Research Note 84-36

A STUDY TO IDENTIFY AND CONSOLIDATE MANPOWER, PERSONNEL AND TRAINING REQUIREMENTS FOR MATERIEL SYSTEMS AT ASARC MILESTONES

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The Department of the Army (DA) is taking steps to improve its ability to evaluate the manpower, personnel and training (MPT) impact of systems under development. MPT information is considered by the ASARC prior to major systems being referred to the DSARC. This report identifies and consolidates MPT information requirements for DSARC and ASARC levels of review. It further analyzes the feasibility of developing a procedure for the acquisition process which identifies the needed information, the type of questions to be addressed, source of information for each milestone review including sample questions is provided. This plan supports the

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conclusion that it is feasible to develop sets of MPT questions appropriate for ASARC preparation and reviews.

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FOREWORD

The Army is engaged in the largest modernization program in its history. There are 42 major systems in various stages of development and literally hundreds of new equipment items or minor systems under development or about to be fielded. A limiting factor in the modernization program may be the manpower, personnel and training requirements to effectively use and maintain these new weapon systems.

The Army has taken steps to improve its ability to evaluate the manpower, personnel and training impact of systems under development. Accordingly, increased emphasis has been placed on such an evaluation during ASARC reviews for each system.

The present effort identifies and consolidates manpower, personnel and training information requirements for DSARC and ASARC levels of review. The effort considers the feasibility of developing a procedure which identifies needed information and the types of questions which must be answered to obtain the information. A plan with sample questions to develop needed information is provided. Plans for development of manpower, personnel and training information for each decision level milestone will be validated, refined and updated as required to provide the Deputy Chief of Staff for Personnel a standardized method and tool for use in addressing manpower, personnel and training issues for ASARC reviews.

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EXECUTIVE SUMMARY

There has been increasing concern over the anticipated manpower needs of materiel systems under development. Department of Defense (DOD) directives governing the Materiel System Acquisition Process have been revised to require that expanded manpower, personnel and training information be submitted to DOD for each major system scheduled for review by the Defense Systems Acquisition Review Council (DSARC). The Department of the Army (DA) has also taken steps to improve its ability to evaluate the manpower, personnel and training impact of systems under development. Manpower, personnel and training information is considered by the Army Systems Review Council (ASARC) prior to the system being referred to the DSARC.

This report identifies and consolidates manpower, personnel and training information requirements for DSARC and ASARC levels of review during the Materiel Acquisition Process. It further analyzes the feasibility of developing a procedure for the acquisition process which identifies the needed information , the type of questions which must be addressed, the source of information, the user, data gathering methods, and time requirements.

The analysis indicated that it is feasible to develop a series of questions which should be addressed during preparation for ASARC/DSARC reviews. The type of questions and level of detail of the answers will vary with the particular stage of development. Further, the questions will become more specific and the answers will become more refined as the system progresses through the development phases.

This report briefly describes the Materiel Systems Acquisition Process. It identifies information requirements and key issues associated with each of the four major decision milestones (Milestones 0, I, II, and III) as well as discusses information sources. A plan to develop MPT information for each milestone review is provided which supports the conclusion that it is feasible to develop sets of MPT questions appropriate for ASARC preparation and review.

Finally, it is recommended that the plans for each milestone be validated, refined, and updated as required to provide the Deputy Chief of Staff for Personnel (DCSPER) with a standardized method and tool for use in addressing MPT issues for ASARC/DSARC reviews.

CHAPTER 1
INTRODUCTION

A. BACKGROUND

There has been a continuing effort by the Department of Defense (DOD) and the Services to conduct extensive analyses, reviews and evaluations of materiel acquisition programs. Specific guidelines have been established by DOD and the Department of the Army (DA) for such analyses and evaluations. However, the process established by these guidelines is complex in detail and involves numerous management levels. And, although guidelines exist, problems have been especially prevalent in areas such as the establishment of manpower requirements, the determination of skills and skill levels, and the training and programming of required manpower.

