Admirals Chicken Out On Pecking Pigeons As Missile Pilots

Committee Of Beaks Also Considered

NEW YORK, Oct. 10 (HTNS) Now it can be told, a project that the navy has keep under secrecy wraps for six years: Using pigeons to guide missiles.

They would ride in the nose of the missile, piloting it by pecking at an image of the target — pecking their way to doom, as it were.

Their reward: A hemp seed.

It worked out well enough in ground tests. But the admirals never got up enough nerve to trust the birds with a real missile. And by the time the idea was shown to be possible, today's electronic guidance equipment became available.

"For the present," the navy reported sadly, Project Orcon "remains merely a history of some fascinating experiments with some very obliging little animals."

Orcon comes from organic control, which even the navy admits is a delightfully esoteric euphemism for using animals to guide deadly missiles.

'Try Anything' Mood

It all started during World War II. The crude homing devices for bombs and torpedoes were being confused by the enemy. Noisemakers lured homing torpedoes away from the target, and radio signals jammed radio-controlled weapons.

Scientists were in a "try-anything" mood. They gave a contract to Dr. B. F. Skinner, a psychologist at the University of Minnesota, now at Harvard University, to try to train pigeon pilots.

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The pecking accuracy and were homing pigeons. Any light-weight, trainable creature would have done as well.

Project Orcon was dropped after the war, but revived in 1948 under the direction of Dr. F. V. Taylor of the Naval Research Laboratory.

In the tests it was found the pigeons would peck about four times a second. They could track a target very well under ideal conditions. Some birds were better than others, but the psychologists figured that the star pilots would be picked for missions after their training, while the dullards would be passed over.

Pilot Committee Suggested

However, ideal conditions would seldom be present in actual operation. Clouds, waves, shadows and other things would confuse the birds, causing them to lose the target.

This was when Dr. Skinner suggested that a committee of pilots be used. More pecks per second would increase the probability of staying on target, he believed, and the majority opinion would overrule individual errors.

The rather bizarre scheme never came to a test, however, for the project was abandoned.

There was one useful offshoot of the project. It was the electrical conducting glass at which the birds pecked.

The engineers who developed it later applied it to radar presentation problems. According to Naval Research Reviews, which made public the weird pigeon project, this glass radar display has "become a key feature of the navy data handling system."

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The pecking accuracy and reliability of individual pigeons was not perfect, Dr. Skinner acknowledged, "but it would have worked if we used two or three pigeons, not one, to peck at a target, and then took the majority of their views."

Details Of System

Here is how the system worked:

A close-fitting jacket held the pigeon inside the nose of the missile. The pigeon faced a ground glass plate which could carry electricity. The missile was to have a lens in its nose, and any target it saw would be cast onto the glass.

A fine electric wire was cemented to the pigeon's beak. The pigeon had been trained to peck at any distinguishable image on the glass. When the target appeared, like a night moth at a lighted window, he pecked at it.

His pecks caused electricity to flow through his beak and the glass. As long as the missile was on course, the target image was in the center of the glass, and the pecks kept it that way.

But if the missile veered off course, the target image moved away from the center. The pigeon's pecks at the image were so much to the right or left, and so much above or below the center.

Steering Corrected

The distance off center was an indication of how far the missile was off course.

The electric signal from the pecks told the missile how much to correct its steering, to bring it back on course.

In this way the missile homed on its target, courtesy of the homing pigeons. Actually, it didn't matter that they