

MEMORANDUM OF AGREEMENT
AMONG
THE SERVICES AND BALLISTIC MISSILE DEFENSE
ACQUISITION EXECUTIVES
(ASN RDA; SAF/AQ; ASA(ALT); BMDO)
AND THE
SINGLE INTEGRATED AIR PICTURE (SIAP)
ACQUISITION EXECUTIVE (AE)

References:

- (a) Theater Missile Defense (TMD) Capstone Requirements Document (CRD), 31 July 1998
- (b) Joint Requirements Oversight Council Memorandum (JROCM) 051-00, 20 March 2000
- (c) JROCM 097-00 of 25 May 2000
- (d) SIAP System Engineer (SE) Charter, 26 October 2000
- (e) OUSD (AT&L) Implementation letter, 26 October, 2000
- (f) Department of Defense Directive 5134.9, 14 June 1994, "Ballistic Missile Defense Organization (BMDO)"
- (g) Memorandum for Secretaries of the Military Departments, Chiefs of the Military Services, Assistant Secretary of Defense (C3I), Director, BMDO, signed by the Vice Chairman of the Joint Chief of Staff and Under Secretary of Defense (Acquisition and Technology), 14 November 1996, Subject: Management of Theater Air and Missile Defense (TAMD) Activities

1. Purpose.

This Memorandum of Agreement (MOA) among the Service/BMD Acquisition Executives and the Single Integrated Air Picture Acquisition Executive (SIAP SE) documents the relationships necessary to support the mission of developing/modifying and fielding the systems and system components that collectively provide the ability to build and maintain a SIAP. This MOA also identifies the coordination required to execute the system engineering roles in the generation of the system and technical views of the SIAP component of the Theater Air and Missile Defense (TAMD) Integrated Architecture (IA) and those responsibilities necessary to provide measurable improvement in warfighting capability leading to the fielding of a SIAP capability.

2. Background.

The Theater Missile Defense Capstone Requirements Document (CRD), ref (a), specified SIAP as a critical joint operational requirement and describes the required characteristics of a SIAP. Participants in the 1999 Joint Theater Air and Missile Defense (JTAMD) Flag Officer/General

Officer (FO/GO) Workshop reiterated the need for a SIAP. The Joint Requirements Oversight Council (JROC) recommended designation of a Service-led system engineering task force to facilitate the transition of the SIAP requirement from concept to a fielded joint capability. In ref (b), the JROC recommended establishing the SIAP SE Task Force (TF) to execute this task. The SIAP SE will be a small, collocated task force, staffed by the Services not to exceed 30 personnel. This task force, established within the Department of Defense (DOD), is responsible for the completion of the systems engineering necessary to develop recommendations for systems and system components that collectively provide the ability to build and maintain a SIAP capability. The SIAP SE will satisfy this mission by implementing a disciplined systems engineering process. This process will yield recommendations for fielding a SIAP, which will lead to measurable improvements in warfighting capability. The SIAP SE must consider the entire spectrum of alternatives including training and tactics, techniques, and procedures (TTPs) to make recommendations on the most cost-effective means to achieve the SIAP. The SIAP is not the end-state; it is part of a larger construct that must be engineered so it can easily migrate toward, and supports a common tactical picture (CTP). As such, it is recognized that the SIAP supports joint forces air component commander (JFACC) mission areas involving the tactical employment of airpower. An incremental approach is needed to develop and implement improvements to command and control of existing systems and the integrated architectures within which these systems operate while the SIAP is being developed. In the end, the product of the SIAP SE recommendations will be combat-ready, operationally certified equipment and computer programs that enable the warfighter to build and maintain a SIAP, and inputs to (TTPs) necessary to operate the Command and Control (C2) components of an integrated system. The SIAP SE will not establish operational requirements, but will provide technical expertise to aid requirements development. Requirement validation is the purview of the Joint Requirements Oversight Council (JROC) via the Joint Theater Air and Missile Defense (JTAMD) process and other relevant processes.

