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STUDY TITLE:

An Analysis of Engineering Transfer of Acquisition Systems

STUDY PROJECT GOALS:

To review, understand and prepare a study report explaining the processes that the Air Force, Army and Navy go through to prepare a weapon system for engineering transfer from the acquiring organization to the using organization.

STUDY REPORT ABSTRACT:

The purpose of this study report was to review the methods the Air Force, Army and Navy use to transition the engineering responsibility from the acquisition or developing organization to the using or supporting organization. In all three services, the engineering transfer is a portion of the overall management transition that occurs on major systems.

The data to support this study was collected from DOD Directives, Air Force regulations, Air Force Systems Command and Air Force Logistics Commands regulations, Army Regulations, DARCOM Draft Regulations, Army Tank-Automotive Command Letters of Instruction, SECNAV Instructions, NAVSEA Instructions, NAVAIR Instructions and interviews with PMs or department headquarters personnel. The data was separated into three sections in the report which discusses the policies and how they are being applied by each organization.

The report outlines how the Air Force, Army and Navy have changed their method of acquiring and supporting major weapon systems since the DOD Directive was issued implementing a program/project manager concept and how the transition of the PM responsibility would transition from the development command to the support command with only one individual responsible for the program.

KEY WORD: Engineering Management Transition.

MATERIEL DESIGN AND DEVELOPMENT SINGLE MANAGER ENGINEERING DATA

MILITARY DEPARTMENTS

NAME, RANK, SERVICE
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DEFENSE SYSTEMS MANAGEMENT SCHOOL

PROGRAM MANAGEMENT COURSE
INDIVIDUAL STUDY PROGRAM

ANALYSIS OF ENGINEERING TRANSFER

OF ACQUISITION SYSTEMS

STUDY PROJECT REPORT

PMC 76-1

CHARLES J. HOSKINS
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ENGINEERING TRANSFER:

AN ANALYSIS OF AIR FORCE, ARMY AND NAVY TRANSITION POLICIES FOR

Study Project Report

Individual Study Program

Defense Systems Management School

Program Management Course

Class 76-1

by

Charles J. Hoskins
GS-13 DAFC

May 1976

Study Project Advisor
Mr. Wayne Schmidt

This study project report represents the views, conclusions and recommendations of the author and does not necessarily reflect the official opinion of the Defense Systems Management School or the Department of Defense.

EXECUTIVE SUMMARY

This report was written with two purposes in mind. One was to provide the author with a detailed understanding of how the Air Force, Army and Navy transition system management and particularly engineering management from the developing organization to using organization. The second purpose was to provide a summary of the methods used by the three acquiring service commands for personnel interested in weapon system transfers.

The report examines the background of the system management process for the Air Force, Army and Navy. It also reflects the impact that DOD Directive 5000.1 dated 13 July 1971 had on these departments. A section on this report is dedicated to each service and their methods of transferring the engineering responsibility when the SM function is transferred.

The Air Force had a system developed to transition the aircraft system management responsibility to the logistics support organization in the early 1950's. This transitioning started when the Air Force development and supporting organization was under one command. The Air Material Command reorganized and split the research, development and acquisition organization and the logistics support organizations into two separate commands. These commands are AFSC and AFLC respectively. In early phases of the management transfer, the management responsibility was transitioned to AFLC but the engineering support was provided by AFSC/ASD. This process was used for a period of about ten years. It was very cumbersome, costly, time consuming and did not provide the system manager with adequate support to control or modify the systems he was responsible for. In the 1960-1970 time period, an agreement was reached between AFSC and AFLC

commands that the engineering responsibilities would also transition. During this period, the engineering data that was transitioned was not detailed enough to allow AFLC to do much detailed system engineering. Most of this type engineering was purchased by the system manager from the aircraft production contractor and the AFLC engineering organization provided engineering surveillance for the SM. The transitions during this period were done by directions from Commander level and was not a workable solution.

As a result of DOD Directive 5000.1 and normal progression, the Air Force has now developed a program for the transitioning of new weapon systems that should permit a satisfactory transition of engineering responsibilities from AFSC to AFLC in the future. This updated program involves AFLC personnel with an AFSC System Project Offices (SPOs) early in the concept or validation phase of a weapon system life cycle and they continue this support until they return to the system management office at an AFLC/ALC with the responsibility for that weapon system.

The Navy has a slightly different approach to this type program, but the concepts used in their transitioning process has traced similar paths as did the Air Force program. Some of the major differences in their programs are that there are several more organizations involved in their programs, due to the nature and time required to produce the complex systems of a ship. The Navy also transfers the ship project management responsibility back to the Ship Acquisition Project Manager (SHAPM) from the Ship Logistics Manager (SLM) on some major development efforts.

The Navy Air Systems Command (NAVAIR) is charged, by charter, to maintain the system integrity and effectiveness. In this case, they transfer the system management and engineering responsibility but restrict the engineering effort by the logistics support organization. This restriction allows the support organization's engineer organization to develop modifications and provide field support as long as they do not affect the system integrity.

Until 1976, the Army Acquisition and Support Command was under one organization, the Army Materiel Command. When these two commands were together, the management of a system was transitioned from the development organization to the using organization by mutual agreement and the development organization continued to provide the engineering support required to maintain and update these systems. As a result of the DOD Directive and a reorganization, the Army Materiel Command has now been restructured into two commands under one commander. This new organization is called the Development and Readiness Command (DARCOM). Under the reorganization, the Army systems will transition from the developer to the user and the engineering support will also transition. The engineering transition will provide the user with modification and field service engineering support but the system integrity engineering responsibility will still be retained by the development command.

The reader should benefit from the report by obtaining an overview of the various methods the Air Force, Army and Navy use in transitioning these engineering efforts. This report also provides a condensed version of these efforts that may be of assistance to new program managers in expanding their knowledge of transitioning procedures.

ACKNOWLEDGEMENTS

Engineering Transition of Major Weapon Systems has been a real world interest to the author for several years. There has always been the deep seated idea that there must be a better, more positive or correct way to accomplish this transfer from the acquisition command to the using command. Thanks to the assistance of Mr. Wayne Schmidt, my advisor on this report, Mr. Ned Pooley for my contacts at NAVSEA and LTC William Chen, USA, for my contacts at DARCOM, without whom the author could not have completed this Study Report.

Appreciation is also extended to COL Frank Matthews, USA, Chief of AMARC, COL James J. O'Quinn, USA, and Mr. Fordyce A. Edwards, DARCOM, for the data and memorandum on the Army's transition process, to Mr. H. W. Schmidt of NAVSEA for all the support, data and personal time he spent assisting the author in obtaining and understanding the Navy's transitioning process.

The author would also like to thank LTC Jerry Huff, USA, XM-1 PMO and MAJ Don Derrah, USA, CAPT Tom Bucher, USAF, and Mr. John Mathias for their assistance in getting data from their organizations on how their projects transferred or plan to transfer the weapon system to the user.

Finally, and most importantly, I take this opportunity to extend recognition and sincere gratitude to my wife, Joyce, for her enduring understanding, cooperation, and sincere support during this academic endeavor. Without the full support and understanding she provided, I would have had extreme difficulty in coping with the extended absence while attending the Defense Systems Management School.

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SECTION I

INTRODUCTION

General

On 13 July 1971, then Deputy Secretary of Defense David Packard, signed into effect a Department of Defense Directive that outlined how all new major defense systems directed by the Secretary of Defense/ Deputy Secretary of Defense (SecDef) would be acquired. This directive, DODD 5000.1, applied to all programs that had a dollar value of 50 million dollars for Research, Development, Test and Evaluation (RDT&E), or an estimated production cost in excess of 200 million dollars.

This directive also applied to systems directed by SecDef that were considered nationally urgent or recommended by DOD component heads or the Office of Secretary of Defense (OSD) officials. (11:2)[1]

DODD 5000.1 directed that in addition to the above requirements, the management principles in this directive would also apply to all programs.

The mode of operation to accomplish the efforts outlined in the above paragraphs were as follows. To successfully develop, produce and deploy a major defense systems, the primary requirement is to be able to depend on competent people who can rationalize priorities and clearly define responsibilities. The responsibility and authority for the acquisition of major defense systems shall be decentralized to the maximum extent practicable and be consistent with the urgency and importance of each program.

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[1] This notation will be used throughout the report for sources of quotations and major references. The first number is the source, keyed to the bibliography. The second number is the page reference.

The directive also states that the development and production of a major defense system shall be managed by a single individual (Program Manager) [PM], who shall have a charter which provides sufficient authority to accomplish recognized program objectives. (11:3)

As a result of DODD 5000.1, each service addressed in this report has developed its own regulations outlining the Program/Project Manager's functions during the acquisition, development, production and deployment phases of a system's life cycle. This report deals with the phases that the engineering responsibility is transitioned from the acquisition command to the using command and how some of the PM's organizations have actually handled the Engineering Transfers of their systems.

PURPOSE AND GOALS

The purpose of this study report is to describe how the Air Force, Army and Navy acquisition or implementing command transitions or transfers newly acquired weapon systems, subsystems or components to the field activities, supporting commands or logistics commands. A copy of the regulations that provide the policies for the three services is available at the Defense Systems Management School so the reader can get a first-hand understanding of the methods used and the terminology each service has. A copy of a Memorandum for the Record is attached to point out how the Army handled its transfers prior to the release of a regulation to cover this area of responsibility.

METHODOLOGY

The information contained in this study has been based on data, policies, regulations and interviews received from the Air Force Systems Command, Air Force Logistics Command, Army (DARCOM), Army Tank-Automotive Systems Development Center (TASDC) and Navy (NAVSEA). There is also data and information contained in this report obtained from the students, faculty and library at the Defense Systems Management School, Fort Belvoir, Virginia.

LIMITATIONS

The information contained in the study relates to the transitioning of engineering responsibility of a weapons system from the acquisition command to the using command, constrained by the Air Force, Army and Navy policies and procedures.

ORGANIZATION OF THE STUDY

Section I includes the general introduction, the purpose and goals of the study, the methodology, the limitations and the organization of the study.

Section II discusses the Air Force Systems Command and Air Force Logistics Command policies on engineering transfer and how some Air Force systems have actually been transferred.

Section III relates how the Army transitions its systems from the Development Center or Command to the Readiness or Commodity Command.

Section IV examines the policies the Navy uses to transition an aircraft system or ship between the Naval Systems Command representative and the field activity selected by the logistics and fleet support organization and the material acquisition groups.

Section V summarizes the Engineering Transfer process between the three military services and draws together the thoughts of some of the representatives interviewed for this report.

SECTION II

AIR FORCE TRANSITION PROCEDURES

Policies

The Department of the Air Force prepared AFR 800-2 dated 16 March 1972 as a result of DOD Directive 5000.1 dated 13 July 1971. In this regulation the policies for management of all Air Force acquisition programs funded or procured under Research, Development, Test and Evaluation (RDT&E) was stated.

AFR 800-2 delegated the maximum authority and responsibility for acquiring a new system to the implementing command which in turn designated a program manager to conduct the program. In most cases, the implementing command in the Air Force is the Air Force Systems Command. The program manager is responsible for his program and is expected to keep it within the approved performance, schedule, and funding parameters. As can be seen from this regulation, the program management approach has decentralized the management process and moved it down to a single management concept with a single individual responsible for the program management phase of a program. This authority has been passed down from the Secretary of Defense through the Secretary of the Air Force to the implementing command and on to a single individual. All levels of higher authority have reserved the right to make the appropriate review of any program and grant approval actions. All of these reviews and approved actions are, however, supposed to be conducted with a minimum amount of interference to the Program Management Office (PMO) and be limited to the efforts that require their action to meet the overall needs of the

Air Force. Some of the programs directed by the Secretary of the Air Force will be of such a nature as to require special management reviews to keep the Secretary, Chief of Staff and other staff members advised on the progress of major programs. (3:1)

Under the program mangement concept the Air Force has established the responsibilites. They are identified with four organizations: Headquarters, USAF, the implementing command, the program manager and the participating commands. Headquarters, USAF, establishes and verifies the program requirements, conducts program advocacy, issues program management directive and supplements the directive as necessary to reflect the implementing commands policies.

