

May 9, 1969

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BYE 11,898/69

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This document consists of 3 pages of 6.0 Series -A

READOUT SATELLITE SYSTEM

Since the beginning of the concept of satellite reconnaissance, the ultimate goal has been to give decision-makers an "on-call" capability to view any area of the world [redacted] We would like to report that in our opinion, technology will now support a decision to build a system of satellites which could view important intelligence locations in the USSR and China daily and send high quality (2 to 3-foot resolution) pictures [redacted] Here are the capabilities that have been developed over the past few years which now make this a realistic expectation:

1. We have learned how to build satellite systems which can operate reliably for a year to five years and more in space. Thus, we can confidently build an economical system which will have satellites over the Soviet Union and China every day, year after year.

2. We have learned how to send great quantities of information very rapidly from satellites to the ground. This technology is immediately applicable to the relay of information from satellite to satellite.

Thus, we can build a communication link which can [redacted]

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3. The technology of solid-state photosensitive devices has advanced to the point where we foresee in the very near future the capability to view the ground with good resolution and in a manner which makes this image available for to the U. S.

While for the next five to ten years we must continue to plan for HEXAGON to photograph large areas and to use GAMBIT (or MOL) to get very high resolution, now the time has at last arrived when we can begin building a system which will provide surveillance which HEXAGON, GAMBIT and MOL cannot provide. The potential value of such a system has been demonstrated time and again --the 1962 Cuban crisis, the Arab-Israeli War, the Czechoslovakian invasion, and the Pueblo incident have all placed great urgency on timely information, not only about the particular area of crisis, but also about the military status of the rest of the world.

In summary, we think the great value of the system and the state of the technology warrants giving the highest intelligence priority to the development of the readout system. We therefore recommend that the National Reconnaissance Office be directed to initiate development on a system with the following characteristics:

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— A photosensitive solid-state-array image transducer.

— A simple satellite system with a minimum of moving parts and a long orbital lifetime.

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The first step should be a fully-funded system-definition/component development effort which we believe would require about 

in FY 70. This work should be scheduled to give rough estimates of FY 71 fund requirements in time for inclusion into the FY 71 NRO budget submissions this fall; and to give by next spring a detailed understanding of development costs and risks so that the Executive Committee can decide whether to continue development and, if so, to allocate FY 71 funds for the purpose.

- Edwin H. Land, Chairman
- James G. Baker
- Sidney D. Drell
- Richard L. Garwin
- Marvin L. Goldberger
- Donald P. Ling
- Allen E. Puckett
- Edward M. Purcell
- Joseph Shea

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MEMORANDUM FOR: ~~DDA~~ P

This proposition was to have been considered at the 13 May 303 Committee meeting. It was removed from that agenda this morning.

At such time as it is placed again on the agenda, I will request your observations and recommendations for the Director.



CS/SGO

12 May 1969

(DATE)

FORM NO. 101 REPLACES FORM 10-101
1 AUG 54 WHICH MAY BE USED.

(47)

Another call from [redacted]

Has been talking with [redacted] who says the Director has been talking with Duckett. Duckett is to do something on it. So if we do have any comments/observations we should call Duckett.

12 MAY 1969

From [redacted]

The proposition will be on the agenda. Will be a talking/information session with Dr. Land and DuBridge attending.

Would appreciate any observations for the Director by mid-afternoon.

12 MAY 1969