3. Scope.

The Services, Ballistic Missile Defense, and SIAP AEs will provide specific recommendations on program management and acquisition to assist the SIAP SE to focus his/her efforts. This process has been formalized through the creation of an oversight council that is comprised of the three Service AEs (or their Principal Deputies) the BMD AE, and three-star level representatives from the Services. The SIAP SE, in coordination with the Service/Agency points of contact, will work closely with the Systems Commands, Program Executive Officers, and Program Managers (SYSCOMs/PEOs/PMs) to execute the mission. The SIAP SE will draw support from program offices, Federally Funded Research and Development Centers (FFRDCs), and as necessary through contracts with industry to support conduct of the mission. The Service AEs, BMD AE, and/or relevant PMs will be provided the opportunity to provide input regarding the executability, schedule risk, and cost of alternatives to be presented to the JROC. The SIAP SE will respond to commander-in-chief (CINC) issues, through US Joint Forces Command (USJFCOM) for joint force integration and interoperability matters and in-Service support to combatant commanders.

3.1. This MOA describes:

- a. The roles/responsibilities of the SIAP SE, BMDO, and Services as defined in ref (d).
- b. The programming and budgeting responsibilities for the SIAP SE, BMDO/Services as they apply to SIAP-related efforts.
- c. The required interaction between the SIAP SE, BMDO, and the Services, including how warfighting improvements will be made to existing systems as well as procedures for ensuring functional commonality in new and emerging systems.

4. SIAP SE TF working relationships.

The SIAP SE will work with BMDO and the Services as the SIAP SE TF leads, orchestrates, and coordinates the development of the system and technical views of the SIAP component of the TAMD integrated architecture and throughout the implementation of JROC approved fixes to fielded and emerging systems. The specific SIAP SE work/tasks and resources required to generate system and technical views for the TAMD Architecture will be identified in the SIAP SE Implementation Plan and coordinated through the SIAP Oversight Council and approved by the SIAP AE.

4.1.1 In accordance with the SIAP SE charter the Services will participate in the decision process and activities of the SIAP SE TF. To ensure that the appropriate decision process is coordinated, the Services and BMDO will:

(1) At the signing of this MOA have an individual designated in writing to the SIAP SE as the principal (POC) for that Service/BMDO on issues related to the TAMD SIAP. This individual will provide direct interface between the SIAP SE and the Service/BMDO and will be empowered to represent the Service/BMDO in all deliberations and manage (as appropriate) the requests for support from the SIAP SE to that Service and BMDO.

(2) Identify and provide personnel from appropriate SYSCOM, PEO, PM, laboratories, and field activities to become part of the SIAP SE staff. In addition to the small assigned staff, the SIAP SE will use the Service/BMDO POCs to gain access to a 'virtual' task force comprised of subject matter experts (SMEs) who will provide engineering and system expertise necessary to complete narrow-scoped and detailed tasks requiring unique skills (Figure 4.1).

(3) Provide operational and systems engineering expertise to the SIAP SE.

(4) Participate in SIAP SE led engineering efforts to improve the performance of systems that will contribute to developing and maintaining a SIAP.

(5) Assist in characterization of issues, including problem and root-cause identification,

determination of operational impact, and identification of temporary near-term fixes or changes in TTPs that can alleviate symptoms while a longer-term solution is engineered.

(6) Assist in the conduct of engineering and systems analysis/system trades for the determination of cost-effective SIAP upgrades to legacy systems.

(7) Assist in building a prioritized list of candidate improvements, including warfighting benefit estimates and anticipated implementation costs, for validation by the JROC.

(8) Implement SIAP SE-recommended and JROC-validated fixes to currently fielded systems and architectures using a joint Service coordinated timeline.

(9) Assist in testing and certification process for SIAP SE-proposed and JROC-validated improvements.

(10) Participate in SIAP SE-led Joint engineering efforts that will lead to convergence of future systems.

