

SPY SAUCERS:

Remote-controlled vehicles keep a watchful eye

By Peggy Noonan

Government entities may soon be flying their own saucers over American cities, but in this case the UFOs are actually UAVs: Unmanned Aerial Vehicles.

If you see a flying saucer, it may not be an alien UFO. It could be one of ours. One of our UAVs, that is: Unmanned Aerial Vehicles.

In 1988 the Defense Department was directed by Congress to centralize the development of UAVs. It created the Joint Project Office (JPO) to oversee the program. Creativity flowed freely as inventors came up with a variety of shapes, from a slightly modified but ordinary-looking airplane configuration like the Pioneer—which proved useful for reconnaissance in the Persian Gulf War—to flying saucers, bumblebees, doughnuts, peanuts, and cigars, according to Department of Defense UAV-JPO spokesman Ray Coleman.

Sikorsky's doughnut-shaped Cypher UAV, for instance, is a 1.6-foot-thick ring with shielded spinning rotors in the middle. Cypher's ducted fan design offers stability and control, and it makes the UAV safer to operate—no exposed propeller blades to catch the inattentive or to tangle in rigging.

The Cypher and everything it needs, from replacement fuel to spare payloads and parts, can be carried into land battle by a Humvee pulling a trailer. A two-man crew can set up, launch, and recover the 6.5-foot-diameter saucer in any clearing twice Cypher's size—or aboard ship, using 52 square feet of deck. Using Cypher is much faster than waiting for satellite pictures, according to Coleman. When a battlefield commander needs to see what's over the next hill, the

UAV can get instant data.

UAVs can go into areas too hazardous for humans. Aerobotics, a subsidiary of California's Moller International, has two UAVs in advanced development. The ES20-10 Aerobot is already proving its value in tests by the California Department of Transportation which plans to use the 30-by-20-inch flying duct to inspect highway bridges, overpasses, and elevated freeways.



This tethered Aerobot can hover a few feet from a suspect bridge section and transmit real-time video or infrared images to ground handlers. The UAV is powered by a generator linked via a 200-foot umbilical, and it operates with a patented self-stabilizing system. The handler directs and positions the Aerobot using a joystick mounted at the waist of a vestlike control unit while an inspector monitors the screen-displayed images. Like the Cypher, the Aerobot's rotating blades are contained safely within the protective confines of its duct-shaped body.

UAV's have many nonmilitary applications which will "far outstrip military value," JPO spokesman Coleman says. The Atlanta native suggests that UAVs would be a great help during the 1996 Olympics when officials have to transport athletes from their residential quarters through rush-hour traffic to events. Boring, tedious, or dangerous work such as inspecting pipelines or remote power lines could be managed by a UAV. Sports events could be televised from a hovering UAV instead of a blimp. A single forest ranger could cover

thousands of acres watching for fires or poachers via UAV sky eyes. Traffic monitoring could be simplified, and police UAVs could be used to film accident sites.

One small UAV has already demonstrated how effective sky spies can be. Although AeroVironment Incorporated's Pointer mini-drone experienced problems in Operation Desert Storm (it can't fly in winds that exceed its 20 to 40 miles per hour speed), it has proved its worth on civilian operations. The tiny Pointer weighs in at eight pounds and has a nine-foot wingspan. It can be launched with a javelin-type throw, according to Coleman, and carries a videocamera that transmits real-time images.

A Pointer was loaned by the Defense Evaluation Support Activity to Oregon's National Guard and State Police last February prior to their raid on a suspected drug compound. Where agents had expected one fence, a couple of dogs and cars and a few buildings, the Pointer's silent spying revealed two fences, many dogs, and more of everything else. The raid was successful.

However, as JPO spokesman Coleman points out, nonmilitary use of UAVs raises as-yet unresolved questions of invasion of privacy and illegal search and seizure. And there's the matter of "deconfliction" that FAA and military representatives are trying to work out. "Pilots are horrified to think of vehicles flying with nobody in them," Coleman says, suggesting they'll need an electronic warning akin to aircraft collision avoidance systems.

"I'm convinced there is no problem the engineers cannot solve given enough time and money," Coleman states. Except maybe what to do about all those people who'll call to report UFOs when UAV saucers are flying. 