Both DOD and the Army have taken actions to emphasize the requirements for early and effective Manpower, Personnel and Training (MPT) planning for new systems. DOD Directive (DODD) 5000.1 and DOD Instruction (DODI) 5000.2 clearly describe the MPT review requirements for major systems at each milestone review. Recent DA actions have also added emphasis to MPT planning and analysis during the acquisition process. The Deputy Chief of Staff for Personnel (DCSPER) is now a regular member of the Army Systems Acquisition Review Council (ASARC) and as such is in a position to ensure proper consideration of MPT during systems reviews. Even though emphasis has been added for improved MPT planning and analyses, and requirements exist for specific MPT information at various decision milestones, the desired information is not guaranteed. There are many questions which must be answered at various levels to generate inputs of information. The information inputs, when consolidated and analyzed, should provide a basis for addressing the major issues.

Recent actions have been taken by the Deputy Secretary of Defense (DEPSECDEF) to improve the Acquisition Process. One of the decisions was to reduce the Secretary of Defense (SECDEF) decision milestones to two vice four as currently prescribed in DODD 5000.1 and DODI 5000.2 (DEPSECDEF memorandum of 30 April 1981). Implementing instructions have not yet been provided. Accordingly, this study was directed at the current four decision milestone process. The

approach to preparing for ASRC reviews, discussed in Chapter V, contains the types of questions which must be addressed during the acquisition process, regardless of the number and timing of decision milestones. Should the Army ASARC decision cycle change, adjustments could be made in the time frame required for addressing specific issues.

B. PURPOSE

The purpose of this document is to provide a report of the findings and recommendations of a research effort to:

(a) Identify and consolidate MPT information requirements for DOD and DA levels of review during the Materiel Acquisition Process.

(b) Determine the feasibility of developing a time-phased procedure/process which identifies: needed information, the type questions which must be answered, the source/provider and user of the information, a method of acquiring the information, and the specific time requirements based on a selected reference. (The means to judge the validity of responses was also a consideration of the tasks of the research effort.)

C. METHODOLOGY

A mapping approach was used to identify the MPT information for DOD and DA levels of review during the Materiel Acquisition Process. DOD instructions and directives, appropriate Army regulations, Army Research Institute (ARI) product "Manpower, Personnel, and Training Requirements for Materiel System Acquisition," and other related studies/documents were reviewed. The MPT information requirements and issues for each decision milestone were identified and consolidated for that particular milestone review. After MPT information requirements and issues were identified for milestones 0, I, II and III, a review was conducted to identify specific actions within each phase which produced MPT information that could be used as feeder data for milestone information requirements. All of the related information was analyzed and served as a basis for interviews with key individuals. The interviews were designed to examine the

feasibility of establishing a subset of questions related to the various categories of information requirements which had to be answered to provide decision information. These interviews to some extent also addressed the issue of validity of responses. A comparative analysis was conducted of major information requirements directed by DOD and DA regulations for each milestone review and the crucial MPT issues that were evident versus information inputs needed at various levels to answer the major MPT requirements and issues. A complete analysis of major requirements for specific reviews, crucial issues, and interviews served as a basis for determining the feasibility of developing a time-phased procedure/process which identifies needed information, type questions which must be answered, source of information, user, method, and time requirements based on a selected baseline reference.

D. ORGANIZATION

This report is organized into 5 Chapters, preceeded by an executive summary. The executive summary provides highlights of the findings and recommendations of the study. Chapter I introduces the report and provides background as well as other introductory information. Chapter II discusses the review and analysis of documents and regulations and consolidates information requirements and crucial issues. Chapter III describes those scheduled events that occur during each phase of acquisition which generate MPT planning and requirements information. Chapter IV discusses the interview approach and results (and further provides findings and recommendations). Chapter V provides discussion of the analysis effort and conclusions. Chapter V also contains an approach for addressing MPT in preparation for ASARC/DSARC reviews incuding the type of questions which should be considered.

CHAPTER II
INFORMATION REQUIREMENTS AND KEY ISSUES

A. PURPOSE

The purpose of this chapter is to provide a brief description of the Materiel Acquisition Process and relate MPT information requirements and key issues to appropriate decision milestones. To achieve this purpose, each phase of the acquisition process has been reviewed, and MPT information requirements and key issues for each decision milestone have been consolidated and displayed.