4.1.2 The Strategic Planning Cell (SPC) is a small group, comprised of the SIAP SE TF Technical Director, the four Service POCs and a BMDO POC. They facilitate progress in meeting the strategic goals of the SIAP SE TF that are described in the SIAP SE TF Charter and enhance communications among key SIAP stakeholders. The SIAP SE TF will rely on Service/BMDO POCs to advise the task force on their specific interests and perspectives in order to help resolve issues and provide rationale on their position, concurrence, or non-concurrence. The SPC meets periodically to discuss emerging issues, obtain Service-specific ideas and inputs on SIAP SE TF efforts, and to formulate and make strategic recommendations (as necessary) to the SIAP SE. The SIAP SE Task Force Technical Director shall be responsible for convening the group, but any member of the Cell can recommend convening a meeting of the group. Figure 4.1 lays out the organization of the SIAP SE Task Force with the support of the Strategic Planning Cell.

4.2 The SIAP component of the TAMD integrated architecture:

a. Is defined as the process by which the information regarding aerospace objects is collected, managed, and provided to operators in support of warfighting missions.

b. Includes those devices, which sense, process, store, disseminate, and display information concerning aerospace objects, including sensor netting and ID information generation and processing.

c. Does not include the link between a warfighting unit and its weapon unless the weapon can provide information relevant to the operating environment.

d. Does not include interfaces between the sensor and the warfighting unit unless

some relevance can be shown (e.g., Inertial navigation system data from ships and aircraft).

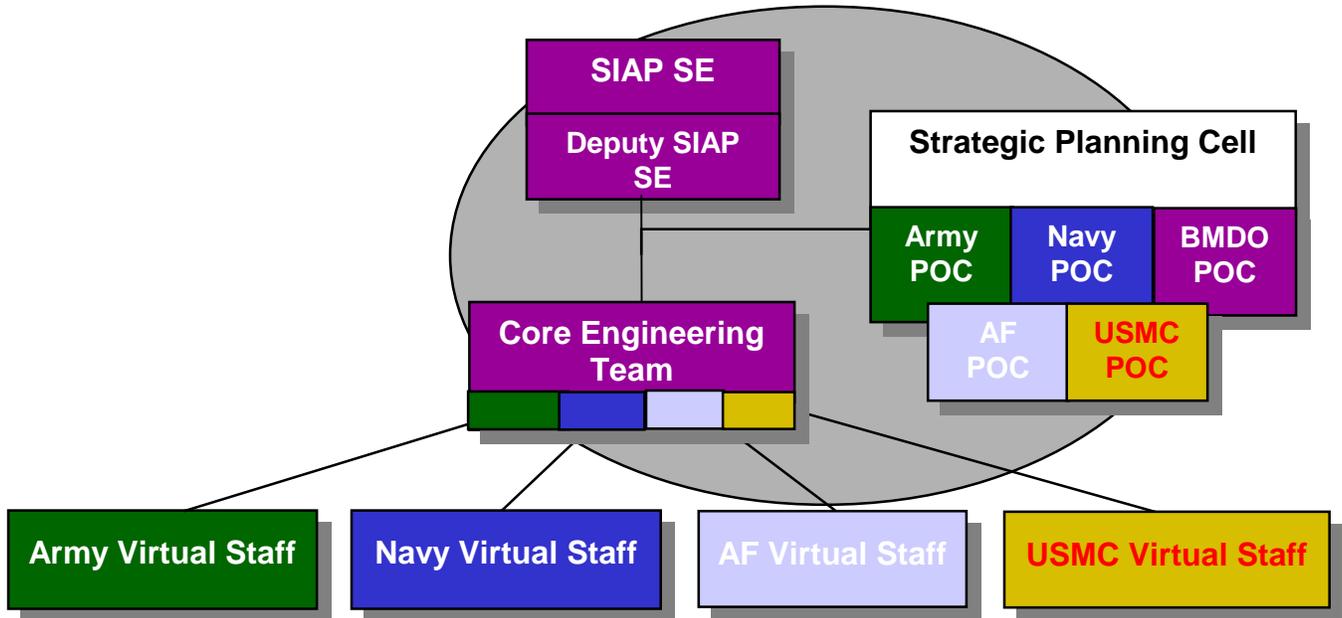


Figure 4.1
SIAP SE TF Strategic Planning Cell

4.3 In this context, “work closely” is defined as working together for the purpose of understanding program design implementations, to recommend possible changes to those design implementations, and to meet SIAP SE technical objectives. In the case of BMDO, the SIAP SE will provide SIAP inputs to the TAMD integrated architecture development effort being accomplished within the JTAMD process.

