~~TOP SECRET~~

HANDLE VIA
BYEMAN
CONTROL SYSTEM

~~ISI~~ NATIONAL RECONNAISSANCE OFFICE
WASHINGTON, D.C.

14-00026717D

OFFICE OF THE DIRECTOR

14 July 1971

MEMORANDUM FOR THE RECORD

SUBJECT: Notes for Use at Meeting with Senator Stennis at 3 O'clock, July 14

One of the principle points we would like to make is that the criticality of the overhead reconnaissance systems is increased by the current environment wherein we are involved in talks in Helsinki having to do with SALT and where we are beginning discussions on mutual balanced force reduction. Our knowledge of Soviet strength is dependent to a very great extent on the coverage we achieve with our photographic satellite systems. This applies especially to the numbers of deployed weapon systems. Insofar as the characteristics of these systems are concerned, we are dependent not only on our photographic satellites but also ELINT systems which, to a great extent, are space based.

Another point is that during this period of austerity in the Pentagon when most budgets are going down, there will no doubt be some questions asked about whether we are making comparable cuts in intelligence categories. We are making cuts but we believe that during times of continuing tension there may very well be areas where intelligence expenditures should be increased as weapon systems expenditures are decreased.

There is another factor operating with respect to our particular programs, namely, some of them are now becoming available for the first time. Thus we see a tendency for our budget to rise whereas the overall budget for intelligence is being carefully controlled. We explain this by the fact that there is a continuing trend to conduct intelligence from space and thus to gradually displace other items which are related to non-space collection.

One final item is that we have discovered that there are certain types of information which can be gotten only from space and which we have not had before. We are approaching a time when the so-called near real time systems are becomming technically attainable. Through these systems which we call FROG and EOI (Film Readout-Gambit and Electro-Optical Imaging), we could make available information about what is happening at critical locations during crisis situations in a very short period of time. Typically these systems could read out to ground stations in the United States in a matter of hours. We would thus be able, for the first time, to return satellite photography to the users in key departments in Washington as a crisis develops. An example for the need for crisis response of this type was provided last summer during the buildup of the SAM sites along the Suez Canal.

Crisis management, we believe, can be conducted more rationally if photographic data is available on a daily basis. In this case the government can take action near to the time when the event occurs, rather than waiting for a week or two for a return of photographic film from space in the case where we have the satellite on orbit or waiting a month or two for film return in the case where we do not have a satellite on orbit.

There are two ways in which our current capability continues to improve. First, the reliability of spacecraft is improving to the point where we can collect the normal synoptic type of photographic coverage with a decreasing number of satellites. We have shown a steady decrease in the number of photographic satellite launches over the last several years and we expect that in the next few years we would launch no more than eight and probably no more than six or seven photographic systems. The amount of data returned from this reduced number of launches continues to increase. Nonetheless, these systems will not satisfy the so-called crisis response requirement.

Second, we can, by stretching the lives of our satellites gradually over the next two to three years, build up the total time on orbit to essentially 100 percent. Even with the increased performance on the part of our satellites we would not

be in a position to return data daily unless we go to one of the so-called near real time photographic systems which reads out data to a ground station by electronic means rather than waiting for the return of a film capsule.

After having looked at approximately a dozen candidates, we propose to develop two realtime systems. The first of these, FROG, is based on the current Gambit system where film is returned by capsule. We propose to process the film on orbit, scan it, relay the data to ground and reconstitute the picture in a matter of a few hours. This system has the advantages of being based on current technology and being achievable in approximately 30 months.

The other system which we propose to develop, EOI, is more like a television system although obviously of much higher sophistication.

Advantages of the EOI are that it has a somewhat higher resolution than the FROG; produces pictures of somewhat higher quality, and offers the potential, through later growth possibilities,

The Senate Appropriations Committee has questioned the need for both these near real time systems. Our Executive Committee, in preparing to answer the Appropriations Committee's questions, has decided to discuss the issue with the President at an early meeting. The critical issue is whether we should proceed with FROG now in order to achieve system capability at the earliest date, i.e., some 30 months from now, or whether we should forego the FROG and develop only the EOI system which, it is estimated, would not be available until FY 1976 at the earliest and more likely FY 77. There is roughly a 30-month period between the most likely availability of the FROG and that of the EOI. To provide crisis capability at the earliest possible time we

propose to develop the FROG. FROG could of course be continued if for any reason, financial or otherwise, the EOI system development were not carried forward.

Secretary Rogers and others representing the President have indicated a strong desire for a crisis capability. We believe that if it is to be achieved our minimum position should be to proceed with FROG now and continue the technology work for the EOI system which could be brought in a few years later as it proved itself technically and economically.

John L. McLucas

MR: This memo was not used by Dr. McLucas but was used by Colonel Bradburn in a meeting with Senator Stennis on 15 July 1971.

WLB.