The implementing command also appoints the program manager, delegates maximum responsibility and authority and provides the appropriate staff for the PMO.

The program/project manager organizes, plans, directs and controls the program using the participating commands for advice and recommendations. He makes technical and business management decisions within his authority and tailors his organization to manage the program identified in the PMO. He prepares and issues a Program Management Plan (PMP) that agrees with the PMO and command supplements. The PMP is directive in nature and involves the participating commands. The program manager is responsible to assure that all organizations associated with his program are involved and they are talking to each other and coordinating their efforts. The program manager has to continually maintain an updated assessment of his program. If he does not have the participation, coordination and communication between his participants, he will not be

current on all phases of his program. It is very important that the manager be current on the threat his system is expected to operate in, how his program is progressing on its schedule and most important in this period of time, how he stands cost-wise. He has to be able to compare program performance versus program requirements so he can advise higher headquarters of any programmed or required program change or any potential changes in his program that breaches the cost thresholds or changes his contract, the Decision Coordination Paper (DCP), between him and the Secretary of Defense.(3:8)

The Program Management Plan (PMP) that was prepared by the PM involves all participating organizations associated with the project or program. In the Air Force program, one of these participants is the Air Force Logistics Command (AFLC). Headquarters, AFLC, will assign a project officer or office at headquarters or select an Air Logistics Center (ALC) and a System Manager (SM) to act as their representative during the acquisition phase of the program. When a prime ALC is selected, they will provide a staff focal point, SM, that will provide a staff of representatives that support the Air Force Systems Command (AFSC), System Project Office (SPO). These people may or may not be assigned to the SPO but will work with them as required during the conceptual and validation phases of acquisition. This is a portion of the program management concept that has made dynamic changes in the last five to ten years. This change will be discussed later, but at the present time most major programs will have a cadre of people from AFLC that will be assigned to the AFSC SPO early in the concept phase of the program, and will follow the system through full scale development and early production. These people will provide the logistics inputs to the SPO and

will make up a nucleus to return to the newly assigned ALC, which, in most cases, is the one assigned to support the program during the acquisition phase.

During the acquisition phase of the program, the AFSC PM and SPO use AFR 800-2 and AFSC supplements to AFR 800-2 as their guidelines for the program management concepts. These regulations are approximately six years old but have been significantly revised as late as October 1974.

The Department of the Air Force also released AFR 800-4 in November of 1971 addressing the "Transfer of Program Management Responsibilities" and who would be responsible for various phases of the acquisition of a system. This regulation has been revised as late as 10 March 1975. It is apparent from the rapid revision of these regulations that the transitioning environment has become very dynamic in the past few years.

AFR 800-4 outlines the Air Force policy and assigns the responsibilities for transferring program management responsibilities from the implementing command to the supporting command. The implementing command is, in most cases, The Air Force Systems Command. They are charged with the responsibility for acquiring major systems or equipment for the Air Force inventory. (4:1) The Program Management Responsibility (PMR) is assigned to the acquisition organization and the supporting organizations provide support to the PM as required by the PMO. As a result of the PMR and the way the Air Force is organized, these progress as a normal progression and is referred to as a Program Management Responsibility Transfer (PMRT). The transfer that the PMRT accomplishes transfers a system by series or equipment by designation to the supporting command (AFLC). (4:1) Under the new guidance provided by AFR 800-2, AFR 800-4, AFSC/AFLC 800-4 and the new AFR

800-19 to be released soon, a date is established to actually transition the program management responsibility as well as the engineering responsibility which is addressed in the PMRT.

The PMRT plan outlines all actions, agreements and requirements necessary to transfer the PMR and establishes dates that these actions or events will be accomplished. The plan identified the responsibilities for all pending tasks and how they are time-phased for action and when the transfer is to be completed.

The engineeering data transfer is included in this plan. The data that is involved in this transfer is engineering specifications, engineering drawing standards, engineering analysis, engineering reports and any other engineering data that was prepared or acquired by the design organization that defines the design, performance, manufacturing, test qualifications, or inspection requirements for items or services. All of this plan, which includes the engineering data, has to be approved by both the AFSC/PM and the AFLC/ALC Command or the SM/IM as appropriate. (5:1) It should be apparent from the above listings and diverse responsibilities why it is very difficult to establish a transfer package, let alone a date. In the next portion of this section the reader can see how from actual practice the transfer action has changed drastically from the early 1950 time frame to today's environment and how, even though this concept has been blessed from the highest level in the command chain, that it doesn't always proceed that way.

APPLICATION OF POLICIES

In the 1940 - 1950 time period, a weapon system was acquired for the Air Force by a cadre of personnel located at Wright-Patterson AFB. In this time frame both AFSC and AFLC personnel, as we know them today, were located almost in the same building at WPAFB so when the requirements for a particular skill came up to support a new program it was not too difficult to identify the person or persons needed to accomplish the task and to get them assigned to that organization. Also, during this period of time there was a major war going on plus other police action that made dollars more available to get a contractor to accomplish a major portion of the design effort for the Aeronautical Systems Division (ASD) which was the PM on these programs. In the 1940's, the Air Force was also building plants to produce and repair aircraft and equipment for the war-time operation. This time period is when most, if not all of, the Air Force Logistics Centers were built. During this period of time ASD provided or acquired the engineering support for the weapon systems. Later on, after World War II, the aircraft plants that the government owned were vacated or taken over by the government to maintain the aircraft. During this time and until the early 1950's, the weapon system inventory was such that ASD still provided the engineering support to AFLC which had taken the management responsibilities for the B-36, B-47, C-54, C-97, C-119, C-124 and many other types of aircraft. By the mid 1950's it was quite apparent that the present inventory plus new requirements was getting too large for ASD to retain and provide the type engineering support required to maintain these aircraft as well as design new ones.

When this support was required and ASD could not provide it, the system manager or item manager would go directly to the contractor to get the data or engineering required to maintain or update the systems. The system manager and his organization would review the data and determine if he could update the system or correct the problem using his in-house manufacturing capability. He would then take the data or proposals to Headquarters, AFLC, and have ASD approve the engineering package. He would then buy or build the parts and proceed with his program.

By the mid-1950's, AFLC had acquired a few engineers at the different installations and they were providing engineering support in the areas they could and working with ASD on the others. By this time it had also become apparent that the engineers could provide better support to their facilities than could ASD so an engineering organization was established at each AFLC facility. During this time the AFLC engineers could make system changes but AFSC (ASD) could also make changes and also had to approve the airworthiness of the aircraft modifications. This caused a mass state of confusion as well as a lot of friction between the two organizations. It was obvious by the late 1950's that something had to be done, but what? This effort continued until the early 1960's when it was decided that the total responsibility of a weapon system should be transitioned from ASD to AFLC. During this period of time ASD maintained a System Project Office (SPO) on all the weapon systems and AFLC Headquarters had a project office on the weapon systems. When the transitioning started, it was found that the data required by AFLC to maintain their weapon systems had not been acquired by ASD or the data was not detailed enough to do the engineering design. This problem took many

years and several million dollars to resolve. In fact in some cases, it could only be solved by going only to the design contractor to get any new design efforts accomplished.

To give some examples of this, the author will address the B-52 and C/KC-135 series aircraft. This is only an example because this same problem occurred on apparently every system in the inventory at that time.

The last B-52 aircraft was produced and delivered to the Air Force in 1962. The engineering transfer was not completed until the 1968 - 1969 time frame. Even after the so-called transfer was accomplished, the Air Force, AFLC, Oklahoma City Air Materiel Area (OCAMA) still had to go to the manufacturer of the aircraft for engineering designs in the air frame area and to the prime avionics systems contractors for support on these systems. In most cases today, the AFLC/ALC now has enough experience on their prime system to be able to design new changes on their own.

The C/KC-135 aircraft had even a worse situation to cope with on its engineering transfer. This particular aircraft had thirty-nine configurations, and so many electronic systems and maintenance contractors involved in the early days, that the transfer has not been completed even though the last aircraft was produced in the 1961 - 1962 time period.

To give a more current example of this effort, the author will address a special fleet of aircraft that has been configured in the last five years. This small fleet of aircraft, six, were completely reconfigured so the user would know what configuration they were when he received them. The design effort on the new systems to be installed was accomplished by AFSC with AFLC support during the development. Totally new engineering data was

developed on the aircraft and the engineering data developed by AFSC contractors was for all new avionics systems to be installed. The installation was completed approximately two years ago and even with AFLC and AFSC joint command level supporting the transfer agreements, the details could not be resolved until AFLC and AFSC commanders reviewed the problems and directed that the effort be accomplished. A Lieutenant General, at AFSC, was assigned to get this effort completed approximately six months ago and the agreement is almost complete at this writing. From these examples, it can be seen that the engineering transition in the past has been a very time-consuming and costly process.

The process today, however, is greatly improved. In an interview with two PMO representatives on two new systems, it appears that we in the Air Force can now approximate reasonably close when the transfer can actually occur. On a joint Air Force-Navy program the engineering data has been reviewed by both supporting organizations and it appeared to be satisfactory with both the implementing command and the supporting command. This transition is scheduled to occur in late 1976.

On a new major weapon system the engineering data is being developed by the contractor as he designs the system. The implementing command (AFSC) and supporting command (AFLC) are reviewing this data as it is being prepared. Although the procurement of this data is being delayed for a year or more due to a lack of funding, it appears to the SM/engineering organization and AFSC (SPO) personnel that it will be complete and ready to transfer when the weapon system is produced.

The program management responsibilities which include the engineering transfer, will be accomplished at the completion of the production phase.

This, however, may occur at a more logical point in the life cycle if it is mutually agreed upon. (3:1)

SECTION III

ARMY TRANSITION PROCEDURES

The Department of the Army has had the acquisition and support of major weapon systems under one command, The Army Materiel Command (AMC) redesignated the Army Development and Readiness Command (DARCOM), has had the responsibility to develop, acquire and support the weapon systems in the past under one organization. Under this type of system management the engineering support was retained with the developer. This had been the case until late 1975 when it was determined to reorganize the structure and have two commanders. The "Basic Policies for Systems Acquisition by the Department of the Army" was revised in November 1974 to incorporate the latest thinking in the Department of Defense. (6:1)

During the 1970 - 1975 time frame the Army improved their research and development efforts using a modest program and avoiding, to the most part, any indication they planned to produce the product until the technical risks and uncertainties were identified. There were no formal requirements made that would imply a production decision was pending until a thorough advanced development program had been conducted on systems or components that adequately demonstrated the technical and operational feasibility. (6:2) Before the system could be accepted, it had to be jointly approved by the combat developer and the material developer. They had to jointly agree that the material concept had sufficient capability and technical potential to warrant the resources to support the program. The two organizations would then prepare a Letter of Agreement (LOA) documenting their support rational for the system. This Letter

would then be forwarded to higher headquarters for a decision. (7:2) In this organizational structure the combat developer would act as the using organization's representative.