4.4 For the Army, the organizations that the SIAP SE plans to work closely with are:

- a. For operational requirements: TRADOC/SMDC-OTII.
- b. For engineering: PEO AMD.
- c. For TTP: TRADOC/SMDC-OTII.

All Army activities will be managed through the Army’s SIAP POC. Army approval/position will be obtained through the Army’s SIAP POC.

4.5 For the Air Force, the organizations that the SIAP SE plans to work closely with are:

- a. For operational requirements: AC2ISRC.
- b. For engineering: ESC.
- c. For TTP: ACC.

These Air Force activities will be coordinated through the Air Force's SIAP POC. Air Force approval/position will be obtained through the Air Force's SIAP POC (C2ISR Integration Team Chief).

4.6 For the Navy, the organizations that the SIAP SE plans to work closely with are:

- a. For operational requirements: ACNO(MD).
- b. For engineering: RDA CHENG.
- c. For TTP: Naval Warfare Development Command.

These Navy activities will be coordinated through the Navy's SIAP POC. Navy approval/position will be obtained through the Navy's SIAP POC, RDA CHENG.

4.7 For the Marine Corps, the organizations that the SIAP SE plans to work closely with are:

- a. For operational requirements: MCCDC.
- b. For engineering: MARCORSSYSCOM.
- c. For TTP: MCCDC.

Headquarters Marine Corps (AVN/APC) will serve as the functional sponsor for SIAP. Marine Corps participation in SIAP activities will be coordinated through a designated MARCORSSYSCOM POC .

4.8 For BMDO, the organizations the SIAP SE plans to work closely with are:

- a. For TAMD System and Technical View Development: BMDO/SE.
- b. For Engineering: BMDO/SE.

These BMDO activities will be coordinated through BMDO's SIAP POC. BMDO approval/position will be obtained through BMDO's SIAP POC.

4.9 Through the approved SIAP SE Implementation Plan and System Engineering Management Plan (SEMP), the SIAP SE will identify areas on which the Task Force will work.

5. Service/BMDO roles and responsibilities (discussed in refs b through g) that directly affect the working relationship.

- a. Services Only: Identify and provide on-site personnel from appropriate Service

laboratories, field activities, and Federally Funded R&D Centers (support only) to establish a core team for the SIAP SE TF. These personnel will be rated within the Task force and senior rated by their parent Services. They will bring their Service's perspectives on SIAP to the task force while crafting joint solutions.

b. Services Only: Adhere to SIAP operational requirements when validating operational concepts, Mission Need Statements (MNSs), and Operational Requirements Documents (ORDs) of programs that contribute to the SIAP capability.

c. Participate as part of the larger (virtual) SIAP SE organization.

d. Conduct engineering and systems analysis/system trades for the determination of cost effective SIAP upgrades to legacy systems.

e. Budget for validated and approved SIAP-related efforts and coordinate POM data submission for SIAP-related improvements.

f. Verify, validate and accredit models and simulations of their Service specific systems used in SIAP analyses in accordance with DoD 5000.61, DoD Modeling and Simulation (M&S) Verification, Validation, and Accreditation (VV&A).

