~~TOP SECRET~~

DEFENSE MAPPING AGENCY
BUILDING 56, U.S. NAVAL OBSERVATORY
WASHINGTON, D.C. 20305

MAR 08 1976

D

MEMORANDUM FOR THE DIRECTOR, NATIONAL RECONNAISSANCE OFFICE

SUBJECT: Review of Acquisition Systems to Satisfy MC&G Needs

Reference: Memorandum from Assistant Secretary of Defense (Intelligence), dated 24 October 1975, subject: Proposed Change to the Overhead Mapping Program, BYE-66353-75.

I have again reviewed the various options available to provide a metric mapping capability to satisfy DMA source data requirements. I am reaffirming the position taken last October, leading to the decision made in the reference. The fact that HEXAGON is in danger of being phased out, while KENNEN is an emerging system, was carefully weighed during this review. The production processes, responsiveness, and probable material qualities were assessed to see whether or not a direct transition to KENNEN should be made, rather than invest money to upgrade the HEXAGON to the Metric Pan System (MPS). As a result of this review, I am convinced you should proceed with the development of an MPS as approved by the reference, and with other items provided for in the FYDP.

S. D. CRAMER, JR.
Vice Admiral, USN
Director

cc:
ASD(I)

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BYEMAN-1

Classified by ____
EXEMPT FROM GENERAL DECLASSIFICATION SCHEDULE OF EXECUTIVE ORDER 11652 EXEMPTION CATEGORY para 5B (2) & (3)
DECLASSIFY ON Impossible to determine

HEXAGON KENNEN
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BYE-47517-76

AMERICAN REVOLUTION BICENTENNIAL 1776-1976

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ANGLO PASS ETHER, CLEAT
CATOR PASS CHARGE
HYPO PASS SOLAR

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~~S E C R E T~~ 022100Z FEB 76 CITE WHIG 0159.
PRIORITY ETHER INFO PRIORITY CLEAT, SOLAR, CHARGE, PILOT.
HANDLE VIA BYEMAN CONTROL CHANNELS ONLY
KENNEN HEXAGON
FOR [redacted] FROM COL WHEELER
1. THE FOLLOWING GROUND RULES ARE TO APPLY TO INTERFACE AMONG ELEMENTS OF THE DMA AND OFFICES OF NRO PROGRAMS.
2. WHEN THE DMA REQUIRES NEW OR EXTENSIVE INTERFACE WITH, OR FORMAL INFORMATION FROM, THE NRO, A TWX WILL BE SENT TO WHIG (INFO PILOT, IF IT CONCERNS KENNEN; INFO CHARGE, IF IT CONCERNS HEXAGON) WHICH DESCRIBES WHY THE MEETING/DOCUMENTATION/DATA ARE REQUIRED AND WHICH SUBJECTS ARE TO BE ADDRESSED.

PAGE 2 WHIG 0159 ~~S E C R E T~~
3. UPON WHIG CONCURRENCE, THE DMA ELEMENT WOULD BE AUTHORIZED TO CONTACT THE APPROPRIATE NRO PROGRAM OFFICE TO CONDUCT THE REQUIRED BUSINESS. SIGNIFICANT RESULTS OF THE PROCEEDINGS SHOULD BE REPORTED TO THE KWWHIG ACTION OFFICER, AS APPROPRIATE.
4. NRO PROGRAM OFFICES WOULD NOT BE RESPONSIVE TO DMA PROGRAM OR POLICY DIRECTIVES. THE DMA SHOULD DIRECT ALL SUCH ACTIONS TO THE KWWHIG STAFF.
5. IN THE EVENT OF NRO PROGRAM OFFICE CAPABILITY DEVELOPMENT OR STUDY IN SUPPORT OF DMA REQUIREMENTS, APPROPRIATE, LIMITED REVIEW SESSIONS WILL BE SCHEDULED TO REPORT NRO PLANNING, APPROACH, MILESTONES, ETC. AT THESE SESSIONS THE DMA ELEMENTS WILL BE MADE AWARE OF NRO PROGRESS/PLANS AND HAVE THE OPPORTUNITY TO SUGGEST ALTERNATE COURSES OF ACTIONS.
E-2 IMPDET
~~S E C R E T~~
BT

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TOP SECRET

DMA/NRO SUPPORT AGREEMENT

12 November 1975

PURPOSE

The purpose of this Agreement is to establish the policy, procedures and organizational interface between DMA and the NRO in the accomplishment of approved MC&G tasks involving NRP systems.

