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THE WHITE HOUSE
WASHINGTON



September 15, 1970

MEMORANDUM FOR

Mr. David Packard
Mr. Richard Helms

SUBJECT: Land Panel Memorandum on Photographic
Readout Systems Definition Studies (ZAMAN)

Recently the Land Panel reviewed among other matters the plans being made for systems definition studies for the photographic readout system (ZAMAN). A copy of their memorandum to me on the subject is attached for your use. The fundamental finding of their consideration is that if we are to proceed to a full and timely capability with the solid-state sensor readout system, emphasis ought to be placed on System A (ground sample distance) approaches and consideration of System B discontinued.

Edward E. David, Jr.
Science Adviser

Attachment
BYE 11958-70

Cy to
Dr. McLucas
Mr. Duckett
Dr. Foster

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ZAMAN

BYE 11960-70

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EXECUTIVE OFFICE OF THE PRESIDENT

OFFICE OF SCIENCE AND TECHNOLOGY

WASHINGTON, D.C. 20506

September 14, 1970

MEMORANDUM FOR

Dr. David

SUBJECT: [redacted] Photographic Readout Systems Definition Studies (ZAMAN)

Your Reconnaissance Panel reviewed recently the two "baseline systems" being considered during ZAMAN systems definition studies by Boeing, General Electric, Lockheed and North American Rockwell. Both of these baseline systems would employ [redacted] mirrors, Ritchey-Chretien optics and operate at S/N of 5. Otherwise the baseline systems -- A and B -- differ as follows.

	<u>System A</u>	<u>System B</u>
Ground Sample Distance	[redacted]	18"
Data Rate	[redacted]	[redacted]
Modulation	[redacted]	[redacted]
Image frames/day	[redacted]	[redacted]
Number of arrays	[redacted]	[redacted]
Sensors/array	[redacted]	[redacted]
Operating altitude	188-420 n. mi.	200 n. mi.

System A encompasses the characteristics of the system we recommended (BYE 11944-70) following our July meeting and we emphasize that such an approach is mandatory if we are to achieve the full potential of the ZAMAN system. Such characteristics are necessary if we are to protect the possibility that the ZAMAN system might eventually replace the GAMBIT system -- with the associated system procurement savings -- for photographic surveillance.

ZAMAN GAMBIT

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System B, which attempts data-handling "savings" at the expense of ground sample distance, data modulation scheme, and image frames per day, even if it attained those capabilities could neither assure -- within our present understanding -- adequate ground resolution distance nor a capability which could economically grow to that of System A.

The Panel believes therefore that pursuit of System B is wasteful now of funds for systems definition and furthermore that such a system if implemented would eventually be wasteful of development funds as we attempted to evolve to the full exploitation of the capabilities inherent in this [] photographic readout system. We believe the actual savings of the System B approach over System A will be negligible compared to the total development cost of the system; that the capability of the ZAMAN system in its primary role will be reduced at a period of history when the high competence will be most needed; and that the possibility for the replacement of GAMBIT will be delayed or eliminated.

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 F. Shea
John Martin, OST

*Members not present at review.

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