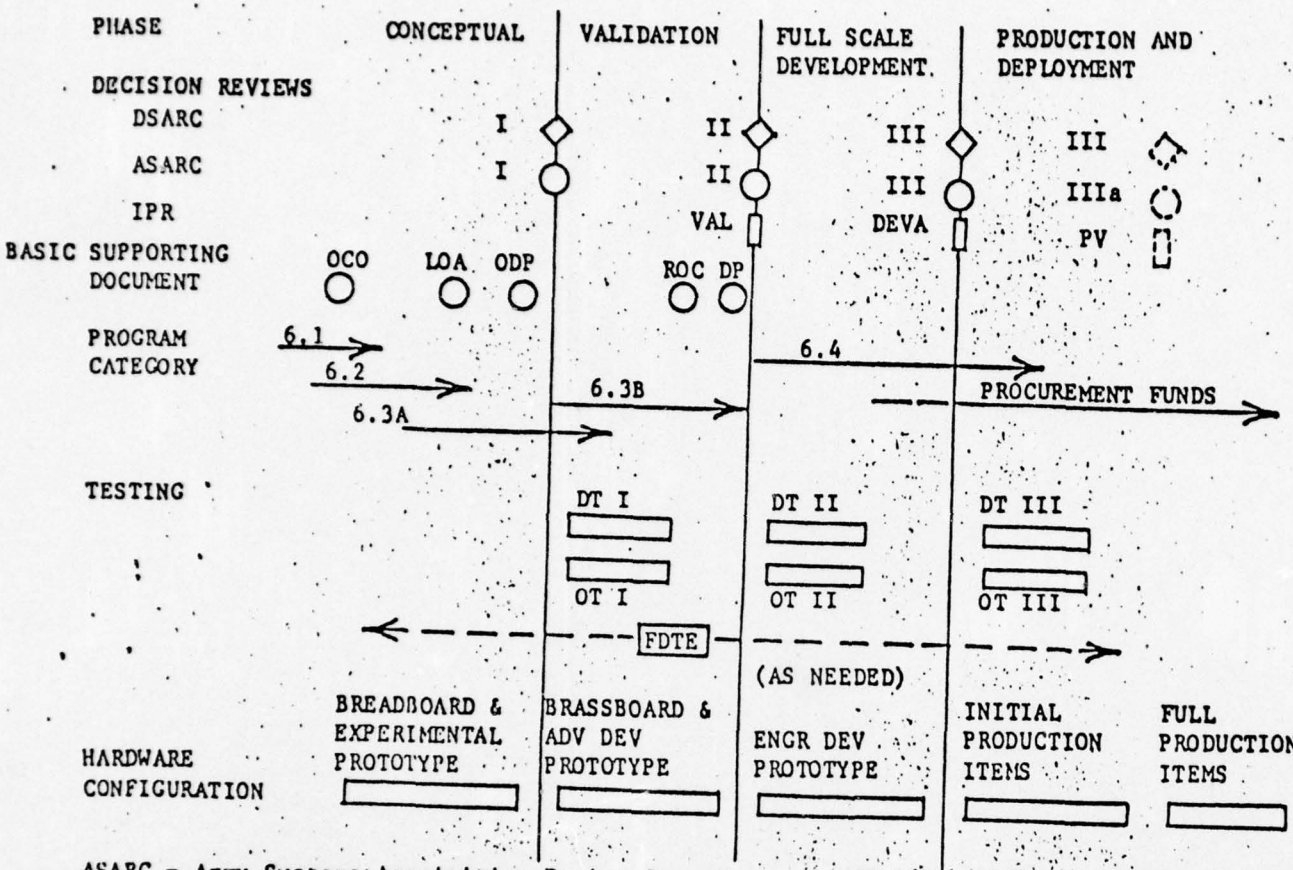
Figure 2.1 shows how the Army has its program laid out for acquiring a new system. The reader will see some additional terms and reviews that were not in the Air Force procedures. This figure was incorporated so the reader can see the various phases an Army program goes through and how well the program gets scrubbed before it is approved. It can also be seen where various types of money is spent on the program.

The author will be following the Tank-Automotive Development Center (TADC)/Tank-Automotive Command (TACOM) procedures primarily throughout the remainder of the Army section; however, the PM organization will be addressed first.

In June 1975, AR 70-17 was revised. In this revision, the material developer was the organization that would prepare the Project Manager Charters for the Deputy Chief of Staff for Research, Development and Acquisition. They would also establish the project manager position requirements, specifications and personnel qualifications. They would identify personnel positions by skill and grade level required by the PMO. (8:7)

Under this type of management program, the PM is responsible for developing, processing, producing and logistically supporting his system in accordance with his Charter, Letter of Agreement or Required Operational Capability (ROC), the Outline Development Plan (ODP), and the Development Plan (DP). The PM will use full-line authority as defined in one of the procedures mentioned above to plan, organize, direct and

SYSTEM ACQUISITION CYCLE



ASARC - Army Systems Acquisition Review Council
DEVA - Development Acceptance
DSARC - Defense System Acquisition Review Council
DP - Development Plan
DT I(II)(III) - Development Test I(II)(III)
FDTE - Force Development Testing and Experimentation
IPR - In-Process Review
LOA - Letter of Agreement
OCO - Operational Capability Objective
ODP - Outline Development Plan
OT I(II)(III) - Operational Test I(II)(III)
PV - Production Validation
ROC - Required Operational Capability
VAL - Validation
Program Category:
6.1 - Basic research
6.2 - Exploratory development
6.3A - Advanced development (non-system)
6.3B - Advanced development (system)
6.4 - Engineering development

Fig. 2.1

control his approved project. His areas of authority will cover reviews of proposed contractual actions, approve in-house scheduled projects, maintain evaluation and control schedules to update the master schedule (AR 70-16), maintain an updated DP, keep higher headquarters up-to-date and be ready to support ASARC/DSARC meetings, OSD management reviews and Department of the Army reviews, maintain production schedules, compile and maintain a complete Technical Data Package (TDP), insure that environmental consequences are addressed, and execute trade-off on his system in accordance with his LOA. (8:2-3) He also reviews military specification and standards to assure that they apply to his program. He prepares and secures the approval of his project transitioning agreement. The PM works with all concerned organizations to determine the amount of developmental and operational testing required to evaluate his system. He works with TRADOC to develop the data required on cost schedules and logistics to support the cost and operation effective analysis made on his program.

The Army presently has a more positive approach to staffing the PMO's than do the Air Force and Navy. They have very specific regulations and procedures established for manning their offices and appear to follow these procedures very closely. (1:1) The Air Force and Navy are in the process of developing programs that will accomplish this same effort. All of the PM type programs are getting top level visibility so the personnel problems should be resolved at an early date in the future.

The transitioning effort in the Army has to be briefed up through the appropriate channels to the Secretary of the Army. The Army's transition date is tied to the Initial Operational Capability (IOC). The responsibility for the logistics support will be transferred from the Program/

Project Manager to the System Support Manager (SSM) or Product Manager at this time. (8:2-9)

The proposed (Draft) AMCR which is in Appendix 1 of this report, indicates that the transition from the development command to the logistics command will occur on a jointly agreed upon date and is not tied to the IOC date as was the above mentioned regulation in the draft AMCR. (9:3)

APPLICATION OF POLICIES

The information contained in this section of the report is based on the proposed transition regulation, a Letter of Instruction, between the Tank-Automotive Development Center (TADC)/Tank-Automotive Command (TACOM) and other commands and organizations associated with their program and personnel interviews with Army personnel associated with Army PM offices.

One of the major points involved with the Engineering Transition effort in the Army is this new requirement for them. In fact, the Development Command and Readiness Command are not divided as of this date. The reorganization of DARCOM is in process at the writing of this report. After the reorganization is complete, the transitioning process will be implemented.

Conversations with Army PM personnel indicated that the only transition they were concerned with on their programs was the transitioning of the weapon system from the developer to the user. The engineering support for that system remained with the developer.

In the past, the user would identify any problem he was having with the system, and notify the developer of that problem. The developer would assess the problem and either assist the user in obtaining data to define the problem or advise the user of data he required to resolve the difficulty or design. The developing organization would then design the fix and provide the using organization with kits to correct the difficiencies or provide those kits to the overhaul facilities for them to install when the unit returned for its periodic overhaul.

The new procedures that are being prepared and implemented today will change this process somewhat. Under these new policies the user will have some new engineering responsibilities transitioned to his organization. However, any major engineering effort will still be supported by the developer. An example of the type of engineering transfer the author is describing is provided in the next paragraph.

To retain continuity in the engineering effort throughout the entire material life cycle of a system, the program dictates that the primary design engineering responsibility be retained in the development center. Engineering functions that impact the equipment design will remain the responsibility of the developer. In this case the Tank-Automotive Development Center (TADC), is the responsible organization. (10:3g) The engineering functions performed by TADC are based on engineering-design interrelationships and the need to assure life cycle integrity. TACOM will have the engineering function required to support the material readiness mission responsibilities which are continuous in nature and are concerned with the Production Deployment Phase of the systems life cycle. TACOM engineering will provide the technical interface with the contractor on any TACOM procurements to resolve technical problems. If any of these problems relate to design integrity, it will bring TADC back on the program which will require a TADC/TACOM engineering interface. For any TACOM fielded system, the TACOM engineers will provide a field service engineering capability for investigation of any technical problems and will assist the user as required. If any of these problems reveal a design integrity problem, TACOM will provide TADC data for a product improvement action. The Letter of Instruction directs that minor modifications that

do not alter the design parameters of safety, reliability, durability and interchangeability and involve little engineering and testing, can be handled by TACOM, as can be seen from this direction. TACOM is authorized to do only minor engineering on product improvement efforts, maintenance engineering, value engineering and production engineering.

Under this type of a transition, it is difficult to determine what engineering data will be transitioned to the user (readiness command) and retained by the developer (development command). If the reader desires additional insight into this program, the author recommends the review of the Letter of Instruction in the Apprendix.

SECTION IV

NAVY TRANSITION PROCEDURES

Policies

The Department of the Navy has several different approaches to the transitioning of a major weapon system, from the developing organization to the supporting organization. The Navy uses one method for its surface ships, a slightly different method for its aircraft systems and a significantly different process for its subsurface weapon system engineering transfers. In this section of the report the author will address the method used by NAVAIR and NAVSEA.

The Navy had a system developed for transitioning management responsibility of a weapon system prior to the release of DOD Directive 5000.1 dated 13 July 1971. This regulation changed their process enough that a new procedure had to be developed for new weapon systems to be acquired after the release of this regulation. The Navy (SECNAV) released their Instruction 5000.1 on 13 July 1971 also. After various organizations in the management hierarchy reviewed this regulation and applied it to their own organizations, it was determined that several changes needed to be incorporated to be able to institute the DOD Directive. On 13 March 1972, the Secretary of the Navy, John H. Chafee, signed into effect the revised SECNAV Instruction 5000.1 that identified the responsibilities of the different levels of Navy management. It also addresses the levels of authority and stated that these levels should be minimized and programs that involve two or more components of the service will have a PM assigned from the component having the dominant interest. (13:IIIB)

This regulation also addresses the responsibilities and relationships between the Chief of Naval Operations (CNO) program sponsors, the CNO program coordinators, CNO development coordinators and the Navy Material Command (NMC) project managers in the acquisition process of a weapon system.

The SECNAV instruction was revised on 22 May 1975 and signed out by J. William Middendorf II, and again on 14 January 1976 by O.S. Potter, Secretary of the Navy and Under Secretary of the Navy respectively. This rapid revision of a major directive indicates how dynamic and rapid changing the program/project management field is.

The author will not reiterate the details involved in DODD 5000.1 in assigning a program manager (PM) and how the office interfaces with the various other organizations. These details are explained in the Air Force section of this report.

When the PM organization in the Naval Air Systems Command (NAVAIR), prepares the Transition Agreement (TA) with the supporting organization in the Logistics and Fleet Support (L/FS), the L/FS identifies the Prospective Cognizant Field Activity (PCFA). The PCFA is mutually agreed upon between the L/FS and the Material Acquisition Group (MATACQ). After the TA is prepared, it becomes a directive which is enforceable at Naval Air Systems Command Headquarters level. (12:5)

The Transition Agreement is prepared by types and classes of equipment for which engineering cognizance is expected to be transferred now and in the future. These agreements are signed by the assistant commanders of Logistics and Fleet Support, the Commander of MATACQ and the commanding officer of the PCFA. When these agreements involve a Naval Air Rework Facility (NARF), the cognizant Naval Air Systems Command representative

also has to sign the agreement. The Transition Agreements have to be coordinated with the Configuration Management Office (AIR-01A6), Project Support Branch (AIR-1041), Financial Management Division (AIR-402) and the Acquisition Control and Resources Division (AIR-501) during their preparation. (12:6)

The engineering transfer of responsibility for these systems has some restrictions involved with it. The restrictions of the transfer of in-service engineering cognizance or assignment of production support responsibilities for service equipment to fill activities, does not relieve the cognizant groups or division of NAVAIR of their responsibilities to provide engineering and production support for maintaining the effectiveness of that equipment. (12:5)

The Naval Sea Systems Command (NAVSEA) had a different approach to the transitioning of their ship systems. The policies discussed in this section applies to all such vessels and crafts that NAVSEA has maintenance responsibility for, except those vessels specifically designated to remain under the Ship Acquisition Project Manager (SHAPM) for maintenance.

