



Businesses Build, Provide Parts for Unmanned Craft

Date: May 18, 2008

Published: The Arizona Republic

Arizona-based companies are engaged in building unmanned aerial vehicles, or UAVs, of their own, as well as components used in planes produced by other makers.

In Phoenix, Honeywell Aerospace has developed an 18-pound aircraft called the Micro Air Vehicle that resembles a bucket and maneuvers like a helicopter. Honeywell also makes the engines for the Predator B aircraft, now being used in Iraq and Afghanistan and on the Arizona-Mexico border.

Honeywell's Micro Air Vehicle can be carried in a backpack and launched and controlled in the field. It allows users to peer into buildings and other places out of the line of sight. The so-called MAV has infrared sensors and can locate buried improvised-explosive devices, or IEDs, as well as other explosives.

Honeywell's MAV passed field tests in Iraq last year, and the company expects an order shortly from the U.S. military for several hundred units. While the product was developed for the military, police departments in Houston and Miami are eyeing the product. While Honeywell declined to name the price of the units, the Miami Police Department estimates it at \$250,000.

The Department of Homeland Security Customs and Border Protection division has four 36-foot Predators deployed on the Arizona border.

"They've been very successful in detecting aliens," said Juan Munoz-Torres, a spokesman for Customs and Border Protection's air and marine unit.

The agency plans to deploy one this summer on the northern border in North Dakota and eventually plans to use them along the entire southern and northern borders along the Gulf of Mexico and the Caribbean.

The \$10.5 million Predators, built by General Atomics Aerospace of San Diego, can patrol the border at speeds up to 240 knots (276 mph) and send back streaming video from up to 50,000 feet.

A modified version of the aircraft, called the Reaper, is equipped with two Hellfire missiles and is deployed by the U.S. Air Force in Iraq and Afghanistan.

The Predators in Iraq are controlled from Nellis Air Force Base in Nevada, while those on the Arizona border are flown from Fort Huachuca.

A more lethal version of the Predator, called the Sky Warrior, carries four missiles and is being developed for the U.S. Army.

The aircraft's targeting system is built by Raytheon Co. in Tucson, which also makes sensors for Northrop Grumman Corp.'s \$35 million high-altitude, long-range reconnaissance UAV called the Global Hawk.

Raytheon also has developed its own experimental UAV, called the Cobra, and is working on a new plane, the KillerBee, that it hopes to sell to the U.S. Navy and Marine Corps.

The missile maker operates one of a handful of U.S. test facilities for unmanned aircraft near Sierra Vista, where it is working on the KillerBee and conducting further experiments with its 9-foot Cobra.

In Tucson, Advanced Ceramics Research has been building UAVs for six years and has three models: the Silver Fox, Mantra and Coyote.

The 5-foot Silver Fox is undergoing combat trials in Iraq while the 6-foot Mantra is being pressed into service by the Scripps Research Institute in La Jolla, Calif., to collect data on California's air quality.

The planes have been deployed in Greenland collecting data on climate change.

Another aircraft, the 31-inch Coyote has an electric motor and wings that fold back so it can be launched from a tube on an airplane or helicopter.

Woddy Berzins, a spokesman for Advanced Ceramics, said the company has produced about 400 planes that it has sold in the U.S. and abroad. "We're looking at both military and commercial applications for our aircraft," Berzins said.

In Mesa, Boeing is working on its Unmanned Little Bird. The company has modified MD530F commercial helicopter to fly without a pilot. The military is eyeing the unmanned aerial vehicle to re-supply combat troops and as a weapons platform.

Boeing has been flying the Little Bird from the cockpit of a Mesa-made Apache Longbow attack helicopter. The next-generation Apaches will come with UAV guidance systems as standard equipment.

The technology will allow the pilot to send out a UAV to gather intelligence and provide air support for troops on the ground and in the air.