B. THE MATERIEL SYSTEM ACQUISITION PROCESS

Before the Materiel Acquisition Process becomes a formal structured procedure as prescribed by DODD 5000.1 and DODI 5000.2, an existing deficiency in a specific mission area has to have been identified by a Mission Area Analysis. Mission Area Analyses are continually conducted by the Army to evaluate its ability to effectively accomplish the required tasks of specific mission areas. When a deficiency is identified within a certain mission area, a Mission Element Need Statement (MENS) is prepared by the Army and submitted to the Secretary of Defense (SECDEF). If the MENS is approved, the appropriate Secretary of Defense Decision Memorandum (SDDM) is issued which is the first major milestone decision, Milestone 0, of the Defense System Acquisition Process. Thus, only after MENS approval and issuance of the SDDM does the acquisition process formally begin.

Figure II-1 illustrates the four phases and associated milestones of the acquisition process as it currently exists for major systems. The four distinct phases of the acquisition process are: Phase I, Concept Exploration; Phase II, Demonstration and Validation; Phase III, Full Scale Development; and Phase IV, Production and Deployment. Following the initial decision to begin the acquisition process, Milestone 0, are the remaining milestone decisions designated as Milestones I, II, and III. Each milestone review is accomplished through the DSARC process. Phase I culminates with ASARC I/DSARC I reviews and a favorable Milestone I decision. Accordingly, ASARC II/DSARC II reviews are associated with Milestone II. And, ASARC III/DSARC III reviews are associated with Milestone III.

ACQUISITION PHASES AND MILESTONES

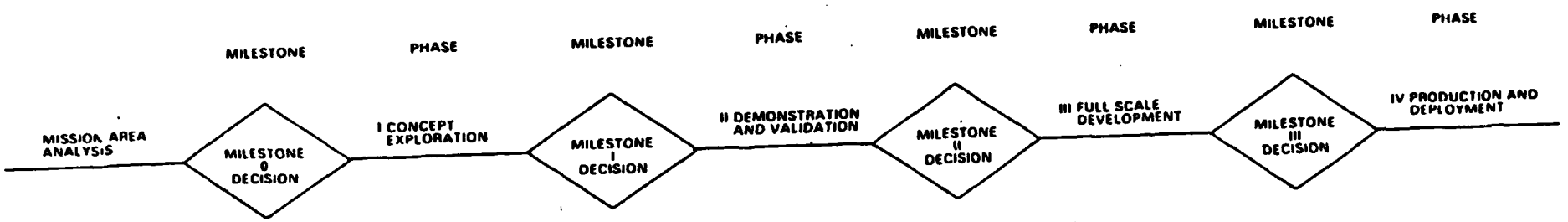


FIGURE II-1

ACQUISITION PHASES AND MILESTONES

After Milestone 0, the system enters the Concept Exploration Phase. Current Army regulations require a series of events to be performed during this phase of the acquisition process. There are designated events (displayed in the Army Life Cycle System Management Model (LCSMM) (DA Pam 11-25) which occur during this phase that generate certain MPT information. Information from these events can provide inputs to address the MPT information requirements which are specified for Milestone I review. Although the MPT information required at Milestone I is not as extensive as that for subsequent milestone reviews, it should be noted that decisions made at this point have long-range impacts on the total and type of MPT requirements for the system.

SECDEF approval at Milestone I includes alternative selections and provides authorization for the system to proceed into the Demonstration and Validation Phase of acquisition. This phase also contains a series of events that generate specific types of MPT information which can provide data to address the Milestone II MPT information requirements. A favorable SECDEF decision at Milestone II completes the Demonstration and Validation Phase, establishes intent to deploy the system, and provides authority for the system to enter the Full Scale Development Phase. Successful completion of the Full Scale Development Phase is evidenced by a favorable SECDEF decision at Milestone III which authorizes production.

MPT information requirements increase as the system proceeds through the acquisition cycle. Not only are there designated events throughout the LCSMM which require various types of MPT information, there are also requirements for information to be refined and documents to be updated as the system evolves. According to DOD and DA regulations, specific MPT information requirements must be addressed at each milestone review. In addition to the specific MPT information which is required by designated events, new MPT issues will arise, as the system proceeds through the acquisition process, that will need to be addressed. Ultimately, however, the implied MPT issue is: "can the Army afford and support the system from the MPT point of view in accordance with organizational and operational concepts; schedule personnel and training to support integration of the system into the Army; and maintain the required support for the life cycle of the system?".