To provide a little background on NAVSEA, Naval Ship Engineering Center and Ship Logistics Managers (SLMs), the author will start with the responsibilities assigned in the PM's Charters. The charter assigns the responsibility to manage the development, design, construction or conversion of a ship program to the SHAPM. The SLMs are assigned the responsibility of overhauling or modernizing ships while they are assigned to the operating forces. The Type Commander (TYCOM) has the responsibility to maintain and repair these ships with the SLM providing contract and technical support. The

management transfer for a ship which included the engineering transfer, occurs at or near the end of the Ship Construction Navy (SCN) Obligation/ Work Limiting Date. This date is normally eleven months after the completion of fitting the ship. In the case of submarines, this date is on the delivery date. (14:3)

It is interesting to note that in the Navy, the reverse of the management transfer can also occur. In the Navy, new major programs may come into being that will require the Systems Acquisition Project Manager to take the management responsibility of a ship system back from the SLM. The reverse process is identified to the original transfer. The Integrated Logistics Support Plan (ILSP), the Depot and Logistics Management Plan (SLMP) and the Ship Acquisition Plan (SHAP), have to be updated to show the current status of the ship before it is transferred back to the SHAPM.

The SHAPM/SLM transition will normally start about six months prior to each ship delivery. This is not the case on major complex systems like the TRIDENT submarine program. On these major systems it starts approximately eighteen months prior to the ships delivery. A transitioning conference is held for surface ships approximately thirty days before the SCN obligation work limiting date. During this conference the attendees will discuss the Transfer Plan that was sent to these organizations thirty days prior to this meeting. This conference will have the SHAPM, SLM, TYCOM, other supporting activities, SEA 04 and SEA 06 in attendance. (14:4)

The author would like to point out that in the above paragraph the reader can see how complex and dispersed the control of various phases of responsibility for a naval system can be. This will be discussed in more detail in the "Applications and Policies" of this report.

The completion of the transfer is accomplished by the SHAPM preparing a transfer of management responsibility memorandum, having the SLM indorse and accept it and then forwarding it to the Platform Director. The SLM also has to prepare correspondence to the CNO, TYCOM and others, notifying them of the transfer.

At this point in time the reader is wondering if the author covered all the details of the policies. These details have been covered but they have actually been left flexible by the Navy because of the variety of programs they have to contend with. The Navy supports air systems, surface systems and subsurface systems for the Navy plus air and surface systems for the Marine Corps.

The following three charts will give the reader some insight into the Navy's organizational structure and how weapon systems are acquired or supported by these organizations.

COMBATANT SHIP ACQUISITION EVENT PHASING AND SYNCHRONIZATION

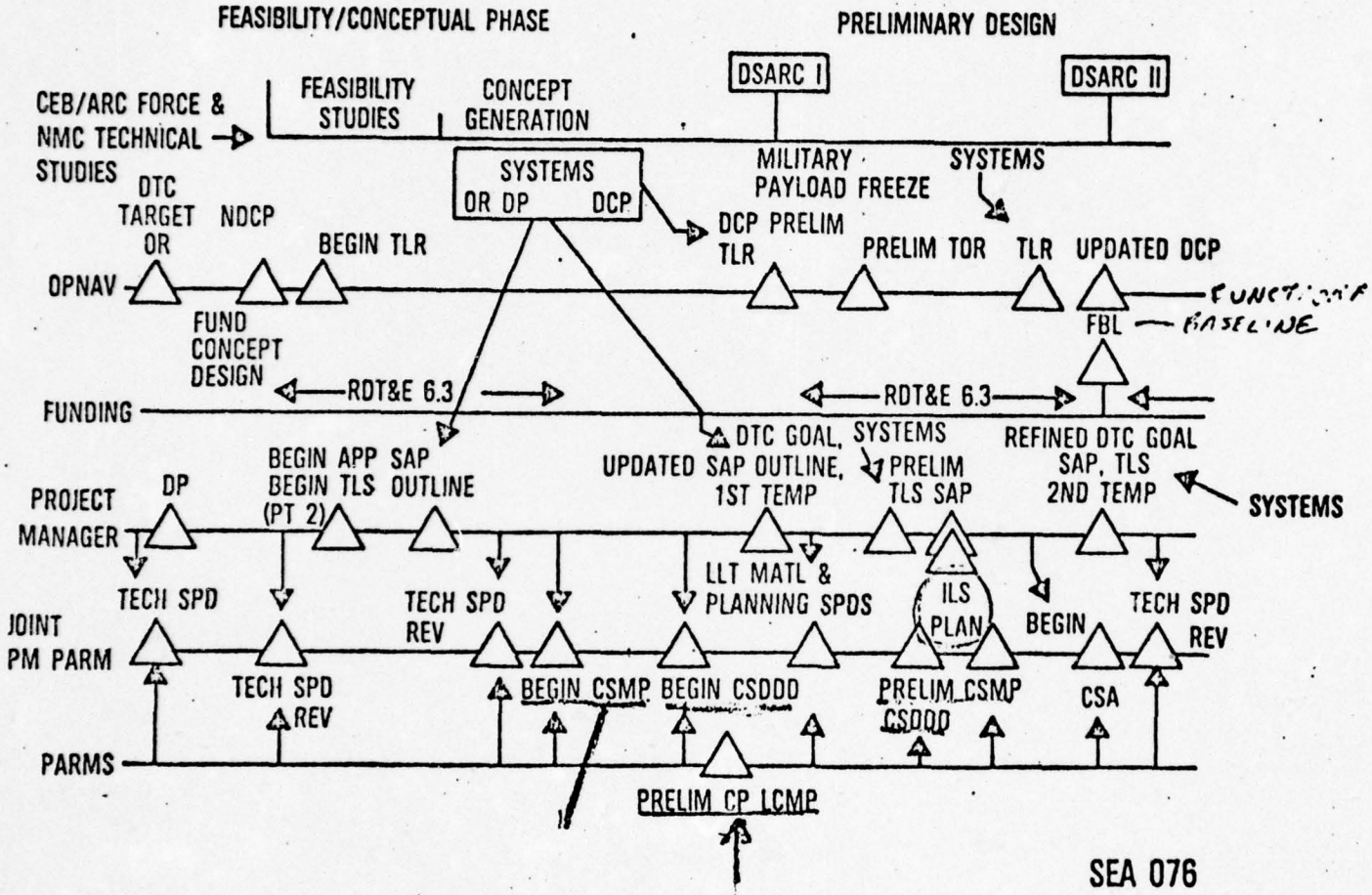
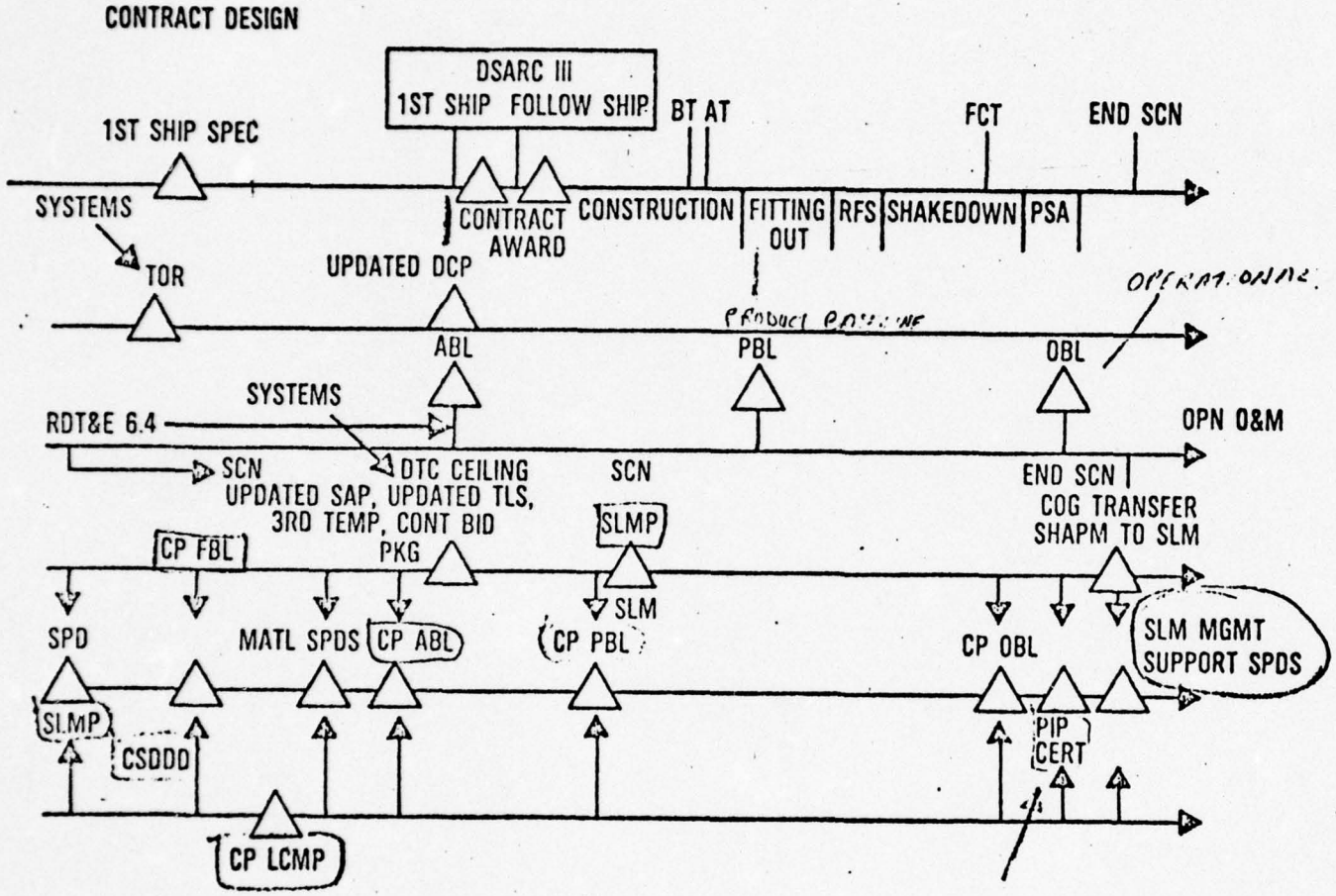


