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17 December 1958

MEMORANDUM FOR THE UNDER SECRETARY OF THE AIR FORCE

SUBJECT: Reorganization of SENTRY Program *(Signature)*

1. **Objectives:** The basic objectives of the ANPA Sentry R & D program should become as follows:
 - a. Develop and improve area reconnaissance system based on the use of recovery techniques.
 - b. Develop a point surveillance system based on the use of the film read-out techniques.
 - c. Sustain development of the ferret reconnaissance and surveillance system.

2. General Outline of SENTRY Program.

The surveillance system is to be based on the use of the presently planned film read-out techniques. The reconnaissance system is to be based on the use of the film recovery techniques. Since it appears that a much improved reconnaissance camera system could be available for flight test in early 1961, the development of a recoverable Atlas boosted capsule should be scheduled so as to meet a first camera flight test date in early 1961. Since it appears that the 36 surveillance camera system could be available for flight test in mid 1961, the development of an Atlas boosted capsule and associated ground equipment should be scheduled so as to meet a first system prototype flight test date in mid 1961.

3. Funding.

The funding for the SENTRY program should be assumed to be as follows: FY 1959 - \$160 M. Expenditures under the ANPA program are limited to only such development and installation of equipment as is actually required for the testing of an engineering prototype of area reconnaissance systems. The FY 1959 figure includes the 13 flight recoverable capsules of calendar 1959.

4. List of Possible SENTRY Program Changes to be Considered by USAF.

The following are program changes which ANPA requests be considered in the present program in order to meet the objectives in paragraphs 1 and 2 above and the limitations in 3 above.

- a. Delete program to use high energy fuel in second stage of launch vehicle.

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b. Delay development of 6" read-out camera film program, and delay all testing (ground or space) of components of the 6" system, except where these are identical, or very similar to, components of the 16" system.

c. Consider very carefully the possible use of the recoverable Atlas space vehicle as a flying test bed for flight test of components of the surveillance camera system and the turret system.

d. Consider the possibility of scheduling development and flight testing of the recoverable ATLAS launched vehicle so as to be able to make use of it in connection with the 1960 operational recovery program, should such use become desirable for any reason, such as a requirement for more film capacity, addition of new gear needed for improved recovery, addition of any other components which might improve the system, or addition of necessary modifications to convert to mapping capability, etc.

e. Consider carefully any changes, particularly in connection with subsystems H and I, which would be brought about by the change in the requirement for the read-out system from use in an area reconnaissance system to use in a point surveillance system only, and modify the program accordingly.

5. Operational Program.

ARPA supports the U. S. Air Force proposed operational program as discussed in my office this date.

/s/ Roy W. Johnson
/t/ Roy W. Johnson
Director

cc: Gen. Schriever

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