POLICY

The NRO and the DMA will interact in the study and definition of collection systems which satisfy those DMA requirements validated by the USIB structure. NRP host vehicles may be used for non-BYEMAN DMA equipments at the discretion of the DNRO. This use will be based on NRO management and mission priorities in the conduct of the NRP.

PROCEDURES AND RESPONSIBILITIES

The specific procedures and organizational responsibilities regarding NRP support of DMA activities are:

a. DMA:

(1) Develop and defend DMA requirements.

(2) Evaluate technical approaches and studies by the NRO for MC&G mission accomplishment which use NRP systems.

(3) Identify to the NRO the technical recommendations to support DMA requirements.

(4) Provide planning, programming and budgeting for development and procurement of approved MC&G collection capabilities.

(5) Identify P.E. 35156F funds to be provided to the NRO for development and procurement of MC&G acquisition systems on NRP systems in accordance with NRO comptroller procedures.

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Page 1 of 2 pages
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EXEMPTION CATEGORY para 5B (2) & (3)
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Handle via BYEMAN Control System

(6) Coordinate with the NRO requests for the integration of non-BYEMAN MC&G acquisition systems using NRP host vehicles.

(7) Maintain BYEMAN Control System integrity regarding all NRO resources and activities, whether or not specific aspects of DMA interface actions involve compartmented information or activity aspects.

b. NRO:

(1) For the use of NRP systems (BYEMAN):

(a) Obtain EXCOM approval as required. Provide DMA with technical/cost options for MC&G mission accomplishment based on USIB validated requirements.

(b) Accomplish development, acquisition and integration tasks after approval and funding of DMA recommendations.

(c) Provide fund requirements in support of recommended technical approaches to DMA.

(2) For the support of non-NRP resources (non-BYEMAN). When approved by the DMA and the DNRO, assume integration responsibility subject to funding availability.

(3) Provide Byeman security, advice, and guidance as required regarding the DMA/NRO interface.

(4) In the event of impasses regarding activities covered by this DMA/NRO Support Agreement, the DNRO will make the final judgment on the issues in consultation with the Director, DMA, and the EXCOM as required.

SECURITY

DMA will conform to all BYEMAN security requirements in interactions with the NRO.

Harold P. Wheeler, Jr.
HAROLD P. WHEELER, JR.
Colonel, USAF
Director, Office of Space Systems

Program Manager
Special Data Acquisition Systems
Defense Mapping Agency

BYE-47608-75

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~~T O P S E C R E T~~ 212057Z AUG 75 CITE WHIG 1260.
CHARGE.
HANDLE VIA BYEMAN/TALENT-KEYHOLE CHANNELS JOINTLY.
SECUR
FOR GENERAL KULPA
SUBJECT: DMA/NRO SUPPORT AGREEMENT
THE FOLLOWING FINAL DRAFT OF THE DMA/NRO SUPPORT AGREEMENT IS FORWARDED FOR YOUR COMMENTS NLT 1 SEPTEMBER 1975.
QUOTE:

DMA/NRO SUPPORT AGREEMENT

PURPOSE
THE PURPOSE OF THIS AGREEMENT IS TO ESTABLISH THE POLICY, PROCEDURES AND ORGANIZATIONAL INTERFACE BETWEEN DMA AND THE NRO IN THE ACCOMPLISHMENT OF APPROVED MC&G TASKS INVOLVING NRP SYSTEMS.

POLICY
THE NRO AND THE DMA WILL INTERACT IN THE STUDY AND DEFINITION OF COLLECTION SYSTEMS WHICH SATISFY THOSE DMA REQUIREMENTS VALIDATED BY THE USIB STRUCTURE. NRP HOST VEHICLES MAY BE USED FOR NON-BYEMAN DMA EQUIPMENTS AT THE DISCRETION OF THE DNRO. THIS USE WILL BE BASED ON NRO MANAGEMENT AND MISSION PRIORITIES IN THE CONDUCT OF THE NRP.
PROCEDURES AND RESPONSIBILITIES
THE SPECIFIC PROCEDURES AND ORGANIZATIONAL RESPONSIBILITIES REGARDING NRP SUPPORT OF DMA ACTIVITIES ARE:
A. DMA:
(1) DEVELOP AND DEFEND DMA REQUIREMENTS.
(2) AS REQUESTED BY THE NRO, EVALUATE TECHNICAL APPROACHES BY THE NRO FOR MC&G MISSION ACCOMPLISHMENT WHICH USE NRP SYSTEMS.
(3) IDENTIFY TO THE NRO THE TECHNICAL RECOMMENDATIONS TO SUPPORT DMA REQUIREMENTS.
(4) PROVIDE PROGRAMMING AND BUDGETING FOR DEVELOPMENT AND PROCUREMENT OF APPROVED MC&G COLLECTION CAPABILITIES AS DEFINED BY THE NRO.