The following paragraphs discuss the information requirements and some key issues for each milestone review.

C. MILESTONE 0

Mission Area Analysis is a continuing effort by the Army. It consists of identification and definition of current and projected needs within a mission area. It further includes analysis of capabilities, resources, technologies and potential adversary capabilities. When deficiencies are found and a mission need is identified, a MENS is developed. As noted earlier, approval of the MENS and issuance of a SDDM constitute a Milestone 0 decision and authorizes the system to proceed into Concept Exploration.

DODI 5000.2 provides guidance regarding MENS preparation. A manpower constraints statement is a requirement of the MENS. Accordingly there is direction that manpower requirements must be a consideration during the mission area analysis and MENS preparation. This is a relatively new regulation and is applicable to all the Services. Interviews with Army personnel reveal that there is neither an established procedure for development of a manpower constraints statement in the MENS nor is there an established criteria from which to develop constraints. The Draft MENS is prepared by TRADOC. DCSPER reviews manpower constraints and DA provides MENS approval prior to submission to DOD for Milestone 0 decision. Figure II-2 summarizes mission area analysis requirements and provides suggested areas of MPT information which should be considered when identifying manpower constraints.

MISSION AREA ANALYSIS

- o Mission need identified
- o MENS required
- o MENS includes manpower constraints statement

ISSUES/QUESTIONS AREAS CONCERNING MANPOWER CONSTRAINTS

- o Total mission area manpower requirements
- o Total mission area personnel assets
- o Grades/skills adequacy within mission areas
- o Critical skill areas identification
- o Resource availability to train sufficient number of personnel in critical areas
- o Recruitability of personnel with required qualifications for critical skill areas
- o Profile of typical soldier 1980's-1990's
- o Constraints in system design to minimize numbers/skill requirements

Figure II - 2

MISSION AREA ANALYSIS REQUIREMENTS AND QUESTION AREAS

D. MILESTONE I

The Concept Exploration Phase consists of many specific events which require MPT input prior to a Milestone I decision. Both the DA and DOD require designated MPT information to be provided for the ASARC and DSARC I milestone reviews. Preparation for ASARC reviews will address issues at lower levels of review, attempt to resolve as many issues as possible, and bring those issues judged to be significant to the ASARC.

Figure II-3 provides a list of specific information which is required for ASARC/DSARC I reviews. Key issue areas are also addressed.

INFORMATION REQUIREMENTS ASARC/DSARC I

- o Organizational and operational concept
  - Organizational structure associated with system
  - Plans for integration into the force structure
  - Initial development/operation concept
  - Initial system activity rates/readiness objectives

  (Information provides basis for all subsequent manpower requirements determination)

- o Manpower goals and thresholds
  - Estimate of operator manning
  - Estimate of maintenance manning
  - Recommended total manning

- o Personnel funding estimate for the preferred alternative
  - Military Personnel (MILPERS)
  - Civilian Personnel (CIVPERS)
  - Operations and Maintenance

- o Manpower estimate
  - Summary estimate to develop MILPERS funding

- o Manpower sensitivity analysis
  - Manpower requirements for each system alternative correlated with:
    a. MILPERS funding and manpower estimates
    b. Sensitivity to alternative system employment concepts

- o Training implications summary
  - Significant differences in training implications of the alternative system

Figure II-3

INFORMATION REQUIREMENTS AND ISSUES ASARC/DSARC I

- o Manpower evaluation
  - Discussion of alternative approaches which will be analyzed during phase II to significantly reduce manpower requirements or increase productivity:
    a. Changes in maintenance concepts
    b. Increases in productivity of personnel through use of new concepts

ISSUES

- o Manpower requirements for each alternative
- o Validity of requirements determination
- o Systems design considerations to reduce MPT requirements
- o Long term MPT implications for each system (peacetime and wartime)
- o Projected requirements versus published constraints

Figure II-3 (continued)
INFORMATION REQUIREMENTS AND ISSUES ASARC/DSARC I

E. MILESTONE II

A favorable decision by SECDEF at Milestone I and issuance of the SDDM will provide authorization for the system to move into the Demonstration and Validation Phase. There are many events during this phase which significantly impact MPT requirements and information. Development Test I (DT I) and Operational Test I (OT I) are conducted. DT I demonstrates that technical risks have been identified and OT I assesses the military utility and worth of the system. The OT test considers the potential of the system relative to concepts, supportability, organization, doctrine, tactics and training. Test data is used to update information for various events including those that directly involve MPT planning. MPT requirements are further developed and refined during this phase thereby improving the Army's ability to assess the overall MPT impact of the system.

