Wally Trabing's

Mostly about People

Lockheed Airlines

IT IS A FRESH, clear morning and a new mission is being readied on the flight line. The pilot nervously paces back and forth in the ready room. Lockheed's air express is ready for action. All systems are go!

The mission is singular. It seldom varies.

Rush a microfilm from Lockheed's Sunnyvale plant (near Moffett Field), across the Great Highway, gaining altitude over the Peninsula and Saratoga, climbing, climbing into the mountains over Saratoga Gap, then over the lonely Eagle Rock fire lookout, and finally let down into Lockheed's test base on Empire Grade, about 20 miles from Santa Cruz.

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A pigeon has made it again.

The flight plan is a bit different from that of the space shuttle which Lockheed helped put in the air and which has flown thousands of miles per hour.

Yes, a bit. The pigeon shuttle averages 35 miles per hour and covers the 25 mile line of flight in about 40 minutes.

This isn't an employee R&R hobby. No sir.

There was a need. The designers and engineers at the Santa Cruz test base use a computer graphic design and drafting technique whereby new ideas are sketched on a video terminal and forwarded to Sunnyvale by microwave.

To achieve design continuity, the Santa Cruz people needed a quick printout each morning of the work from the previous day. Equipment to send printouts back to Santa Cruz electronically is enormously expensive.

Robert Nelson, a design specialist at the Santa Cruz base, remembered seeing pigeons deliver blood samples to hospitals on a TV program and suggested a plan to Werner Deeg, a research scientist and head of the local chemistry lab. Deeg took charge.

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Each morning, about 8 a.m. when the weather is decent, a pigeon is released from Sunnyvale with a microfilm in a capsule affixed to its leg.

The drawings are extracted from the Sunnyvale computers and converted into microfilm. After it is delivered at the Santa Cruz base, it is printed as an enlarged drawing and given to the designer who can continue with the next computer-aided design step.

The bird is the pilot and plane combined.

Deeg developed the small flock of pigeons and has learned of some new theories on their magnificent ability to find their way back to their roost. Santa Cruz is their home port. They are trucked to Sunnyvale.

Recent studies have it that the birds are directed by an internal clock which requires that they see the sun. It tells them where they are supposed to be.

"In other words when a bird senses that it is 10 o'clock, it knows that the sun should be in a certain spot. It can read the angle of the sun in flight and make navigational corrections."

Deeg said that the pigeon also relies on vision, especially on landmarks during the last few miles of the flight.

He said he recently heard also that magnetite, which has magnetic properties has been found in the brain and neck tissues of the pigeon and other birds that navigate great distances.

The Lockheed messengers have so far never failed.

Deegs says that since December, flight times have varied from a record of 28 minutes with a hefty tail wind, to three hours, where a bird might have sat out a storm.

Still the average time is much faster than the trip by car— about an hour and a half if the traffic is light.

Deeg trained the birds by taking them progressively farther from their lofts and letting them fly back.

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All this is not new, of course,

Julius Reuter, founder of the news agency which bears his name, used pigeons in 1850 to carry financial news from the Brussels stock exchange to Aix-la-Chapelle in Germany.

There is the famed "Cher ami," a historic bird during World War I who flew through enemy fire and, though badly wounded, delivered a message which enabled the rescue of a trapped American battalion of the 77th Division.

The record flight for one bird is said to be held by a pigion which flew from France to Saigon — 7,200 miles in 24 days.

Microfilm is contained in a capsule attached to pigeon's leg.

Werner Deeg releases pigeon carrying a Lockheed message.