~~TOP SECRET~~

(5) PROVIDE FUNDS TO THE NRO FOR DEVELOPMENT AND PROCUREMENT OF MC&G ACQUISITION SYSTEMS ON NRP SYSTEMS IN ACCORDANCE WITH NRO COMPTROLLER PROCEDURES.

(6) COORDINATE WITH THE NRO REQUESTS FOR THE INTEGRATION OF NON-BYEMAN MC&G ACQUISITION SYSTEMS USING NRP HOST VEHICLES.

(7) MAINTAIN BYEMAN CONTROL SYSTEM INTEGRITY REGARDING ALL NRO RESOURCES AND ACTIVITIES, WHETHER OR NOT SPECIFIC ASPECTS OF DMA INTERFACE ACTIONS INVOLVE COMPARTMENTED INFORMATION OR ACTIVITY ASPECTS.

B. NRO:

(1) FOR THE USE OF NRP SYSTEMS (BYEMAN):

(A) OBTAIN EXCOM APPROVAL AS REQUIRED. PROVIDE DMA WITH TECHNICAL/COST OPTIONS FOR MC&G MISSION ACCOMPLISHMENT BASED ON APPROVED REQUIREMENTS.

(B) AFTER APPROVAL OF DMA RECOMMENDATIONS TO SUPPORT MC&G REQUIREMENTS AND FUNDING OF A TECHNICAL APPROACH; THE NRO WILL ACCOMPLISH DEVELOPMENT, ACQUISTION AND INTEGRATIONS TASKS.

(C) PROVIDE FUND REQUIREMENTS IN SUPPORT

OF RECOMMENDED TECHNICAL APPROACHES TO DMA.

(2) FOR THE SUPPORT OF NON-NRP RESOURCES (NON-BYEMAN). WHEN APPROVED BY THE DMA AND THE DNRO ASSUME INTEGRATION RESPONSIBILITY SUBJECT TO FUNDING AVAILABILITY.

(3) PROVIDE BYEMAN SECURITY, ADVICE, AND GUIDANCE AS REQUIRED REGARDING THE DMA/NRO INTERFACE.

(4) IN THE EVENT OF IMPASSES REGARDING ACTIVITIES COVERED BY THIS DMA/NRO SUPPORT AGREEMENT THE DNRO WILL MAKE THE FINAL JUDGEMENT ON THE ISSUES IN CONSULTATION WITH THE DIRECTOR, DMA, AND THE EXCOM AS REQUIRED.

SECURITY

DMA WILL CONFORM TO ALL BYEMAN SECURITY REQUIREMENTS IN INTERACTIONS WITH THE NRO.

E-2 IMPDET

~~T O P S E C R E T~~

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BYEMAN-TALENT KEYHOLE
CONTROL SYSTEMS

SECRET

DEFENSE MAPPING AGENCY
BUILDING 56, U.S. NAVAL OBSERVATORY
WASHINGTON, D.C. 20305

PRR S75-189

30 JUL 1975

PR

MEMORANDUM FOR THE UNDER SECRETARY OF THE AIR FORCE

SUBJECT: Mapping, Charting and Geodesy (MC&G) Goals and Objectives in Support of Weapon Technology

Reference: Director of Defense Research and Engineering memorandum, 9 July 1975, subject as above.

1. This memorandum is for your information relative to the technical objectives and goals which DMA is tasked to meet in order to provide adequate support of strategic and tactical weapon systems in the mid-range period through 1982.

2. In view of the progress with current MC&G technology, DMA anticipates reaching these technical objectives with minimal risk, subject to collection of required source material. We will apprise you of any difficulties we encounter.