Fig. 1

COMBATANT SHIP ACQUISITION EVENT PHASING AND SYNCHRONIZATION



SEA 076
6/18/75

Fig. 2

WEAPON SYSTEM ACQUISITION
EVENT ACTIVITY PHASING

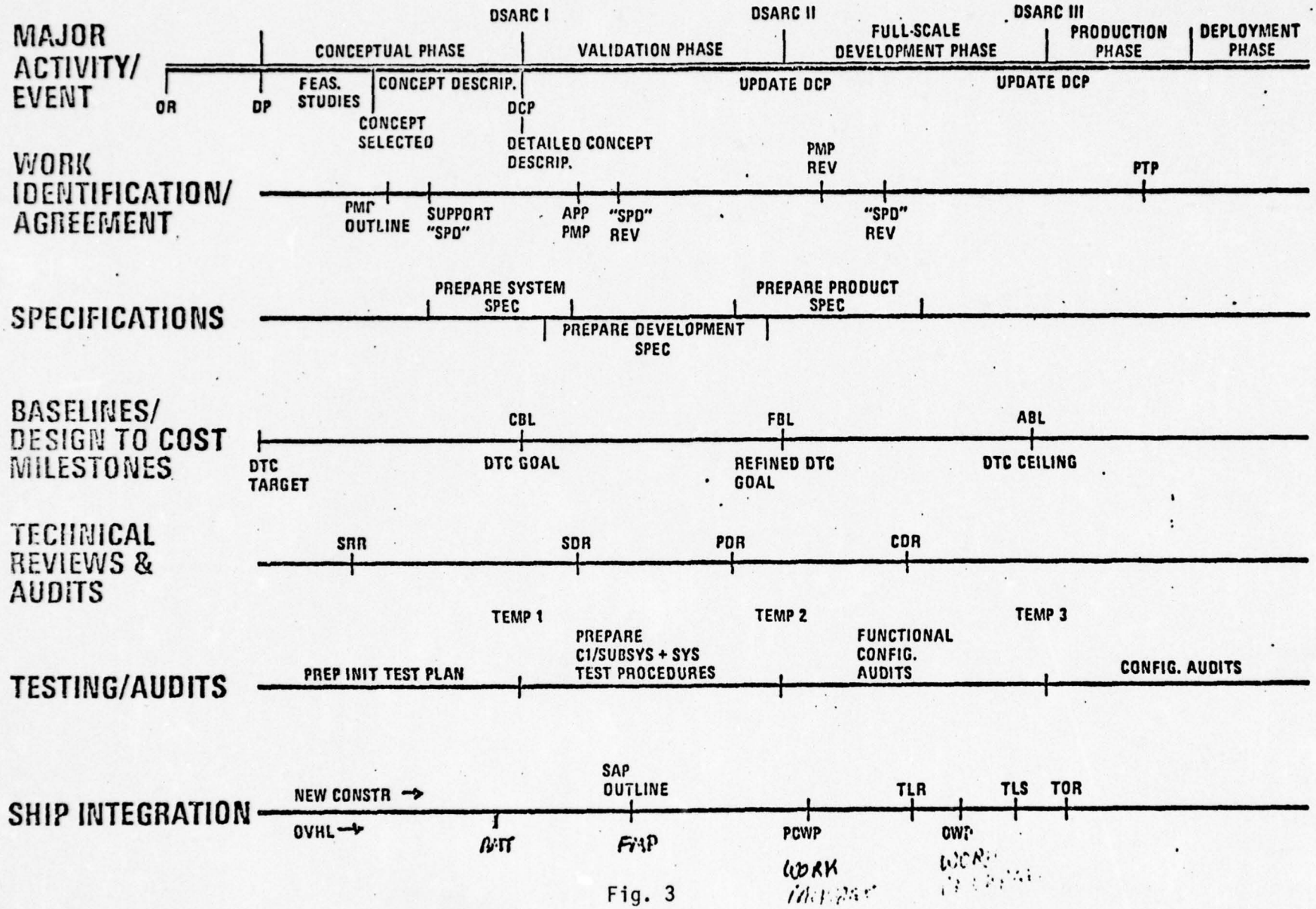


Fig. 3

APPLICATION OF POLICIES

The Department of the Navy has a wide range of programs that involve an even larger number of organizations. The author only listed a few of these organizations in the Navy policy section of this report. A few more of these will be mentioned in this section.

The applications addressed here will be limited to programs that are acquired by NAVAIR and NAVSEA.

The author would like to thank once more the personnel he interviewed in these two organizations and Air Force personnel that support NAVAIR on joint Air Force and Navy programs. Without their inputs, the author would not be able to define the applications of the Navy policies to their programs.

On NAVSEA programs, the SHAPM acquires the ship systems and transfers these systems to the SLM organization. This seems like a simple process, but in reality there are several other offices that are involved. The SHAPM organization really never phases out of the program but becomes only a small organization of from one to ten people that actually stay on the weapon system until the system phases out or no new modifications will be incorporated on it. This method is used to maintain a number of people that can pick up the responsibility for the system if a new system is designed for that type ship. The other personnel from the SHAPM office are phased into new programs as they require personnel.

The transfer of the engineering support is a very interesting process. The engineering data package is handled in a unique manner. The engineering drawings and other engineering data is transferred to the Bureau of Ships where it is retained and updated for a master file. This data is

also shipped to the SLM for those systems he will support. The actual engineering drawings to maintain the ship systems are reduced to microfilm and delivered with the ship to the using activity.

These drawings are now used to develop any shipboard changes that are required by the user. The total engineering package delivered to the SLM organization is used to develop overhaul or modification engineering packages. These changes will be incorporated during the periodic rework, overhaul or repair cycles on a ship. The engineering data package that was sent to the Bureau is used by Bureau personnel, by the Naval Ship engineering personnel, by SEA 04 and 06, or by the SHAPM office personnel to maintain configuration control of the system or design new systems for the ship. This example gives the reader an idea of how complex the Navy's transfer process can be and how much coordination is required to manage a ship program. To compound this problem, a ship takes several years to design and produce and by the time a few ships are constructed, some major changes may need to be incorporated into the program. These changes then affect both the SHAPM program and the SLM program and both may be totally different.

The NAVAIR programs are a little different than NAVSEA since they are a system being incorporated on a ship system or in support of a naval system. In this effort, the developing organization is never relieved of the responsibility of system effectiveness. To support this requirement, they maintain an engineering cadre of personnel that continues to approve or resolve any system effectiveness problems. The total engineering data package for the aircraft system is transitioned to the System Support Manager but a limitation to his design and modification support is identified to assure that no system changes are incorporated, that would

impact the system effectiveness without prior approval or design by the acquisition organization.

SECTION V

Conclusions

It can be concluded from the data in this report that the Air Force, Army and Navy have all established a program that provides a single manager concept for all new weapon systems during their life cycle. Each major command has established policies, instructions or regulations that comply with DOD's requirements for an individual that is responsible for these major programs from the acquisition phase to the disposal phase. These regulations also establish time frames for the transitioning of the systems from the developer to the user.

It is also apparent, from this data, that there will be several changes and possibly significant changes in the engineering data transition procedure. The Air Force has been involved in this type transfer for approximately fifteen years and only recently has the program become a success. This program only started being a success when the using organization (AFLC) started participating in the development phase and was able to support their requirements for engineering data requirements to support the system after it transitioned to the using organization for management responsibility.

The Army is just now in a reorganization program that changes their management concepts for newly acquired systems. Under this new structure, the management responsibility will transition from the development command to the readiness command with restrictions on engineering that does not relieve the development command for systems integrity. It is reasonable to expect some modifications or changes to the procedure used early in this program that may drive this effort to a program similar to the Air Force or

return the engineering effort back to the Development Command.

The Navy has a unique environment to develop and deploy their weapon system in. Their aircraft programs are developed in much the same method the Air Force acquires its systems. There is significant difference in the management of these systems; however, these systems will be incorporated with ship systems or used on land-based facilities. Due to these diverse environments, the NAVSEA organization operates in and retains the engineering integrity responsibility and transfers only that portion required for modification and overhaul support.

Since the Navy has an air, surface and subsurface responsibility for its system, only minor changes could be made in the area of engineering transfer responsibility.

A P P E N D I X

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY MATERIEL COMMAND
5001 EISENHOWER AVE., ALEXANDRIA, VA. 22333

AMCPA-O

31 DEC 1975

SUBJECT: Letter of Instruction, Tank-Automotive Development Center (TADC)/Tank-Automotive Command (TACOM)

SEE DISTRIBUTION

1. Reference is made to:

a. Concept Plan for Establishment of the Tank-Automotive Systems Development Center, dated 15 November 1974.

b. Supplemental Information to the 15 November 1974 Concept Plan for Establishment of the Tank-Automotive Systems Development Center, dated 17 March 1975.

c. Memorandum for Commander, USAMC, from the Under Secretary of the Army, dated 10 December 1975, Subject: AMC Systems Transition from Development to Readiness Status, approving AMC Memorandum of 4 November 1975, re: meeting, same subject (Incl 1).

d. Draft AMCR - Transition of Systems/Equipment/Items Management Responsibility from a Development Center Materiel Development Manager to a Logistics Command Materiel Readiness Manager (Incl 2).

2. PURPOSE. The above referenced Concept Plan presented the general operational and procedural concepts the TADC and TACOM would use in the performance of their missions. This LOI sets forth the separate TADC portion of the life cycle of materiel systems. Information copies are furnished all AMC Commodity Commands and Development Centers as a model to be used in establishing their development centers and "logistics" commands.

3. OPERATIONAL INSTRUCTIONS

a. General

(1) Every item, system, or equipment (hereafter referred to as item) managed by the Army Materiel Command, shall be assigned for management purposes to either a PM or the Commander of a Development Center or a Logistics Command. (It is imperative that all who would understand this

policy document note carefully that it keys not on who performs the function or even particularly where the function is performed, but who is responsible for managing the function). Support of the designated manager will be requested from and provided by any number of activities outside of the assigned organization. The designated manager shall be responsible and accountable for all activity related to an assigned item notwithstanding the source of program support.

(2) The TADC and the TACOM will be under the direct command of the Commander, AMC. The Deputy Commander for Materiel Development will assist the Commander in commanding the Tank-Automotive Development Center by exercising, within his mission area, direction over the center. The Deputy Commander for Materiel Readiness will assist the Commander in commanding the Tank-Automotive Command by exercising, within his mission area, direction over the command.

(3) The TADC will be responsible for the development and acquisition portion of the materiel life cycle until the item is transitioned. The TACOM will be responsible for the acquisition and materiel readiness portion of the materiel life cycle after an item has transitioned to the TACOM.

(4) Transition, for management purposes, will occur at the earliest practicable time. In the event an item is not transitioned at an approved Transition Date, the responsibility for clearly establishing that the transition should not take place will rest with the manager who opposes the Transition. The item Transition Date shall have been established by not later than six (6) months following entry into full scale development. The criteria to be considered in arriving at a Transition Date are at Inclosures 1 and 2.

(5) The TADC shall budget for all programmed requirements prior to the established Transition Date and the TACOM for all programmed requirements after the date.

(6) Within their respective areas of responsibility, the TADC and TACOM will provide support for AMC project/product managed items, i.e., MICV, XM-1, etc., as prescribed in applicable agreements.

(7) Since the policy of AMC is that development centers not be burdened with Post, Camp and Station, and other support type functions, the TACOM will be the host command and will provide Common Service Support to the TADC as a tenant (See Annex A).

b. Item/Systems Assignments.

(1) All items/systems will be assigned by joint agreement of the Commander, TADC and the Commander, TACOM. In making this assignment, the Commanders will be guided by the Transition Criteria set forth in reference d. Items/systems that have been successfully fielded will be assigned to the

TACOM notwithstanding the fact that a significant PIP(s) is underway or contemplated. In such cases the PIP effort will be planned and executed by the TADC pursuant to a Memorandum of Agreement with the TACOM item/system manager. Where the PIP effort results in a new item or a model change, the item will be transitioned in accordance with criteria in reference d. Specific item assignments will be jointly recommended to this Headquarters by the TADC and TACOM Commanders for approval by the DCGMD and DCGMR.

(2) Commercial Buys. The proponent Development Center (MERDC or TADC) is responsible for making the decision to "make" or "buy commercial." MERDC has the responsibility for the Field Evaluation Survey of Commercial Construction Equipment. The responsibility for preparation of the description/specification is a joint process requiring a joint agreement between the Development Center and TACOM Commanders, with the Development Center Commander taking the lead. Once the "buy commercial" decision has been made, the appropriate technical data will be made available by the Development Center to TACOM, who as the system manager, takes the lead.

c. Delegation of Authority. The Commanders, TADC and TACOM will be delegated the authority of Major Subordinate Commands in the areas of program and funding, procurement, projects, and engineering.

d. Requirement Documents. Inputs to draft requirements documents (LR, LOA, and ROCs) shall be forwarded from the Development Center to HQ, AMC as requested. The TACOM will input logistics considerations to the Development Center.

e. Procurement and Production.

(1) Both the TADC and the TACOM shall have procurement responsibility, authority, and staffing for the negotiation, award, administration and reporting of procurement actions on assigned items.

(2) Upon establishment of the TADC and TACOM organizations, AMC will initiate action to have the Commanders designated Heads of Procuring Activities (HPAs) for contractual actions for assigned materiel systems.

(3) Procurement responsibilities for an item transfer from the TADC to the TACOM at the time of item transition, unless the Commanders, TADC and TACOM specifically agree otherwise. The TADC continues to provide engineering support as provided in paragraph g below, after an item has transitioned.