Figure II-4 contains a list of MPT information requirements for ASARC/DSARC II reviews as directed by DOD and DA regulations (DODI 5000.2 and AR 1000-1). Key issue areas are also addressed.

INFORMATION REQUIREMENTS ASARC/DSARC II

- o Manpower goals and thresholds
  - Previously approved manning goals and thresholds
  - Operator manning - current estimate
  - Maintenance manning - current estimate
  - Recommended total manning goal and threshold

- o Personnel funding estimate by fiscal year in Constant/Current Dollars
  - MILPERS
  - Operations and Maintenance

- o Manpower estimate
  - Unit manning
  - Contractor Support
  - Depot workload
  - Net changes in total force associated with the proposed system deployment

- o Manpower trade-off analysis
  - Summary of significant manpower implications of trade-off analyses conducted
  - Manpower trade-off analysis documentation to be included in the Master Reference File (MRF)

- o Manpower requirements comparison
  - Manpower estimate for new system versus manpower requirements for system being replaced and/or reference system

Figure II-4

INFORMATION REQUIREMENTS AND ISSUES ASARC/DSARC II

- o Manpower sensitivity analysis
  - Quantification of sensitivity of manpower requirements to proposed reliability and maintainability goals and proposed system activity rates

- o Manpower requirements and assets
  - Sources of manpower for the new system
  - Summary of projected requirements versus projected assets in career fields
  - Identification of new occupations

- o Training requirements summary
  - Formal training requirements by fiscal year
  - Number of personnel to be trained
  - Training costs
  - Net impact on special emphasis training

- o Training plan summary
  - Plan for achieving operating and support personnel training
  - Scope and duration of formal training
  - OTJ and unit training time
  - Use of training devices and job performance aids
  - Savings from use of training devices/simulations

- o Manpower evaluation schedules
  - Schedules for further trade-off analyses of design and support elements impacting manpower, job task identification, etc.
  - Planned tests to verify manpower estimates/assumptions

Figure II-4 (continued)

INFORMATION REQUIREMENTS AND ISSUES ASARC/DSARC II

ISSUES

- o Requirements versus constraints
- o Validity of estimates
- o Identification of critical skill areas
- o Ability to satisfy critical skill requirements
- o Training device requirements
- o Training requirements
- o Projected personnel availability
- o Training schedule
- o Funding requirements
- o Funding ability
- o Requirements programmed
- o Personnel and training time phasing consistent with IOC
- o Programming consistent with IOC
- o Affordability/supportability

Figure II-4 (continued)
INFORMATION REQUIREMENTS AND ISSUES ASARC/DSARC II

F. MILESTONE III

A favorable decision at Milestone II and issuance of the SDDM by SECDEF authorizes the system to proceed into Full Scale Development. MPT planning is refined as required during this phase. Timing becomes critical since late changes to recruiting requirements, selection of instructor/training support personnel, unit personnel selection, training schedules, and/or failure to properly program/budget for manpower or training could impact on the ability of the Army to properly man the system when fielded. A further impact could be the ability to man follow-on units as they are integrated into the force. Although not previously noted, the plan for retirement of the old system is pertinent since many of the personnel with the old system may have transferable skills and can provide the basic source of personnel to man the new system.

Figure II-5 provides a list of information requirements which are specified for ASARC/DSARC III reviews. Key issues are also addressed.