S. D. CRAMER, JR.
Vice Admiral, USN
Director

Enclosure
(S) DDR&E Memo (75-2226),
9 Jul 75
CY 3 OF 38 REPRO CYS

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2136-75

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Def Mapping Agency Document (U), Subj: Mapping, Charting and Geodesy (MC&G) Goals and Objectives in Support of Weapon Technology, w/1 Atch
Atch 1. DDR&E Memo, dtd 9 Jul 75 (S), Subj same as basic ltr, 1 cy

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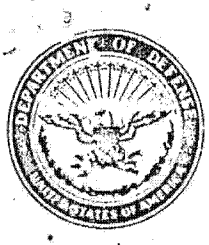

DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING
WASHINGTON, D. C. 20301

75-2226

9 JUL 1975

MEMORANDUM FOR THE DIRECTOR, DEFENSE MAPPING AGENCY

SUBJECT: Mapping, Charting and Geodesy (MC&G) Goals and Objectives in Support of Weapon Technology (U)

(U) This memorandum provides MC&G technical objectives and goals in support of strategic and tactical weapon systems in the mid-range period through 1982.

(S) Strategic missile system needs for MC&G support of high accuracy focus on two separate technology approaches:

a. Inertial guidance: For the fixed-based or land-mobile ICBM with inertial guidance we are seeking a weapon system CEP between 300 and 500 feet. DMA should consider as their goal geodetic and gravitational (G&G) component accuracies to within 75 feet, horizontal and 55 feet, vertical for 90% confidence target location and weapon system CEP of 300 feet. Target location component accuracies for less accurate CEPs up to 500 feet would be correspondingly larger numbers.

b. Terminal updates during a maneuvering terminal phase: For future systems having terminal guidance we are seeking weapon system CEPs from 100 feet to as low as 10 feet. This places a need on mapping accuracies for absolute target location with respect to the launch location and relative target location with respect to the prominent landmark and terrain features. DMA should consider as their goal an absolute location accuracy equivalent to that provided for a 300-foot CEP inertial-only system. For the relative location, the DMA goal should be for errors of less than 10 feet for landmarks and terrain features within 5 miles of the target.

(U) With respect to mobile air and sea launched ballistic missiles, specific quantitative G&G objectives for the mid-range time period cannot be stated now. Similarly, tactical systems are being planned and developed which have the potential for improved delivery accuracies at longer ranges. G&G contributions to their error budgets may also play a significant part in these systems. DMA should develop adequate

technology data bases to support these future systems as the need arises.

(U) Of course these technology goals will be conditioned by the results of technological developments including in the area of MC&G. For this reason, our staffs should maintain contact for a continuing assessment of these goals and objectives.

~~(S)~~ NATIONAL RECONNAISSANCE OFFICE
WASHINGTON, D.C.

THE NRO STAFF

14 July 1975

MEMORANDUM FOR SS-4, SS-5, SS-6 & SS-7

SUBJECT: DMA Interfaces

Request you review and provide comments on the attached draft guide to this office.

WILLIAM H. GEIGER
Major, USAF
Dep Assistant for Security

Atch
NRO/DMA Support Agreement
TS/BTK-P H K Working Paper

Given to SS-5
Suzie
8/1/75

HEXAGON KENNEN

Purpose

The purpose of this document is to catalog, define and classify ~~contacts~~ interfaces between NRO and DMA, and to identify DMA's access and technical information requirements which it looks to NRO to satisfy.

General

NRO and DMA interact with each other in the study, implementation and exploitation of collection systems to satisfy DMA requirements validated by the USIB structure and which involve the use of NRP resources. Additionally, DMA provides certain support to NRP activities.

~~Contacts~~ interfaces between NRO and DMA may be categorized into four functional areas: operational, technical, exploitative, and administrative. ← are these lists all inclusive or only illustrative of the interfaces.

Operational Contacts

1. Preflight calibration of HEXAGON Mapping Camera Subsystems.

Principle contact is with SAFSP at BYEMAN level.

2. Submission of MC&G requirements for collection [KH-8, KH-9 (Pan and MCS)].

Principal contact with SOC at TKH level.

3. Preparation, review, and selection of mission simulations and plans for HEXAGON pan and MCS coverage against MC&G requirements.

Principal contact with SOC at BYEMAN level.

4. In-orbit monitoring (KH-9 MCS).

Principal contact with SOC at BYEMAN level.