(4) Secretarial Determinations and Findings of authority to negotiate contracts will be forwarded from the TADC and the TACOM to the Director, Requirements and Procurement, HQ, AMC.

f. Configuration Management. Managers from both the TADC and the TACOM shall be represented on the Configuration Control Board (CCB). When responsibility for the management of an item/system is assigned the TADC, the Chairman

of the CCB shall be from the TADC and will have final authority over configuration changes. If the TACOM member nonconcurs with the final decision of the TADC Chairman, he may exercise the right of appeal to higher authority. Chairmanship of the CCB will pass at the time of Transition of an end item. When item management rests with the TACOM, the Chairman of the CCB shall be from the TACOM and will have final authority over configuration changes, while recognizing the TADC responsibility for life cycle design integrity of the item. If the TADC member nonconcurs with the final decision of the TACOM Chairman, he may exercise the right of appeal to higher authority.

g. Engineering.

(1) The need for continuity in the engineering effort throughout the materiel life cycle dictates that primary design engineering be retained in the Development Center. Therefore, engineering functions that impact on equipment design will be the responsibility of the TADC. After an item has been transitioned to the TACOM, the TACOM will task the TADC to accomplish required engineering.

(2) The engineering functions to be performed by the TADC are based upon their engineering-design interrelationships and the need to assure life cycle integrity including initial production engineering. The engineering functions to be performed by the TACOM are intended to support its inherent materiel readiness mission responsibilities (i.e., continuous in nature and concerned primarily with the Production Deployment Phase). For TACOM procurements the TACOM engineers provide a technical interface with the contractor in the identification and resolution of technical problems. Those problems that relate to design integrity will be cause to bring the TADC engineering capability to bear. Thus, a TACOM to TADC engineering interface is necessary.

(3) For TACOM fielded systems, TACOM engineers provide a field service engineering capability to investigate technical problems and assist users. Design integrity problems uncovered through field experience will be referred to the TADC for resolution. The TACOM will provide the TADC data for Product Improvement Actions, i.e., failure data, repair parts usage, etc. Minor modifications that do not affect

design (performance safety, reliability, durability, interchangeability) and that involve little engineering and testing shall be handled by the TACOM as ECPs, and processed through the CCB.

(4) The TACOM is authorized engineers to accomplish minor product improvement, maintenance engineering, value engineering, production and industrial engineering.

h. Product Assurance.

(1) The TADC is responsible for all mission related product assurance tasks leading to quality products that will be reliable and obtain user satisfaction and confidence. These tasks include Reliability, Availability and Maintainability (RAM), quality engineering, system assessment, and procurement quality assurance (including First Article Inspections) from inception of a materiel system through transition to the TACOM.

(2) After transition the TACOM will perform all product assurance tasks in support of procurements, supply and maintenance (including First Article Inspections), Army cognizant plants and manufacturing arsenals. Specific tasks of the TACOM include: stockpile reliability/surveillance program, Care of Supplies in Storage (COSIS), quality assurance portion of DMWRs, certification of depot processes and equipment, production and post-production testing, calibration, quality deficiency reporting, assessment of fielded systems, and quality assurance in support of International Logistics programs.

(3) The TADC will act as the materiel release proponent for items procured prior to transition and the TACOM will be the release proponent on items procured after transition. Regardless of the proponent, all releases will be coordinated between both activities. The TADC will provide laboratory support to the TACOM for the purpose of in-house conducted production and post-production tests. Both organizations must work in concert to satisfy the quality requirements for the development phase and to provide continuous quality management throughout the product life cycle.

i. Value Engineering. Value engineering (VE) will be a responsibility of both the TADC and TACOM. The TADC will perform all VE functions until the procurement responsibility is transitioned to the TACOM. The TACOM will perform all VE functions associated with production upon transfer of procurement responsibility as well as on fielded materiel

for which the TACOM is assigned responsibility. Changes emanating from VE effort which affect the technical integrity of the product will be processed in accordance with configuration management procedures.

j. Technical Data Package. Design integrity and currency of the Technical Data Package will remain the responsibility of the TADC throughout the item life cycle. The management and administrative control of the Tech Data Package will transition from the TADC to the TACOM at the time of system Transition. All changes to the TDP (ECPs, deviations, waivers) will be processed through configuration management procedures (Paragraph 3f).

k. Defense Standardization Program. The TADC will be the proponent for DOD standardization, for designated federal supply classes. The TADC will interface with and receive support from the TACOM in the conduct of this task.

l. In-Process Reviews/Type Classification. The TADC Commander is delegated the authority for IPRs and type classification/reclassification actions, prior to item/system Transition. The TACOM Commander is delegated similar authority after Transition of item/system responsibility. Each command will be represented in all AMC IPR position meetings and be a voting member. Nonconcurrences by any voting member on recommended AMC IPR positions and on type classification/reclassification actions will be elevated to HQ, AMC for resolution.

m. National Maintenance Point (NMP). The TACOM is responsible for materiel maintenance engineering and management for the total life cycle of tank and automotive materiel (and other materiel categories as assigned) consistent with National Maintenance Point (NMP) responsibilities (AR 750-1).

n. National Inventory Control Point (NICP). The TACOM is responsible for centralized inventory management including supply and stock control, cataloging, disposal and preparation of technical and supply publications for tank and automotive materiel (and other materiel categories as assigned) consistent with National Inventory Control Point (NICP) responsibilities (AR 710-1).

o. International Logistics (IL). The TACOM is responsible for International Logistics (IL) operations for assigned materiel. However, there may be special instances wherein the TADC or project/product managers may require a small International Logistics element to work with the TACOM.

SUBJECT: Letter of Instruction, Tank-Automotive Development Center (TADC)/Tank-Automotive Command (TACOM)

4. PROGRAMMING, BUDGETING AND FUNDING.

a. Programming/Budgeting.

(1) Effective 1 October 1976 the TADC will be responsible for program management and control for approved RDT&E, OMA, and the Procurement Appropriation for the acquisition phase of the materiel life cycle of assigned items/systems to include first production buys and engineering support funds, to the extent that such buys are scheduled to occur prior to the approved Transition; PAA buys subsequent to item/system Transition will be the responsibility of the TACOM.

(2) Program management and control of the Army Stock Fund, Family Housing, Military Assistance Program, MCA, Minor Construction and TACOM requirements for OMA appropriations will be the responsibility of the TACOM.

(3) The TACOM will continue to provide program management and control for the OMA and Procurement Appropriations for both the TACOM and the TADC for the FY 76 and FY 7T periods of budgetary involvement. Commencing with the FY 77 phase of the budgetary process for the OMA and Procurement Appropriations, execution will be the responsibility of the respective commands.

(4) The Commander, TADC, is responsible for the preparation and justification of programs/budget input financed from the Procurement Appropriations for those items/systems for which the TADC is the manager, beginning with FY 77. The Commander, TACOM will be responsible for preparation and justification of input for the Procurement Appropriations for major and secondary items consistent with his assigned responsibilities. The TADC will input program/budget data to the TACOM who is responsible for combining the data and preparation of the Army Materiel Plan (AMP) and/or SAMPAM.

(5) For the budget execution process commencing FY 77 both the TADC and TACOM will be totally sustaining entities with separate budgets. Each commander will be responsible for the preparation and justification of his respective budget.

b. Funding.

(1) FY 76 and FY 7T. AMC will issue all funds directly to the TACOM. There will be one suballocation servicing both the TADC and TACOM for each of the appropriations.

(2) FY 77 and After. Starting with FY 77 each command will have its own budget. AMC will issue financial program authority directly to each respective command. However, these funding documents will be forwarded by the TADC to the TACOM Finance and Accounting Office which will provide finance and accounting services for the TADC.

5. SYSTEMS/COST ANALYSIS. The TADC and TACOM will both be expected to have their own systems/cost analysis capability within their respective commands.

a. The TADC primary systems analysis functions should include capability for analysis of requirements, COEAs and trade-off studies in support of TRADOC, test evaluation and weapons effectiveness analysis. TACOM studies should include capability for analysis related to production and procurement, materiel management, integrated field support, etc.

b. The TADC and TACOM should have capability to perform cost estimating analysis, and validation of cost for assigned weapon/support systems and materiel programs. This includes analyses, evaluations, and validations of base line cost estimates (BCEs), and independent parametric cost estimates (IPCEs). Both the TADC and TACOM will be responsible for preparation of hard copy analysis of cost positions for command approval and submission to HQ, AMC.

6. FUNCTIONAL RESPONSIBILITIES REQUIRING INTERFACE.

a. Product Improvement. The TADC has the mission of product improvement as the viable technical alternative to the development of new/replacement items. The TACOM is responsible to provide data justification in the area of failure/maintenance support data, repair parts usage, etc., (EIRs, EPRs, NORS, NORM) to support improvement proposals as they evolve (see paragraph 3g).

b. Integrated Logistic Support (ILS).

(1) Management of Integrated Logistic Support.

(a) ILS is a composite of all the support considerations necessary to insure the effective and economical support of an item/

system during its life cycle. The objective of ILS is to enhance operational readiness and logistic support management and to minimize the cost of ownership by -

o Influencing the design and acquisition of materiel systems to insure that these systems are reliable and maintainable.

o Timely planning, development, acquisition, testing, and deployment of required logistic resources as an integral part of the materiel acquisition process.

(b) The principle elements of ILS related to the overall system life cycle include the maintenance plan, support and test equipment, supply support, transportation and handling, technical data, facilities, personnel and training, logistic support resource funds, and logistic support management information. The benefits of ILS will be realized through the proper integration of logistic support elements and the application of logistic considerations to the decisions made on the design of the hardware systems/equipment as a part of the system engineering process.

(c) Both the TADC and the TACOM perform a vital role in ILS. The TADC Commander and his project/product managers are responsible for overall planning and scheduling of ILS and for insuring that all ILS events are integrated into item/system development. The TACOM Commander is responsible for insuring that the ILS concept is compatible with the logistics structure of the Army. The TACOM Commander is responsible for detailed input to ILS planning and implementation. This will require continuous coordination between the TADC/PMs and the TACOM on an individual ILS event basis.

(d) The TADC Commander and his project/product managers will have a small organic ILS management staff element to discharge their attendant ILS responsibilities. The TACOM Commander will designate an ILS manager for each project/product managed system and grouping of nonproject/product managed developmental materiel to coordinate ILS events within the TACOM and to serve as the TACOM focal point for assigned item/system ILS matters. Special interface relationships will be established between the TADC and the TACOM as part of the Transition planning and tracking process prescribed in reference d above. In this relationship the TACOM has primary interest in how ILS planning/scheduling, documentation, and task execution is progressing from engineering development to the point of Transition.

(2) New Equipment Training (NET). NET planning and scheduling and the design and acquisition of training devices is the responsibility of the TADC/PM. The actual performance of NET functions is a responsibility of the TACOM. A critical interface must be maintained between the TADC/PM and the TACOM to be sure that TACOM technicians and field representatives are thoroughly familiar with the item, and to effect the accomplishment of an effective NET Program.

(3) Provisioning. The TADC/PM is responsible for initial provisioning planning and scheduling. The TACOM is responsible to carry out the functions of the Initial Materiel Support Office (IMSO). The IMSO will execute all initial provisioning actions for TADC/TACOM item/systems, and implement the DA provisioning manual (TM 38-715-1) for all initial provisioning processes. The TADC/PM and TACOM will maintain a continuous provisioning interface to insure that all items (end, integrated, and support) essential to a gaining command's mission are available on a timely, scheduled, and uniform basis.

(4) Publications. The TADC/PM is responsible for planning and scheduling technical manuals and publications to include repair parts lists, maintenance allocation charts, instructional manuals, lubrication orders, operational manuals, etc. The TACOM is responsible for preparing, acquiring, and maintaining current equipment operational and technical publications which cover technical operation, maintenance, and repair parts support of materiel. The TADC/PM and TACOM will maintain a continuous publications interface during the materiel life cycle to insure that equipment publications are developed, published, and distributed for each item of significance introduced into the operational inventory.

