

Richard L. Bernard

The Defense Special Missile and Astronautics Center (U)

~~(C)~~ Tucked into the inner southeast corner of the second floor of the NSA main operations building is the Defense Special Missile and Astronautics Center (DEFSMAC), a joint activity involving elements of the National Security Agency (NSA) and the Defense Intelligence Agency (DIA) which keeps an ever-watchful eye on foreign space and missile activity. Even though access to the DEFSMAC work spaces is restricted, this article attempts to share with *Spectrum* readers a reasonably comprehensive insight into the mission, organization, and work processes of the Center.

~~(S)~~ *Origins.* DEFSMAC was established in April 1964 by a Department of Defense directive, signed by then Secretary of Defense, Robert McNamara. The directive provided for a "management arrangement to (a) task and technically control DoD missile and space intelligence collection and processing activities directed against foreign missile and space activities and (b) provide current analysis and reporting of foreign missile and space events." Since World War II, the Soviet Union had been conducting an ever-increasing research and development effort into the military use of missiles, and, as first evidenced by SPUTNIK I in 1957, the use of satellites in space. Paralleling this growth in Soviet R&D were increases in the number and level of sophistication of United States Sigint and non-Sigint intelligence systems directed against these missile and space launches. Although directed primarily at [redacted] missile and space targets, these various collection activities were not always closely coordinated. As the number of observed launches [redacted] [redacted] the volume of intelligence reports related to

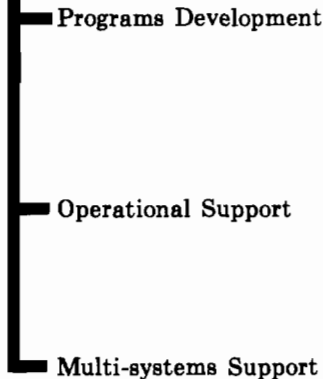
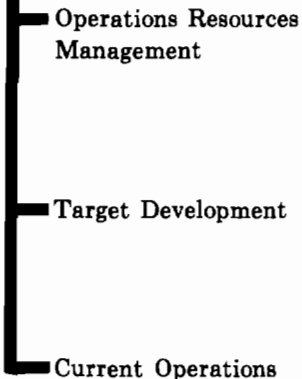
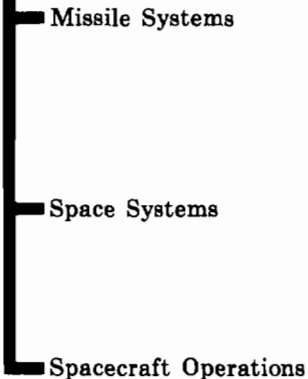
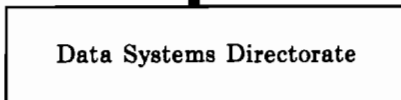
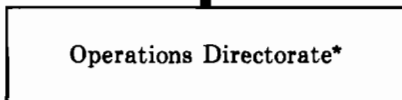
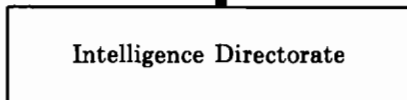
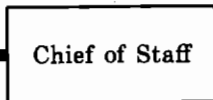
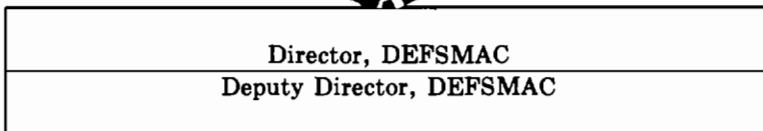
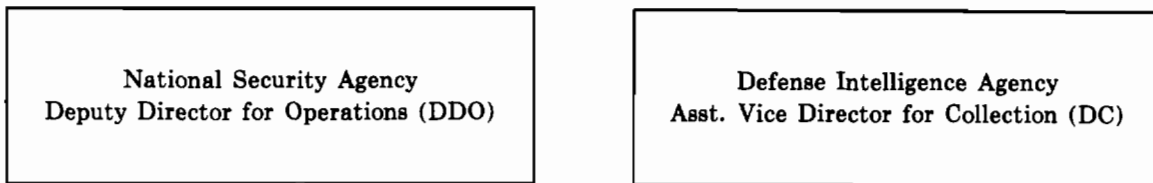
each event likewise grew. For a given event, Defense Department executives often received more reports than there were collectors, each presenting only a fragmentary, and sometimes contradictory, view of the event. DEFSMAC was created in an attempt to stem this tide and give the total DoD collection effort some coordinated guidance (and thus optimize collection resource use) and to provide centralized and authoritative reporting to the United States community. DEFSMAC was to be formed from elements and personnel from DIA and NSA. It was also to carry out previous responsibilities in reporting and collection guidance/tasking of DIA and NSA for both Sigint and non-Sigint [redacted]

~~(S-CCO)~~ *Functional Design.* The functional design and work procedures for DEFSMAC are not unlike those of an information clearinghouse. From most of the collection resources that we work with and from a number of national intelligence, scientific and technical (S&T) centers, DEFSMAC receives a constant flow of information related to foreign missile and space activities. This information may be in the form of [redacted]

[redacted] It is the Center's job to sort all of this information and take appropriate action on it.

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(b) (3)-50 USC 403
(b) (3)-18 USC 798
(b) (3)-P.L. 86-36

DEFSMAC ORGANIZATION CHART



*Also serves as Chief of W11 Division, NSA.

~~(S)~~ *Organization.* As shown in the DEF-
SMAC organization chart, the director is responsible
equally to the DIA-DC (Deputy Director for Collection)
and NSA-DDO; he may be appointed from the staff
of either Agency. The Directorate is supported by an
Executive Staff. Employees of both NSA and DIA are
assigned without regard to parent Agency affiliation to
the Staff or to one of the three Directorates shown.