5. Cloud cover assessments of KH-8 and KH-9 imagery on quick response basis to permit in-flight reprogramming.

Principal contact with SOC at BYEMAN and TKH levels.

6. Post-Flight Analysis (PFA) (Tiger Team) (MCS). Includes in-flight recalibration necessitated by disturbances during launch or in mission environment. Submit report to SAFSP for contract evaluation.

Principal contacts with SAFSP and NRO Staff at BYEMAN level.

Technical Contacts

1. Presentation of requirements for hardware modification or technology studies in support of MC&G. For example: DMA proposal for a Metric Pan System (MPS) (BYEMAN).

2. Submission and/or evaluation of technical proposals by NRO for hardware modifications and/or studies. For example: NRO proposal to increase supply and take up reel capacity on the MCS (BYEMAN).

3. Technological seminars and briefings. For example: NRO briefings concerning SOC operations and programming (TKH-BYEMAN).

4. Evaluation of technical approaches and resultant recommendations. For example: DBA proposal concerning analytical pan attitude (BYEMAN).

5. Participation or coordination in formulation and conduct of MC&G-related studies and hardware development. For example: (BYEMAN)

[redacted]

ISMS Study

Metric Pan System

Wafer Projects

[redacted]

6. COMIREX affiliations. For example: EXRAND, ICRS, EXSUBCOM and MC&GWG (TKH-BYEMAN).

7. Consultant interface. For example:

Metric analysis of KH-9 pan (10096).

8. DMA has both BYEMAN and non-BYEMAN contacts with a number of commercial contractors and government activities, independently and within the framework of the NRP, which do business with NRO. For example, DMA currently has a non-BYEMAN contract with Duane Brown Associates (DBA) for the development of an automatic reseau-measuring equipment. We also do business with DBA under NRO auspices, such as the recently completed (and jointly funded) comparative study of differing contractors' mathematical models of the KH-9. A second example is our non-BYEMAN contacts with LMSC, APL/JHU, Bell Aerospace, AFCRL and NSWC in connection with NAVPAC. These contacts relate to the development of multi-satellite receivers to (a) track the Navy navigation satellites (DoD CONFIDENTIAL), and to (b) improve orbit positioning in support of DMA's target positioning (DoD SNF).

Exploitation Contacts

1. NRO provides to DMA the photographic services, distribution and supporting data as provided to the Intelligence Community (TKH).

2. Funding of development and production of certain exploitation hardware (Example: PCAD) (TKH).

Administrative Contacts

1. Graphic Support. DMA supplies graphics to NRO for mission planning and satisfaction (basic graphic: usually unclassified - annotated graphic: classified according to content) (TKH).

2. Security Guidance. DMA looks to NRO for BYEMAN security guidance.

3. Access and billet authorizations (through DIADC-IC) (BYEMAN).

4. Liaison. Consummation of NRO/DMA Support Agreement will result in posting of DMA liaison officers with NRO Staff and SAFSP.

5. Coordination of visits of DMA personnel to NRO activities and contractor facilities.

6. Communications. DMA has two terminals in SOCOMM System [DMAAC (~~SOLAR~~); DMATC (~~ANGLO~~), ~~which services~~ don't use slave ~~ETHER and CLEAT~~].

Technical Information Requirements

Detailed technical system (operational and developmental) characteristics to support application studies, error analyses, exploitation hardware/software development, and, if warranted, recommendations for collection system modifications.

Collection strategies and planning data, to permit better planning and utilization of system-derived data for specific MC&G applications. This would frequently include applications other than those expected to be primary.

Operational performance data and anomalies in order to identify and/or eliminate the effects of operational maneuvering on data being used in MC&G exploitation.

ANNEX A

SECURITY GUIDE

	Security Level
SAFSS/SAFSP (abbreviated or spelled out):	Unclas
Relating SAFSS and DMA in general:	? Secret NF
Relating SAFSP and DMA in general:	? Bye
Relating SAFSS and reconnaissance satellites:	? TK
Fact that DMA uses satellite data for geodetic applications:	Unclas
Fact that DMA uses reconnaissance satellite materials for mapping:	SNF
Substantive relationship between SAFSS/SAFSP/ DMA/NRO contractors:	TSB

(Would like to see in this guide expression of what can be said in relation to SS, SP, etc. - it then being understood that everything else is B or TKH).