(5) Maintainability and Maintenance Engineering. The TADC/PM is responsible for maintainability engineering to insure design, test and production of equipment that is operable and maintainable by individuals possessing common skills, aptitudes and education levels. The TADC/PM must insure that the equipment is logistically supportable, and cost and operationally effective. The TACOM is responsible for maintenance engineering to insure the provision of maintenance concepts, experience data, and recommended parameters and criteria regarding maintainability and reliability as maintenance support guidance to the design process for use in design trade-offs and risk analysis, and for use in developing a logistic support capability responsive to operational requirements of the system or equipment. The TADC/PM and TACOM will maintain a continuous interface in all phases of the acquisition process for new weapons and equipment to assist in the achievement of operational readiness goals at minimum total ownership costs.

AMCPA-O

SUBJECT: Letter of Instruction, Tank-Automotive Development Center (TADC)/Tank-Automotive Command (TACOM)

(6) Test, Measurement and Diagnostic Equipment (TMDE). The TADC/PM is responsible for managing the RDTE portion of the TMDE Program and for planning and scheduling TMDE requirements. The TACOM is responsible for TMDE program coordination, centralized management effort, and program execution to include registration of TMDE and updating the DA TMDE preferred item list (PIL). The TADC and TACOM will maintain a continuous TMDE interface to insure the availability of TMDE to provide the capability of performing timely and accurate equipment malfunction indentification, isolation, diagnosis, and failure prediction; and reduce the Army's TMDE inventory by eliminating unnecessary proliferation and duplication.

(7) Equipment Improvement Report (EIR). EIRs will be forwarded by the user to the TACOM. When failures reported in EIRs are on those items/systems for which the TADC/PM is responsible, those EIRs will be passed directly to the TADC/PM. After the item/system has transitioned and failures reported in EIRs are the result of design deficiencies, EIR evaluation will be assigned to the TADC as a task assignment from the TACOM. EIR solutions which require changes to the configuration of the items will be implemented and controlled by the Configuration Control Board.

FOR THE COMMANDER:

ROBERT L. KIRWAN
Brigadier General, US Army
Chief of Staff

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DISTRIBUTION:
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ANNEX A

TACOM/TADC LOI

Common Service Support to the TADC

General. Where possible, common support functions/services, such as installations and services, finance and accounting, legal, communications, morale and welfare activities, and personnel support will be provided by TACOM to the TADC on a host-tenant basis. The Commander, TACOM will insure that organizational arrangements are sufficient to provide these services to the TADC on a complete and timely basis.

(1) Installations and Services. The Commander, TACOM will be responsible for Installations and Services functions to include Facility Engineering, repair and maintenance of facilities, construction, environmental protection and restoration, energy conservation, real estate, housing management, retail supply, nonappropriated funds, open mess, community support, food service, audio-visual, and commercial industrial equipment management responsibilities and staffing for their in-use equipment except that the Commander, TACOM will provide installation equipment support maintenance and administrative vehicle support to Commander, TADC.

(2) Comptroller. Since both commanders are delegated full authority in the areas of programming and budgeting, each will have his own Comptroller capability for these purposes. However, only one Finance and Accounting Office is required and this should be the responsibility of TACOM.

(3) Legal. Both TACOM and TADC will have their own mission oriented legal staff, (for example, procurement law). TACOM in agreement with TADC will provide legal support to the TADC for such activities as legal assistance, adversary proceedings, military law, etc., in order to eliminate unnecessary duplication of legal staffs.

(4) Communications. All communications support will be provided by TACOM. The head of the USACC activity will function as the communications-electronics staff officer for TACOM and support the TADC.

(5) Inspector General. TACOM will have an office of the IG. The TADC may have an office of the IG. If the TADC commander elects not to establish an office of the IG, an Acting IG will be appointed in accordance with AR 20-1 and AMCR 20-2.

(6) Security.

(a) Law Enforcement. TACOM will be responsible for installation security functions. This will include but not be limited to direction and control of the security force, physical security inspections, investigation of crime, and reporting of incidents as required to higher headquarters. However, where a special access problem exists, or some unique security matter warrants, the TADC may perform these unique functions.

(b) Intelligence. Installation type intelligence functions will be performed by TACOM. Both TACOM and the TADC will have classified document control, classification management, foreign disclosure, industrial security, and such other functions of intelligence/counterintelligence pertaining to the internal security of their commands.

(7) Safety. Installation/facility safety functions will be the responsibility of TACOM. The commander, TADC will be responsible for internal safety functions within his command. The TADC may require some organic safety engineering capability for hardware development.

(8) Historical. Initially, TACOM will provide the full range of required historical functions for the TADC including: preparation of Annual Reports of Major Activities, Historical Program Progress Reports, Army Historical Program monographs (AR 870-5 and AMCR 870-1), establishment of a TADC Historical Sources Collection Program (AMCR 870-2), and provision of historical reference and other historical support services. This initial arrangement does not preclude the commander, TADC from establishing his own historical element at a later date.

(9) Medical. Medical support will be provided both commands by the supporting Health Services Command MEDDAC organization. TACOM will be responsible for coordinating with the MEDDAC to insure that such service is provided.

(10) Management Information System (MIS). Both TACOM and TADC should have an MIS capability. TACOM will operate computer hardware and provide necessary services to the TADC. This will include provision of sufficient computer time, programming, etc. Where the mission dictates that a dedicated computer (for example, in laboratory work) be assigned to the TADC, it will be operated by the TADC.

(11) Information Office. TACOM will be responsible for Information support to the TADC.

(12) Personnel Services and Manpower Management.

(a) Civilian personnel services will be provided the TADC

by TACOM. The Civilian Personnel Office of TACOM will have a dedicated cell to assist in providing such services. In addition, a Civilian Personnel Advisor will be established on the staff of the TADC to assist the commander in managing his civilian personnel.

(b) Military personnel services will be provided the TADC by TACOM.

(c) Both TACOM and the TADC will have a Manpower Management capability.

(d) The overall Alchohol and Drug Abuse Program responsibility will be assigned to TACOM. TACOM will provide this service to the TADC. The TADC may include an Alcohol and Drug Abuse Counselor within the organization.

(13) Race Relations/Equal Opportunity (RR/EO) and Equal Employment Opportunity (EEO). Each commander will be responsible for RR/EO and EEO within his command. An RR/EO Office under TACOM may service both commands; however, each command will have its own EEO Office.

(14) Chaplain. Chaplain functions will be provided by TACOM for both organizations.

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DEPARTMENT OF THE ARMY
OFFICE OF THE UNDER SECRETARY
WASHINGTON, D.C. 20310

10 December 1975

MEMORANDUM FOR: COMMANDER, US ARMY MATERIEL COMMAND

SUBJECT: AMC System Transition from Development to Readiness Status

Reference: Assistant Deputy for Materiel Development, Army Materiel Command memorandum with inclosures, subject as above, dated 7 November 1975.

The memorandum for record (MFR) of the 4 November meeting has been reviewed. Attention is invited to the CONCLUSIONS portion of the MFR which reads:

> "After discussion, it was unanimously agreed that the CG, AMC would advise the following four people of the impending transition, of all programs subject to the DSARC review: The Under Secretary of the Army; the ASA(I&L); the ASA(R&D) and the Vice Chief of Staff Army."

The following procedural change to the conclusion reached is being made to reduce the administrative burden being placed on the Army Materiel Command:

> CG, AMC will advise the Chairman, ASARC (VCSA) who will in turn ensure that the Under Secretary, ASA(I&L) and ASA(R&D) are notified of the impending transition of all programs subject to DSARC review.

With inclusion of the recommended change, the MFR of the 4 November meeting at HQ, AMC is approved. Comments on the draft regulation will be furnished during the formal staffing process.

FOR THE UNDER SECRETARY OF THE ARMY:

JOHN A. TODD
Colonel, GS
Executive

cc: OSA
VCSA
ASA(I&L)
ASA(R&D)
DCSRDA
DCSLOG
DM, ODAS

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DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY MATERIEL COMMAND
5001 EISENHOWER AVE., ALEXANDRIA, VA. 22333

AMCCG

4 NOV 1975

MEMORANDUM FOR RECORD

SUBJECT: AMC Reorganization Emphasis on Transition of Materiel from Development Centers to Logistics Commands

ATTENDEES: Under Secretary of Army (USA), Vice Chief of Staff of Army (VCSA), ASA(R&D), ASA(I&L), DCSRDA, DCSLOG, CG, AMC and DCG, AMC, DCGMD, ADCGMD, DCGMR, MG Ursano

The following comments were brought out during the subject briefing:

- USA felt that the burden of proof principle was a healthy idea, especially its application to both the DC and LC.

- The ASA(I&L) questioned the avoidance of duplication. He wanted to know if we were concerned with avoiding all duplication. The response highlighted the briefing chart features of "unnecessary duplication" and the desire to "maximize use of talent throughout AMC." The ASA(I&L) accepted those policies with the understanding that duplicate organizations would be established when it is clear that the Return on Investment (ROI) would be greater with two organizations.

- The ASA(I&L) suggested that the validation of business strategy be reviewed periodically and be included in the Transition Regulation.

- The subject of a calendar date, as opposed to a milestone event, for transition date was then discussed. It became apparent that a calendar date would facilitate the budgeting and funding schedules

more conveniently than a milestone event. USA observed that this approach is appealing. However, history is replete with numerous development stretch outs. He suggested specifying a date with caveats regarding accomplishments/conditions that have to be met.

- o ASA(I&L) suggested that the transition date should go through the ASARC approval process. The VCSA stated that the CG, AMC should have the flexibility to establish and manage the transition date.

- o The USA and ASA(I&L) commented that a Validated Technical Data package should be available by completion of the LRIP.

- o USA questioned how we insure that the LCCG's thoughts are accommodated in the production line setup?

  The response pointed out that the LCCG's representatives would have been actively participating in the planning and acquisition process not later than the beginning of Full Scale Development. Additionally, the PM reports to AMC periodically during RECAPs and DAPRs on the status of the ILS program. The DCGMR has a periodic LOG CAP wherein he reviews the ILS status. A Deputy PM is appointed for each development and has total logistics responsibility within that development. He reports to and is rated by the PM and is indorsed by the LC CDR/DCGMR. (The Deputy PM is assigned early in the ED program.)

- o USA suggested inclusion of user approval wording within the Transition Regulation. Also, that OTEA has verified the results of the OT tests and that major engineering problems have been overcome. USA suggested that the Transition Plan be specific with respect to transfer of configuration management control.

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SUBJECT: AMC Reorganization Emphasis on Transition of Materiel from Development Centers to Logistics Commands

- USA then gave his specific understanding of certain of the transition criteria shown on the briefing chart. (The briefing chart criteria are shown immediately below:)
  - Major Engineering Accomplished
  - Configuration Baseline Established
  - Technical Information Available for Component Break-Out
  - Acceptable Technical Data Package
  - Some Units Produced on Hard Tooling
  - Some User Feedback
  - Residual Tasks for DC Identified
  - ILS Planning Accomplished
  - LC Prepared to accept Follow-on Procurement

- The USA's comments follow:
  - Major Engineering Accomplished

    DT/OT III has been accomplished and certified by AMSAA and OTEA.
  - Configuration Baseline Established

    Configuration has been frozen and configuration management control has been clearly established.
  - Acceptable Technical Data Package

    This means and should be changed to so reflect a Validated Technical Data Package.

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- o Some User Feedback

  The user approves of the equipment and field results are acceptable. This criteria may be satisfied by OT III; however, it is recognized that it may be desireable to have the results of initial troop use after IOC (AMC's Project Hand-Off).

- o Residual Tasks for DC Identified

  Residual tasks have been agreed upon and clearly identified by both the LC and DC.

- o The official approval of the Transition Date will be the signing of the formal transition document. USA observed that a major benefit of the transition process will be the ability of the LC to disagree with the transition process. He noted that this was a healthy approach. The USA also wanted to know who certifies the validity of DT III testing? He was advised that AMSAA does and that they report to CG, AMC.

CONCLUDING COMMENTS BY ATTENDEES:

DCSRDA: Recommended go-ahead recognizing that circumstances will dictate exceptions and that CG, AMC should make the Transition decision in those cases. He recommended that CG, AMC make the Transition implementing decision, and opposes the use of the ASARC approval process for this purpose.

ASA(R&D): Observed that the Army has a requirement for additional Program Managers and that a selection board for 05 Deputy PMs would be appropriate. The DCGMD supported this observation. Both the USA and VCSA then expressed strong support for the establishment of the board.