~~(S-CCO)~~ The Operations Directorate contains
a 24-hour Watch Center which maintains continuous
worldwide surveillance for missile or space launch
activity, [redacted] The
Watch Center is charged with (a) alerting various
collectors to impending events, (b) coordinating collec-
tion, and (c) providing immediate reporting of all
missile and space launch events, to include an initial
mission assessment. Operations also maintains collec-
tion management liaison with each of the cooperating
collectors, providing them continuous mission support.
Although DEFSMAC does not "own" any collectors,
per se, each of the collectors has been directed by its
parent organization to respond to the guidance and
suggestions of the DEFSMAC analysts and Mission
Director on time-critical mission actions.

~~(S)~~ The Intelligence Directorate performs
the analysis and reporting, as appropriate, of all event-
related information received at the DEFSMAC up to
[redacted] after an event. This reporting rep-
resents the Intelligence Community's initial assess-
ment and evaluation of an event and serves the
Community [redacted] until the scientific
and technical centers complete their long-term study
of the particular event or series of events. These
reports satisfy the DEFSMAC responsibility for "in-
termediate-term" analysis and post-event reporting.

(U) The Data Systems Directorate pro-
vides software support to the computer operations
which underlie most DEFSMAC activities, including
systems interfaces with several NSA computer sys-
tems, especially those dedicated to time-sensitive pro-
cessing. It coordinates hardware acquisition, installa-
tion, and maintenance; provides user training; and
maintains management liaison between DEFSMAC
and NSA for coordination of future hardware and
systems requirements. The Data Systems people de-
velop and maintain the Center's functional data bases
and software, supporting information storage and re-
trieval, data communications, astrodynamics, and com-
puter graphics applications. At this writing, Data
Systems is busily involved with a major rewrite of
software as DEFSMAC converts its data processing
from older systems (e.g., RYE system) to the newer
PREFACE and OMNIBUS systems.

~~(S)~~ *Targets.* As mentioned earlier our
main effort is directed toward the [redacted]

[redacted]

~~(S-CCO)~~ *Field Resources.* The variety of sen-
sors with which we work provides one of the most
varied and interesting aspects of the Center. We
receive conventional Sigint support from [redacted]

[redacted]

[redacted] aircraft which flies
from Shemya, Alaska, on missions off the [redacted]
[redacted] the [redacted] advanced range in-
strumentation ship (ARIS), which deploys to [redacted]
[redacted] and Air Force assets which
deploy [redacted]

[redacted]

as well as other, more sophisticated, national collection
resources interact with our resources and provide
valuable input to our work.

~~(S-CCO)~~ [redacted] *Activities.* Using 24-hour
operations-to-operations teletype circuits (OPS-
COMM), our Watch Center maintains continuous
direct contact with a number of collectors. [redacted]

[redacted]

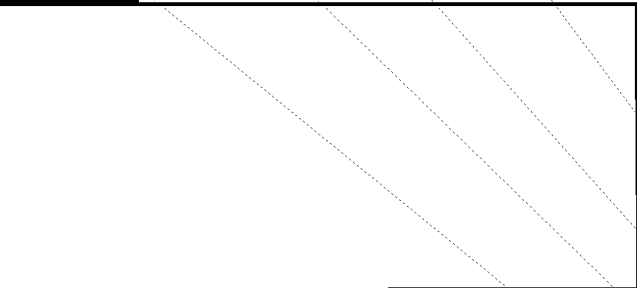
~~(S-CCO)~~ [redacted]

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[redacted] via OPSCOMM which the DEFSMAC Intelligence Directorate uses to prepare more comprehensive timely reports for the Intelligence Community and national planners. These reports then serve as the authoritative statement of analysis and commentary on that event until the scientific community completes its work.

~~(S CCO)~~ [redacted] *Space Events.* [redacted]

[redacted] space ventures are also within our field of interest and charter. The prolonged and on-going military use of space has caused us to expand our efforts in this area. During a manned space event we operate a DEFSMAC [redacted] Space Operations Center which continuously performs [redacted] activity and technical analysis. One of its



To meet this need, with support from NSA, DIA, and elsewhere, we established an enhanced [redacted] space center in DEFSMAC for the duration [redacted]. Throughout the flight, from launch to touchdown, DEFSMAC provided the [redacted] team with a constant, up-to-the-minute flow of information [redacted].

(S) *Conclusion.* All the elements of DEFSMAC combine to create an interesting and dynamic work environment and to perform functions which

contribute vital information on foreign missile and space activities. From the beginnings of DEFSMAC in 1964 through the current year, [redacted]

[redacted] missile and space activities have presented a challenging and ever-growing intelligence target. This demanding target plus the technical complexity of our numerous collection assets make DEFSMAC an exciting and rewarding place to work. The round-the-clock efforts we put forth seem well justified when we review the intelligence information results we obtain. With the increasing missile and space activities of the [redacted] it looks like DEFSMAC will continue to serve the Intelligence Community for many years to come.

(U) **Mr. Bernard has been Director of the Defense Special Missile and Astronautics Center since June 1980. He was first assigned to NSA as a computer maintenance supervisor in 1953 while serving as a second lieutenant in the U.S. Air Force. In 1955 he was selected to participate in the first NSA Management Intern Program. His subsequent assignments include several positions in the research and engineering organization, project manager in the Office of Special Program Management, chief of the Office of Space, Microwave, and Mobile Systems, and Deputy Group Chief for the Line-of-Sight Systems Group. Mr. Bernard holds a bachelor's degree in electrical engineering from the University of Cincinnati and a master's degree in engineering administration from George Washington University.**

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