Contracting and procurement procedures, project security arrangements, identity of contractor participants	TSB

ANNEX B

COMMUNICATIONS

Telephone communications, particularly to and from government facilities, are routinely intercepted by foreign intelligence agencies. It is mandatory, therefore, that great care be taken to avoid revealing BYEMAN program associations and substantive information over the telephone. Communications (other than personal contact) with NRO personnel and contractors should be by secure telephone or SOCOMM whenever possible. The sensitivity of telephone conversations is naturally dependent on the participants and the subject being discussed. In general, however, the following terms should be avoided during telephone conversations: full names; organizational names; references to reconnaissance, satellites, imagery, near-real-time, radar, resolution, specific exploitation techniques; NPIC; COMIREX. In all cases, good judgment and common sense are the keys to getting the job done without compromising sensitive associations and substantive BYEMAN data.

~~15~~

B

Memo to Col Wheeler

SUBJECT: DMA/NRO Support Agreement

1. Attached is a signed DMA/NRO support. [redacted] DMA, said that he and you had [redacted] agreed to the words in it and that you would sign for the NRO.

2. It is not substantively different from the one agreed to by the NRO staff and [redacted] except for adding the word planning in a. 4. General Kulpa's. See Tab 1 & 2. The annotated NRO proposed draft reflect the DMA deletions or changes.

3. If the preceding reflects the case properly I propose you sign the Agreement

Major Grigg

Tab 1

This memo was hand carried in to Col Wheeler in this form. It did not go through me, Col Taylor or Judy. Jan 1973

DMA/NRO SUPPORT AGREEMENT

PURPOSE

The purpose of this Agreement is to establish the policy, procedures and organizational interface between DMA and the NRO in the accomplishment of approved MC&G tasks involving NRP systems.

POLICY

The NRO and the DMA will interact in the study and definition of collection systems which satisfy those DMA requirements validated by the USIB structure. NRP host vehicles may be used for non-BYEMAN DMA equipments at the discretion of the DNRO. This use will be based on NRO management and mission priorities in the conduct of the NRP.

PROCEDURES AND RESPONSIBILITIES

The specific procedures and organizational responsibilities regarding NRP support of DMA activities are:

a. DMA:

(1) Develop and defend DMA requirements.

(2) As requested by the NRO, evaluate technical approaches by the NRO for MC&G mission accomplishment which use NRP systems.

(3) Identify to the NRO the technical recommendations to support DMA requirements.

(4) Provide programming and budgeting for development and procurement of approved MC&G collection capabilities as defined by the NRO.

(5) Provide funds to the NRO for development and procurement of MC&G acquisition systems on NRP systems in accordance with NRO comptroller procedures.

(6) Coordinate with the NRO requests for the integration of non-BYEMAN MC&G acquisition systems using NRP host vehicles.

(7) Maintain BYEMAN Control System integrity regarding all NRO resources and activities, whether or not specific aspects of DMA interface actions involve compartmented information or activity aspects.

b. NRO:

(1) For the use of NRP systems (BYEMAN):

(a) Obtain ExCom approval as required. Provide DMA with technical/cost options for MC&G mission accomplishment based on approved requirements.

(b) After approval of DMA recommendations to support MC&G requirements and funding of a technical approach; the NRO will accomplish development, acquisition and integration tasks.

(c) Provide fund requirements in support of recommended technical approaches to DMA.

(2) For the support of non-NRP resources (non-BYEMAN). When approved by the DMA and the DNRO assume integration responsibility subject to funding availability.

(3) Provide BYEMAN security, advice, and guidance as required regarding the DMA/NRO interface.

(4) In the event of impasses regarding activities covered by this DMA/NRO Support Agreement the DNRO will make the final judgement on the issues in consultation with the Director, DMA, and the ExCom as required.

SECURITY

DMA will conform to all BYEMAN security requirements in interactions with the NRO.

DMA/NRO SUPPORT AGREEMENT

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a. DMA:

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(2) [As requested by the NRO,] evaluate technical approaches by the NRO for MC&G mission accomplishment which use NRP systems.

(3) Identify to the NRO the technical recommendations to support DMA requirements.

(4) Provide [planning] programming and budgeting for development and procurement of approved MC&G collection capabilities [as defined by the NRO.]

Identify P.E. 35156F funds to be provided

(5) [Provide funds] to the NRO for development and procurement of MC&G acquisition systems on NRP systems in accordance with NRO comptroller procedures.