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SUBJECT: AMC Reorganization Emphasis on Transition of Materiel from Development Centers to Logistics Commands

ASA(I&L): Stated that AMC personnel had obviously looked at the transition process in detail, and that the results were both worthwhile and very well done. But, he had a disquieting feeling with respect to transition. The ASA(I&L) felt that the DA Staff and Secretariat were being held accountable to OSD and that they (Secretariat) were not sufficiently involved in the specifics of program developments. He was further troubled by the lack of visibility and accessibility to program details and decisions.

The USA than offered three alternatives with respect to transition decision:

1. Allow CG, AMC absolute authority to make the transition decision.

2. Have those developments involved in DSARC undergo ASARC approval with respect to the transition process.

2a. Have the CG, AMC notify DA 30 days prior to implementing a transition.

o The CG, AMC disagreed with alternatives 2 and 2a, stating that he felt that his office should have the authority to make the decision when transition should take effect.

CONCLUSIONS:

After discussion, it was unanimously agreed that the CG, AMC would advise the following four people of the impending transition, of all programs subject to DSARC review: The Under Secretary of the Army; the ASA(I&L); the ASA(R&D) and the Vice Chief of Staff Army.

ACTIONS REQUIRED:

AMC will provide the above attendees, by Thursday, 6 November 1975 the following:

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AMCCG 4 NOV 1975

SUBJECT: AMC Reorganization Emphasis on Transition of Materiel from Development Centers to Logistics Commands

1. Viewgraphs of Transition presentation with updated comments.

2. First draft of proposed Transition Regulation.

Ivar W. Rundgren Jr

IVAR W. RUNDGREN, JR.
LTC, GS
Executive Officer

DRAFT AMCR

TRANSITION OF SYSTEMS/EQUIPMENT/ITEMS MANAGEMENT RESPONSIBILITY FROM A DEVELOPMENT CENTER MATERIEL DEVELOPMENT MANAGER TO A LOGISTICS COMMAND MATERIEL READINESS MANAGER

1. PURPOSE. This regulation prescribes policies, procedures and responsibilities for the transition of systems/equipment/items (hereafter referred to as items) from a Development Center Materiel Development Manager (DM) to a Logistics Command Materiel Readiness Manager (RM).

2. SCOPE. This regulation applies to AMC Project/Product Managers (PM), Development Center Managers (DM) and Logistics Command Managers (RM). (An assigned Development Center Manager or Logistics Command Manager may range from a very junior manager responsible for a less important item, to a very senior manager responsible for an item that is most important to the Army. For purposes of this regulation the designations DM and RM identify the organizational location of a manager other than a PM. The organizational location of a PM will be clear in the text.)

3. DEFINITION OF TERMS

a. Letter of Instruction (LOI). A letter document issued by HQ, AMC which prescribes the mission, operational and procedural concepts, and interface relationships of a newly established Development Center or Logistics Command.

b. Development Manager (DM). The designated AMC Project/Product Manager (PM) or Development Center Manager vested with

responsibility and accountability for an item prior to the transition of item management responsibility.

c. Readiness Manager (RM). The designated AMC Project/Product Manager or Logistics Command Manager vested with overall responsibility and accountability for an item subsequent to the transition of management responsibility.

d. Project - Product Manager/Development Manager (PM/DM). This abbreviation is used for convenience in this regulation to designate the Project, Product, or other Development Manager, assigned responsibility for the development of an item, requiring extensive Development Center support.

e. Project - Product Manager/Readiness Manager (PM/RM). This abbreviation is used for convenience in this regulation to designate the Project, Product, or other Readiness Manager, assigned responsibility for the readiness of an item, requiring extensive Logistics Command support.

f. Transition. The act of transfering management responsibility from the designated PM/DM to the designated PM/RM.

g. Transition Date. The calendar date on which transition occurs.

h. Transition Plan. The document that outlines all actions, agreements and responsibilities for the transition of management responsibility. It contains a schedule of all events required for an orderly, timely and effective transition.

i. Planning/Tracking Group (PTG). A working group of all participants essential to the transition process, to plan and track the Transition activities. The size and scope of the PTG depends upon the size and complexity of the program.

4. POLICY.

a. General.

(1) It is AMC policy that Transition shall occur at the earliest practicable time consistent with the concepts prescribed in this regulation. A corollary of this policy is the principle that should a PM/DM object to releasing an equipment for Transition, or should a RM object to the acceptance of an item scheduled for Transition, the burden of proof for convincing higher headquarters that Transition should not occur rests with the manager who objects to the Transition.

(2) While overall management responsibility will rest with the designated PM/DM - PM/RM, every such manager must rely on organizations throughout AMC for the planning and execution of important elements of his program. In the relationship between a DC and a LC, the LOI shall establish responsibilities and set forth the extent of support to be provided by each organization throughout the item materiel life cycle.

b. Transition Planning and Tracking.

(1) Transition Planning and Tracking Group (PTG). Formal transition planning shall commence with the formation of the PTG not later than sixty (60) days following an affirmative Full Scale Development decision. The Chairman of the PTG shall be designated by the PM/DM prior to Transition, and by the PM/RM following Transition. PTG

participants shall include representatives of the PM/LM, the prospective PM/RM, supporting PMs/DCs and PMs/LCs and other AMC organizations. The PTG shall function as staff to the PM/DM prior to Transition and as staff to the PM/RM after Transition. The principal responsibilities of the PTG are to:

(a) Prepare the Transition Plan

(b) Provide management visibility on the transition process.

(c) Monitor progress toward implementation of the actual Transition of the item.

The PTG shall disband at the discretion of the PM/RM.

(2) Transition Plan (Appendix I).

(a) A Transition Plan shall be prepared for all items. While the detailed planning contemplated by this regulation applies to the more costly and complex items, its principles are appropriate to the Transition planning of the simplest of items. For example, a one page Transition Plan may be sufficient to document the agreement between a DC and an LC when it is determined, as in the case of a commercial item, that the LC will be the manager. (This decision will not preclude the LC from subsequently tasking the DC to provide engineering support.) On the other hand, a complex new missile system will require that the planning process and documentation of planning meet the specific needs of that program.

(b) Not later than 120 days after the establishment of the PTG the basic provisions of the Transition Plan shall have been structured and a Transition Date established.

(c) The purpose of the Transition Plan is to:

1. Provide a disciplined management tool for achieving a timely Transition.

2. Provide visibility to participants in the process on all aspects of Transition.

3. Establish responsibilities and identify all tasks and milestones for activities involved in Transition.

4. Establish a realistic and achievable Transition Date.

5. Document the entire Transition process.

The Transition Plan shall be maintained on a current basis until all tasks are completed, except those that may be prescribed in the LOI as normal support elements of a DC or LC.

(3) Transition Date.

(a) The Transition Date shall be set by an approved Transition Plan.

(b) The Transition Date shall be established as a calendar date to provide a convenient reference point for programming and budgeting. The PM/DM and PM/RM shall budget for all requirements based on the presumption the Transition will occur on the Transition Date. The PM/DM shall assure that all concerned with Transition shall be made aware of

assigned and pending management responsibilities sufficiently in advance of Transition, to impact the Planning, Programming and Budgeting System cycle. Funding prior to Transition shall be the responsibility of the PM/DM and subsequent to Transition the PM/RM. (See para (5) below for Approvals required.)

(4) Criteria for Transition. The following criteria must be considered in establishing the item Transition Date. Once the date is established, the criteria shall serve as final assessment gates for implementing the Transition action.

(a) Major engineering activity has been accomplished and design stability achieved.

(b) Configuration baseline is established and configuration management control responsibility is clearly specified.

c. Technical information is available to support procurement method codes for component breakout.

d. Technical Data Package has been validated by the PM/DM.

e. System has been produced on hard-tooling, with the product having met all technical and performance requirements.

f. User feedback has documented user satisfaction. Operational Test results may satisfy this requirement when such tests completely and accurately reflect actual field conditions.

g. Residual tasks to be accomplished subsequent to Transition by the PM/DM are identified and milestoned.

h. All Integrated Logistics Support (ILS) planning and implementation required prior to the Transition Date, have been accomplished.

i. The PM/RM is prepared and willing to undertake follow-on procurement and to perform all materiel readiness functions.

j. For computer-based systems, firm availability dates have been established for software, software documentation and rights. Additionally, arrangements for future software maintenance/enhancement have been established.

(5) Approvals. Transition Plans (including Transition Dates) are subject to approval prior to implementation as follows:

(a) PM reports to the Commander, AMC - Approval by Commander, AMC.

(b) PM reports to DCGMD or DCGMR - Approval by DCGMD and DCGMR.

(c) All other Transitions - Approval based on agreement between the Commander, DC and Commander, LC.

(6) Commercial Equipment. Where a materiel need will be met by commercial equipment, management responsibility will rest with the PM/RM throughout the program, i.e., Transition will not apply. (But see para 4b(2)(a) above.) Where engineering support is required to assist the PM/RM in the selection, evaluation and qualification of commercial

equipment, this support will be obtained by the PM/RM from the PM/DM as a service, on a tasking basis.

(7) Transition Visibility. Progress in Transition planning and implementation will be briefed at program/system reviews.

5. RESPONSIBILITIES.

a. DCGMD and DCGMR.

(1) The DCGMD and DCGMR are jointly responsible for establishing policy guidance and monitoring the Transition process.

(2) The DCGMD and DCGMR shall resolve Transition issues raised to HQ, AMC level.

b. PM/DM and PM/RM. The PM/DM and PM/RM shall accomplish Transition planning and implementation as prescribed in this regulation.

COVER PAGE FORMAT

_____
Date of Plan

PLAN FOR
TRANSITION
of the

_____
(System/Equipment/Item)

FROM

_____
(Name of Development Manager)
(Location)
(Command, etc)

TO

_____
(Name of Readiness Manager)
(Location)
(Command, etc)

TRANSITION DATE _____

All approvals required by
Regulation are set forth on
the attached Approval Sheet.

PREPARATION OF THE TRANSITION PLAN

The Transition Plan shall consist of:

1. Cover Page - As shown.
2. Approval Sheet.
3. Coordination Sheet - Coordination signatures by all participating PM/DCs and PM/LCs shall evidence full coordination of the Plan.
4. Table of Contents.
5. Section I - General - Brief purpose of the document, and description of the systems/equipment/items (hereafter referred to as items) involved.
6. Section II - Requirements

This section will include coverage of the following functional areas:

a. System Documentation and Records. Description of the specific documentation and records applicable to the Transition. The responsibilities of the PM/DM and PM/RM shall be stated, as well as the physical mechanism for transfer of documentation and records.

b. Configuration Management (CM). Description of the CM methodology and responsibilities related to Transition. Refer to LOI as appropriate.

c. Engineering Responsibility. Description of the engineering functions to be continued by or to be provided

by the PM/DM for the PM/RM after the Transition. Refer to LOI as applicable.

d. Engineering Data and Technical Data Package (TDP) Description of methods and responsibilities for the exchange of engineering data and validated TDP among Transition participants.

e. Logistics Support. Description of methods and responsibilities governing all logistics support requirements. Include the mechanism for assuring the PM/RM that requisite logistics support data will be provided.

f. Transportation and Packaging. Description of Transition related activities and responsibilities. Include the transfer of transportation and packaging data.

g. Budgeting and Funding Summary. Portray the overall budgeting and funding situation together with the responsibilities of all Transition participants in the budgeting and funding area.

h. Procurement. Description of procurement activities, status of procurements and procurement related responsibilities pertinent to the Transition process. All documented plans regarding business strategies particularly as they impact on the PM/RM, shall be maintained on a current basis.

i. Milestone Schedules. The entire Transition schedule shall be portrayed in sufficient depth to provide visibility and tracking by the PTG.

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SECTION III - Agreements and Commitments

In this section the PM/DM shall provide details on all agreements and commitments that have been made during development that need to be known to the PM/RM. This section will also include all agreements between the Transition participants pertinent to Transition and subsequent program support.

SECTION IV. This section shall be reserved for all Transition matters peculiar to the specific item involved, and not otherwise covered in the Transition Plan.

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