6. Programming and budgeting responsibilities.

a. The Services and BMDO will provide funding, through the financial management processes outlined below. The funding percentages applied to the fair share allocation directed in the OUSD (AT&L)'s 26 October, 2000, Implementation letter (ref (e)) are Army, Navy, Air Force, and BMDO 22.5% each, and Marine Corps 10%. Percentages may not be modified without coordination through the SIAP oversight council and approval of the SIAP AE. SIAP SE TF funding will be Research and Development (R&D) type funds.

b. The Navy, in coordination with the SIAP AE and OUSD (AT&L) will establish a SIAP SE Program Element (PE). For FY00 and FY01, the SIAP AE will coordinate a reprogramming action (DD1415) with the Services and BMDO, to transfer funding from the Services/BMDO to the SIAP SE PE. The FY00 reprogramming will also serve as the congressional new start notification. The actual funding level for the FY01 effort will be defined in the detailed implementation plan. Once the plan is approved, the SIAP AE will submit the FY01 reprogramming action.

c. For FY02, the Services and BMDO will provide funding through Program Budget Decision (PBD) # 224, with the funding amount coordinated through the SIAP Oversight Council and approved by the SIAP AE.

d. The SIAP AE will be the Executive Agent with oversight responsibility for the SIAP SE

PE and funding. The SIAP SE will execute the funds through a support agreement with Naval Sea Systems Command (NAVSEA). The funds in this PE are subject to congressional reductions and OSD-wide reductions including inflation changes, Small Business Innovative Research (SBIR), and Small Business Technical Transfer (STTR) but will not be subject to service reductions or reprioritization within the Navy without the approval of the SIAP AE.

e. It is the SIAP SE's intention that the preponderance of SIAP resources fund Services' field engineering activities and are distributed appropriately to nurture the development of joint interoperability engineering in each Service. The SIAP SE will report regularly to the SIAP AE and Oversight Council on the current and planned allocation of SIAP funds. The intent of the funding strategy is twofold: to build a joint interoperability focus within each Service budget for long-term joint interoperability initiatives and to reduce implementation risk through active field engineering organization participation in the joint System Engineering process.

f. Any unanticipated funding required to execute the SIAP SE mission will be provided in accordance with paragraph 6.a. above or as coordinated through the SIAP AE Oversight Council.

7. Adjudication.

a. The SIAP SE TF will use existing processes such as the JTAMD and the Joint Interoperability of Tactical Command and Control System processes to solve issues requiring adjudication.

b. The SIAP SE TF will rely on the Service/BMDO POCs (described in 4.1.2) to attempt to resolve Service/BMDO issues at the lowest possible levels.

c. The SIAP Oversight Council will be the next level for resolution. As a body comprised of the Service and BMDO Acquisition Executives and providing direct oversight of the SIAP SE TF, it will be in a position to evaluate the issue and identify the best course of action for the Department of Defense. The SIAP AE, as the chair of the Oversight Council, will resolve issues (unrelated to funding and material resources) that the Oversight Council is unable to unanimously endorse.

d. Issues that can not be resolved at the AE level shall be adjudicated by the JTAMD EXCOM, with the advice of the OIPT.

8. Amendments.

Any of the parties to this MOA may propose amendments to this MOA. Proposed amendments will be coordinated through the SIAP Oversight Council for approval/disapproval.

9. Effective date and implementation.

This MOA is effective upon all signatures and will be implemented until superseded, modified, or terminated by mutual agreement. Any party may elect such actions by providing written notification to the other parties. The JROC will review the SIAP SE Charter and organizational accomplishments in 2002 to make recommendations to the USD (AT&L) on the organization's future. If the JROC/USD (AT&L) determine the SIAP SE Task Force will remain viable beyond two years, this MOA will be updated as necessary to include the funding strategy.

Paul J. Hooper Date: 29 NOV 00

Hon Paul J. Hooper
Assistant Secretary of the Army
(Acquisition, Logistics, and Technology)
(ASA (ALT))

H. Lee Buchanan III Date: 12/15/00

Hon H. Lee Buchanan III
Assistant Secretary of the Navy
(Research, Development, & Acquisition)
ASN (RDA)

Lawrence J. Delaney Date: 6 Dec 00

Hon Lawrence J. Delaney
Assistant Secretary of the Air Force
(Acquisition)
SAF/AQ

Ronald T. Kadish Date: 12/01

Ronald T. Kadish, Lt Gen USAF
Director, Ballistic Missile Defense Office
(BMDO)