Tab 1

(6) Coordinate with the NRO requests for the integration of non-BYEMAN MC&G acquisition systems using NRP host vehicles.

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b. NRO:

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(b) After approval of DMA recommendations to support MC&G requirements and funding of a technical approach; the NRO will accomplish development, acquisition and integration tasks.

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P 122155Z
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GUARD 712
GUARD PASS WHIG

~~S E C R E T~~ 122155Z MAY 75 CITE CHARGE 4534.
PRIORITY WHIG.
HANDLE VIA BYEMAN CHANNELS ONLY
HEXAGON/SECLR
FOR [redacted]/K. PEYTON FM: K. BALMGARDNER
SUBJECT: SECURITY GUIDELINES (DMA EXPERIMENT - GEO PAC)
1. THIS MESSAGE SHOULD BE HELD FOR DISCUSSION WITH MR COHEN ON 13 OR 14 MAY 75.
2. (BACKGROUND): GEO PAC HAS BEEN UNDER DEVELOPMENT FOR SOMETIME BY APPLIED PHYSICS LAB. AND IS UNDER A DMA CONTRACT. GEO-PAC IS A SHORT TERM FOR GEODETIC PACKAGE. THE PURPOSE OF GEO-PAC EXPERIMENT IS TO DEVELOP A CAPABILITY TO DETERMINE THE ABSOLUTE POSITION OF A LOW ALTITUDE SATELLITE WORLDWIDE TO AN ACCURACY OF FEET. (ONE SIGMA) IN EACH COMPONENT;

PAGE 2 CHARGE 4534 ~~S E C R E T~~
I.E., IN TRACK CROSSTRACK AND RADIAL. IN LAYMAN'S WORD IT WILL REPLACE THE CURRENT-BEACON DOPLER SYSTEM AND REPRESENT A SIGNIFICANT ADVANCE IN THE STATE OF THE ART. IT WOULD PROVIDE GREATLY IMPROVED SATELLITE/ORBIT DETERMINATIONS IN SUPPORT OF STRATEGIC AND TACTICAL TARGET POSITIONING AS WELL AS SIGNIFICANTLY REDUCE MAPPING, CHARTING AND GEODETIC DEPENDENCE ON EARTH BASED TRACKING STATIONS.
3. SAFSP RESPONSIBILITY OVER THE PAST YEAR HAS BEEN LARGELY ON INTERFACE ROLE WITH DMA, LMSC, APL, BELL AEROSPACE AND THE NAVAL WEAPONS LAB (CHINA LAKE) FOR THE INTEGRATION OF GEO-PAC ON PALLET. THE EXPERIMENT IS TO BE CARRIED ON HEXAGON AS A PIGGYBACK.
4. A SECURITY CONCERN EVOLVED OVER THE ASSOCIATION OF GEO-PAC (GEODESY) WITH LMSC P95 AND THE ASSOCIATION OF SAFSP WITH DMA IN A WHITE PROGRAM WHEREBY THE INTERFACES FREQUENTLY INVOLVED MEETINGS AND A DOCUMENTATION FLOW TO NON-PROGRAM BRIEFING PERSON-

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NEL AND FACILITIES. TO INSURE THAT THE COVERT RELATIONSHIP BETWEEN SAFSP AND DMA AS WELL AS LMSC'S ROLE IN P95 IS NOT OPENLY ASSOCIATED WITH GEO-PAC COMMUNITY.

THE FOLLOWING SECURITY GUIDELINES WERE FORMULATED FOR COORDINATION WITH DMA:

A. THE NAME OF THE GEODETIC PACKAGE (GEO-PAC) EXPERIMENT HAS BEEN CHANGED TO NAVIGATION PACKAGE (NAV-PAC). THE WORDS (GEODETIC PACKAGE" AND "GEO-PAC" WILL BE PURGED FROM ALL CONTRACTUAL AND INTERFACE DOCUMENTATION AND REPLACED BY "NAVIGATION PACKAGE" OR "NAV-PAC." TO THE MAXIMUM EXTENT PRACTICAL, EFFORTS SHOULD BE MADE TO REPLACE GEO-PAC WITH NAV-PAC IN ALL REMAINING DOCUMENTATION.

