > [full story](#)

Robo-Gung-Ho: Office Of Naval Research Cosponsors Development Of Variable Autonomy For Unmanned Air Vehicles (February 6, 2003) -- "Gung ho" means "work together," and that's what Texas-based Geneva Aerospace, Inc. has got its flying robots doing. Using technology developed with the support of the Office of ... > [full story](#)

New-generation Autonomous Helicopter To Create New Era Of Human Safety (December 22, 2003) -- Australian scientists have developed a 'brain', which enables the production of a world-first low-cost, intelligent small helicopter, set to end many difficult and dangerous tasks undertaken ... > [full story](#)



Mini Helicopter Thinks For Itself -- On The Fly -- To React To Dangerous Situations (February 17, 2005) -- Unmanned aerial vehicles (UAVs) are one step closer to someday matching -- and possibly surpassing -- their human-piloted counterparts, thanks to the completion of a project successfully tested by ... > [full story](#)

> [more related stories](#)

Related sections: [Matter & Energy](#)
[Earth & Climate](#)