INFORMATION REQUIREMENTS ASARC/DSARC III

- o Manpower goals and thresholds
  - Previously approved goals and thresholds
  - Current estimates
  - Recommended goals and thresholds (consistent with operational concepts, force structure, projected activity levels, maintenance demand and support concepts)

- o Personnel funding estimate
  - MILPERS costs by fiscal year in constant/current dollars

- o Manpower estimate
  - Current manpower estimate
  - Explanation of differences from manpower estimate at Milestone II

- o Manpower trade-off analysis
  - Manpower requirements analysis is completed at Milestone III. Information from the trade-off analyses that are conducted after Milestone 0 is considered. Information is used to support the manpower estimate for military manpower force structure, contractor support, and depot workload.

- o Manpower sensitivity analysis
  - Quantification of sensitivity of manpower requirements to demonstrated reliability and maintainability levels and to system activty levels

- o Manpower requirements and assets
  - Potential shortfalls of personnel by occupation
  - New occupations not yet approved and programmed into Army personnel and training systems
  - Impact assessment of failure to obtain essential personnel

Figure II-5

INFORMATION REQUIREMENTS AND ISSUES ASARC/DSARC III

- o Training requirements summary
  - Formal training requirements by fiscal year
    - Numbers of personnel to be trained
    - Training costs

- o Training plan summary
  - Plans to train personnel
  - Scope/duration of formal training
  - On-the-job-training/Unit training time
  - Training device/simulator and other job performance/training aid use
  - Savings through use of training devices/simulators

- o Manpower evaluation schedules
  - Plan for any further manpower requirements evaluation tests

ISSUES

- o Ability to provide proper number of trained personnel to man and support the system when fielded

- o Ability to provide proper number of trained personnel to man and support the system throughout its life cycle

- o Shortfalls in personnel

- o Shortfalls in training

- o Shortfalls in Manpower programming

- o Verification of Manpower estimates

Figure II-5 (continued)
INFORMATION REQUIREMENTS AND ISSUES ASARC/DSARC III

CHAPTER III
INFORMATION SOURCES AND FEEDER DATA

The preceding chapter discussed the system acquisition cycle and consolidated MPT information requirements as prescribed by DOD and DA regulations for each milestone review for major systems. This chapter briefly lists the key events/actions within each phase that lead to a milestone review which should produce MPT information. The MPT information could be used in determining and addressing MPT issues. Figures III-1, III-2, and III-3 list the events for the Concept Exploration, Demonstration and Validation, and Full Scale Development Phases respectively. The appropriate MPT information as well as the source and user of the information are listed for each event.

CONCEPT EXPLORATION
MPT INFORMATION EVENTS

KEY EVENTS	MILESTONE	MPT INFORMATION	SOURCE	USER
Logistics Support Planning Document (LSPD)	Pre-Milestone I	o Identification of limitations regarding requirements - Skilled personnel - Training programs - Training devices	Materiel Developer (MATDEV) Combat Developer (COMDEV)	COMDEV MATDEV Trainer Logistician
Letter of Agreement (LOA)	Pre-Milestone I	o Personnel concepts definition o Training concepts definition	COMDEV MATDEV	COMDEV MATDEV Trainer Logistician
Force Level Guidance (FLG)	Pre-Milestone I	o Concept of operations and mission - Forwarded to major Commanders for information on planned use and resulting trade-offs that might be required in Force structure	DCSOPS	COMDEV MATDEV MACOMS
Baseline Cost Estimate (BCE)	Pre-Milestone I	o Estimate of system life cycle cost - Manpower costs	MATDEV	Comptroller of the Army (COA)
Concept Formulation Package (CFP)	Pre-Milestone I	o TOD - Total Army manpower requirements estimate	COMDEV MATDEV	DCSRDA DCSOPS

FIGURE III-1
CONCEPT EXPLORATION MPT INFORMATION EVENTS

CONCEPT EXPLORATION
MPT INFORMATION EVENTS (continued)

KEY EVENTS	MILESTONE	MPT INFORMATION	SOURCE	USER
Concept Formulation Package (cont'd)		o TOD (cont'd) - Total manpower requirements for system - Costs - Schedules o BTA - Estimated costs - Estimated total manpower requirements		
Outline Development Plan (ODP)	Pre-Milestone I	Plan for personnel and training (SEC IV) identifies: o Requried skills o Training services o Other requirements for crew and individual training	MATDEV COMDEV -HQDA (Coordination)	DCSRDA (info)