B. ALL CORRESPONDENCE BETWEEN SAFSP AND THE DEFENSE MAPPING AGENCY (DMA) WILL BE THROUGH BYEMAN CHANNELS. ALL SAFSP PERSONNEL SUPPORTING THE NAV-PAC EFFORT WILL "LOW-PROFILE" THEIR ASSOCIATION WITH SAFSP. EFFORTS WILL BE MADE TO REFER TO

ALL SAFSP PERSONNEL AS "HOST VEHICLE SPO" OR "AIR FORCE."

C. THE FACT THAT LMSC IS THE HOST VEHICLE INTEGRATING CONTRACTOR (HVIC) FOR NAV-PAC IS UNCLASSIFIED. LMSC'S ASSOCIATION WITH THE JHU APPLIED PHYSICS LABORATORY (APL), THE NAVAL SURFACE WEAPONS CENTER (NSWC), THE AIR FORCE CAMBRIDGE RESEARCH LABORATORY (AFCRL) AND BELL AEROSYSTEMS (BA) IS UNCLASSIFIED. THE FACT THAT THE ABOVE ORGANIZATIONS (NON-LMSC) ARE RESPONSIBLE TO DMA IS UNCLASSIFIED, BUT WILL BE "LOW PROFILE." THE ASSOCIATION OF NAV-PAC WITH P-95 IS UNCLASSIFIED.

Nav-Pac with low altitude satellite

D. LMSC WILL WRITE THE MINUTES OF ALL INTERFACE MEETINGS AND DESIGN REVIEWS. LMSC WILL ALSO BE RESPONSIBLE FOR PREPARING THE AGENDAS FOR THE ABOVE MEETINGS. DISTRIBUTION OF THESE MINUTES AND AGENDAS TO DMA WILL BE THROUGH NSWC. SAFSP SHOULD NOT BE INCLUDED AS AN ADDRESSEE.

E. NAV-PAC MEETINGS IN THE NON-BYEMAN AREAS OF

BUILDING 156A ARE AUTHORIZED.

F. DMA WILL AUTHOR A NON-BYEMAN "OBJECTIVE OF NAV-PAC" AND CLASSIFY IT APPROPRIATELY IN ACCORDANCE WITH APPROPRIATE DOD CLASSIFICATION GUIDELINES.

G. NAV-PAC SHOULD NOT BE REFERRED TO AS AN "OPERATIONAL ADJUNCT" TO P-95 OR HEXAGON OUTSIDE OF BYEMAN CHANNELS.

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CATOR PASS CHARGE

SWB 5714
AA 4149

~~S E C R E T~~ 291358Z APR 75 CITE WHIG 0626.
ETHER, INFO CHARGE.
HANDLE VIA BYEMAN CONTROL SYSTEM
SECUR
FOR D. JONES/BCO , INFO H. COHEN FROM W. GEIGER
SUBJECT: NRO/DMA SUPPORT AGREEMENT
THE REF DRAFT AGREEMENT HAS HIGHLIGHTED A CONTINUING PROBLEM IN OUR RELATIONSHIPS PERTAINING TO SECURITY. OUR STAFF FEELS THAT IT WOULD BE BENEFICIAL FOR ALL CONCERNED TO HAVE A CLASSIFICATION/COMPARTMENTATION GUIDE FOR THE VARIOUS KINDS OF ACTIVITES WE DO TOGETHER. IN THIS REGARD, REQUEST YOU INITIATE A FIRST DRAFT OF SUCH A GUIDE WHICH WOULD DESCRIBE AND CATEGORIZE THE VARIETY OF WAYS YOU PERCEIVE WHICH REFLECT OR

PAGE 2 WHIG 0626 ~~S E C R E T~~
REVEAL CONTACTS WITH WHIG OR CHARGE. SUGGEST THIS ALSO INCLUDE CATEGORIES OF TECHNICAL INFORMATION NEEDED FOR THE MAPPING CAMERA.
CHARGE & WHIG WILL THEN EXPAND YOUR DRAFT TO REFLECT OUR PERCEPTIONS OF OUR RELATIONSHIP AND INDICATE BYEMAN/TK COMPARTMENTATION REQUIREMENTS. FOLLOWING AN AGREEMENT ON THE DRAFT, IT SHOULD BE APPROVED BY WHIG.
E-2 IMPDET
~~S E C R E T~~
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SECRET
HANDLE VIA BYEMAN
CONTROL SYSTEM