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OTS/CB Memo #76-11
15 January 1976

MEMORANDUM FOR: DC/OTS/DED

SUBJECT: ORD Report Card - Status of the LSR/ORD Avian Program

1. On 13 January 1976 at the request of [redacted] DC/OTS/CB, I visited [redacted] C/LSR, Project Engineer of the Avian Program, in order to determine the status of the program. Unfortunately, [redacted] had only recently inherited the Avian Program from [redacted] who is going on full time training, and therefore, [redacted] was not totally familiar with the intricacies of the program. Based on the Avian Demonstration and the above briefing, the following is my interpretation of the status of the program:
2. Many years ago, the DDO was interested in a certain potential scenario. Consequently, the DDO levied upon LSR/ORD the requirement of obtaining a bird that would take pictures of certain objects. Apparently, this particular scenario never came to fruition.
3. A few years later the DDO levied another requirement on the LSR to train a bird to place a sensor on a window ledge. This was carried out to completion. Unfortunately, the bird was in the process of molting when the emplacement was needed and, to make matters worse, when the bird was finally able to fly, it placed the sensor on the wrong window ledge.
4. Until recently the Avian Program has been shelved due to the lack of hard requirements. During the past year or so, ORD has apparently decided to determine once and for all the value and applicability of the program. This determination culminated in the "Avian Demonstration" held at [redacted] on October 7-9, 1975. At that demonstration the bird capabilities were demonstrated. Although the general consensus at that time was that the bird capabilities were interesting, it appeared there were precious few scenarios in which a bird would be the only possible vehicle to complete the mission.

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5. Since that meeting, it has been discovered that four possible scenarios have materialized in which birds could be used. They are as follows:

- a) A bird climbing up and down a rope.
- b) A bird taking pictures in a denied area.
- c) A bird placing a microphone on a window sill.
- d) A bird collecting a water sample.

What was dismissed, a few months ago, as an improbable, exotic, humorous idea has suddenly become a serious undertaking. In fact, it is presently being handled by the TCT.

[redacted] SDB/OPS, is acting as chairman, [redacted] DC/SE/USSR, as vice-chairman and [redacted] as secretary of the effort. As it stands to date, LSR has the following plans for the bird program. It has a contract with [redacted] in California to conduct a feasibility test of a specific operational scenario. The scenario is to have a kit of pigeons equipped with cameras fly from one location (launching site) to another location 3 miles away, take pictures of a certain object and fly to a different location (home).

6. The experiment will involve 3 kits. The first kit will act as a control group and will be trained to fly from home to the target and back to home. The second kit will be trained to fly from a launching point to the target to a new home 25 miles away. The third kit will be trained in California to fly from a launching point to the target and to a new home. This kit will then be moved to Oklahoma and will be carefully observed to determine the affects long distance displacement has on their performance.

7. Finally, the second kit in California will be moved with the kit in Oklahoma to Washington, D.C. It has been determined that at this time a live demonstration might be held for interested offices. Specifically, the kits will individually fly from a launch point to [redacted] to East Building. The above project has been already funded at \$90,000 and should take 6-7 months to complete. If all goes as planned, the feasibility of bird scenarios will have been proven by ORD/LSR.

8. For your further edification, ORD/LSR has made a 27 minute 16mm film of the Avian Demonstration held at [redacted]. It shows the performance of the birds in real life situations. LSR also has a 10 minute film clip of an impromptu demonstration of a raven collecting a water sample.

9. At this point in time, [redacted] is not being funded whatsoever. It is my impression that they are not employed at this time because of the less "spectacular" performance of [redacted] birds as compared to [redacted] birds. This is unfortunate because [redacted] approached the problem from a scientific posture, examining cause and effect, whereas [redacted] took a more pragmatic approach to get the job done. Both approaches, I feel, are equally valid in this case.

10. It should be noted that the bird scenario presently being investigated in California by [redacted] is not an OTS requirement, but was generated directly by the DDO staff. No firm requirements have yet been placed upon OTS by the DDO.

11. I would like to reiterate my opinion which is reflected in OTS/CB Memo for the Record #75-127, "Avian Demonstration [redacted]" "It appears as if justification of spending approximately \$100,000 per year for the maintenance of a stable of birds for an occasional deployment would be difficult to rationalize. The undersigned received the impression that given the present avian capabilities and the known possible missions, there was little interest in maintaining the capability at this time. In fact, there was only one DDO Division (SE) that indicated an immediate interest in the present avian application.

Through discussions with both contractors, the undersigned believes that if the contracts were allowed to expire, [redacted] would close down this type of operation completely. However, [redacted] has a continuing interest in this basic type of training since he trains animals [redacted] and would most likely stay in the field. Given a lead time of 3 to 4 months, and \$20,000 to \$30,000, [redacted] would be able to obtain and train 3 to 4 birds for a particular scenario which has been previously demonstrated. Compared to yearly maintenance of a stable of trained birds, this would be the most economical route provided that operational plans for using a trained bird are developed far enough in advance of the requirement."

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12. In closing I would like to state that based on the limited knowledge I have gained to date, it is my opinion that the Avian Program should be terminated by ORD upon completion of its present contract with

[redacted] I feel it should then be turned over to OTS and retained at not cost for R&D until a requirement is levied on OTS. At that time, [redacted] could train a particular bird within 3 to 4 months to perform a scenario similar to those already demonstrated in the past by ORD, at a cost of \$20K to \$30K.

[redacted] OTS/CB briefing

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