Figure III-1
CONCEPT EXPLORATION MPT INFORMATION EVENTS

DEMONSTRATION AND VALIDATION
MPT INFORMATION EVENTS

KEY EVENTS	MILESTONE	MPT INFORMATION	SOURCE	USER
DT I/OT I Test Results	Pre-Milestone II	o Military utility o Supportability o Organizational requirements o Training requirements	Test Reports	Tester Trainer COMDEV MATDEV Logistician
Logistics Support Analysis Planning Update	Pre-Milestone II	o MPT information derived from analysis of DT I/OT I results with systems design to identify support-ability problems	MATDEV COMDEV Trainer	MATDEV COMDEV Trainer Logistician
Training Support Planning Update	Pre-Milestone II	o Modifications to initial training - Training stragety - Research - HFE implications	Trainer MATDEV COMDEV	Trainer MATDEV COMDEV
Tentative Quantitative and Qualitative Personnel Requirements Information (TQQPRI)	Pre-Milestone II	o Personnel requirements o Duties and tasks o Work units o Performance standards o Manpower authorization factors o MOS o Skill levels o Organization	MATDEV	HDQA SSC COMDEV
Basic of Issue Plan - I (BOIP I)	Pre-Milestone II	o Initial unit structure	COMDEV	HQDA COMDEV MATDEV

Figure III-2
DEMONSTRATION AND VALIDATION - MPT INFORMATION EVENTS

DEMONSTRATION AND VALIDATION
MPT INFORMATION EVENTS (Contd)

KEY EVENTS	MILESTONE	MPT INFORMATION	SOURCE	USER
Training Device Requirements (TDR)	Pre-Milestone II	o Training devices - Need - Type - Manpower information derived	Trainer	TRAINER Appropraite Commands
Tentative MOS Evaluation	Pre-Milestone II	o TQQPRI basis for proposed MOS structure versus current MOS structure and will - Establish personnel qualifications - Facilitate selection and distribution of personnel	MILPERCEN	HQDA Trainer
Advanced Resident Training Plan (ARTP)	Pre-Milestone II	o Proposed training course o Course length o Number of personnel requiring training o Equipment required o Training location	Trainer	HQDA COMDEV MATDEV Trainer
New Equipment Training Plan (NETP)	Pre-Milestone II	o Training requirements and plan for initial transfer of knowledge to operators and maintainers o Trained personnel to develop training within units	MATDEV	MATDEV Trainer

Figure III-2
DEMONSTRATION AND VALDATION MPT INFORMATION EVENTS

DEMONSTRATION AND VALIDATION
MPT INFORMATION EVENTS (Contd)

KEY EVENTS	MILESTONE	MPT INFORMATION	SOURCE	USER
Development Plan (DP)	Pre-Milestone II	o Personnel and Training Requirements Section - Identification of new skills - NET - Crew and individual training requirements - Training devices - Facilities - Schedules	MATDEV COMDEV Logistician Trainer	MATDEV COMDEV Logistician Trainer

Figure III-2
DEMONSTRATION AND VALIDATION MPT INFORMATION EVENTS

FULL SCALE DEVELOPMENT
MPT INFORMATION EVENTS

KEY EVENTS	MILESTONE	INFO REQUIREMENTS	SOURCE	USER
DT II/OTII Test Results	Pre-Milestone III	DT II o Human enginering o Training devices OT II o Suitability in a realistic operational environment	Test reports	COMDEV MATDEV SSC Trainer Logistician
Logistic Support Planning Manuals	Pre-Milestone III	o Quantitative and qualitative personnel and training requirements	MATDEV COMDEV Trainer Logistician	MATDEV COMDEV Trainer Logistician MACOMS
Training Plan Update	Pre-Milestone III	o Personnel and training requirements validation	MATDEV COMDEV Trainer	MATDEV COMDEV SSC MILPERCEN Trainer
Logistic Support Planning Summary	Pre-Milestone III	o Concept of logistics support - Personnel - Training	MATDEV	COMDEV Trainer Logistician SSC
QQPRI	Pre-Milestone III	o Personnel requirements o Duties and tasks o Work units o Performance standards	MATDEV COMDEV Trainer	HQDA Trainer COMDEV SSC

Figure III-3
FULL SCALE DEVELOPMENT MPT INFORMATION EVENTS

FULL SCALE DEVELOPMENT
MPT INFORMATION EVENTS (Contd)

KEY EVENTS	MILESTONE	INFO REQUIREMENTS	SOURCE	USER
QQPRI (continued)		o Manpower authorization factors o MOS o Skill levels o Organization		
BOIP	Pre-Milestone III	o TOE requirements o TDA requirements o JTA requirements o CTA requirements	COMDEV	HQDA MATDEV Trainer Logistician
DP Update	Pre-Milestone III	o Updates training information	MATDEV COMDEV Trainer Logistician	MATDEV COMDEV Trainer Logistician

Figure III-3
FULL SCALE DEVELOPMENT MPT INFORMATION EVENTS

CHAPTER IV
INTERVIEW APPROACH AND RESULTS

A. APPROACH

Interviews were conducted with key personnel who are involved in the MPT aspects of Materiel Systems Acquisition. The objectives of the interviews were to discuss: information requirements and key issues during the Materiel System Acquisition Process; availability and credibility of information sources; feasibility of developing a set of questions which should be addressed in preparation for ASARC reviews; and a plan of organization for addressing these questions.

Interviews were conducted with personnel from DCSPER, DCSOPS, FMCO, MILPERCEN, and the Solider Support Center (SSC). Initial questions used in the interview are shown in Appendix A. Additional follow-on questions were asked as the situation dictated.

As can be seen from the list of questions in Appendix A the interviews initially concentrated on those LCSMM events involving MPT information to determine if they are being or can be used to assist in providing ASARC preparation data. Further, interviews concentrated on the need and ability to generate questions during preliminary ASARC preparation which address the MPT issues. A summary of findings is included in the following.

B. MILESTONE 0

The MENS should contains a manpower contraints statement. All key individuals interviewed were aware of this requirement. It was noted that there is no standardized approach within the Army for developing a constraints statement. Manpower constraints statements currently included in the MENS are very general and normally do not address limitations. A consensus of opinion held that overall mission area requirements versus assets, the type of soldier the Army will have in the future, critical skill areas, and the ability to recruit and train should be considered in developing a manpower constraints statement. Further, questions should be asked in these general areas when considering the appropriateness or validity of a constraints statement. One action underway which may assist in

improving the Army's ability to develop appropriate constraints without unnecessarily restricting design engineers is a functional review which is being conducted by the SSC. This functional review should identify short and balanced occupational fields and MOSs. Milestone 0 appears critical to the development of reasonable constraints. Such constraints should be based on the projection of the quantity and quality of personnel during the life of a system.

C. MILESTONE I

The key individuals interviewed were of the opinion that the requirements for MPT information generated in the Concept Exploration Phase were valid. Most individuals felt that the information contained in documents at this stage of development was sketchy, if available at all. All agree that this phase requires improved front end analysis, however, there were questions regarding availability of necessary tools. The personnel involved in developing or addressing MPT issues prior to the ASARC felt that specific lines of questions could be developed to assist in preparation. Further, personnel in the SSC who assess supportability, support actions to review the documents which should contain MPT guidance and/or broad MPT planning information. When questioned about the ability and need to develop time-phased questions based on IOC, PPBS, and training schedules, these personnel stated that it would be more difficult to determine the timing of question areas early in concept design. Milestone I MPT review appears critical regarding the man-machine interface design. It is at this point that an alternative selection can have far-reaching MPT implications.

D. MILESTONE II

It was noted by personnel being interviewed that more definitive information, especially regarding task and skill analyses, should become available during the Demonstration and Validation Phase during which the TQQPRI and BOIP I are required. It was also noted that information concerning training requirements, facilities, and devices should be more definitive. At this point that potential problem areas should be identified which if not corrected could develop into major MPT issues. To some extent questions can be developed for review which are not only time sensitive to ASARC preparation but are time sensitive to requirements such as IOC date, training, pipeline/schedule, PPBS, MILCON requirements, etc.

MPT review in prepartion for Milestone II is critical in many aspects since improper planning at this stage could affect the ability to properly man the system at IOC. All phases of MPT must be considered including: manpower planning, programming, and budgeting; training planning; training device requirements; MILCON; and personnel recruiting and selection.

E. MILESTONE III

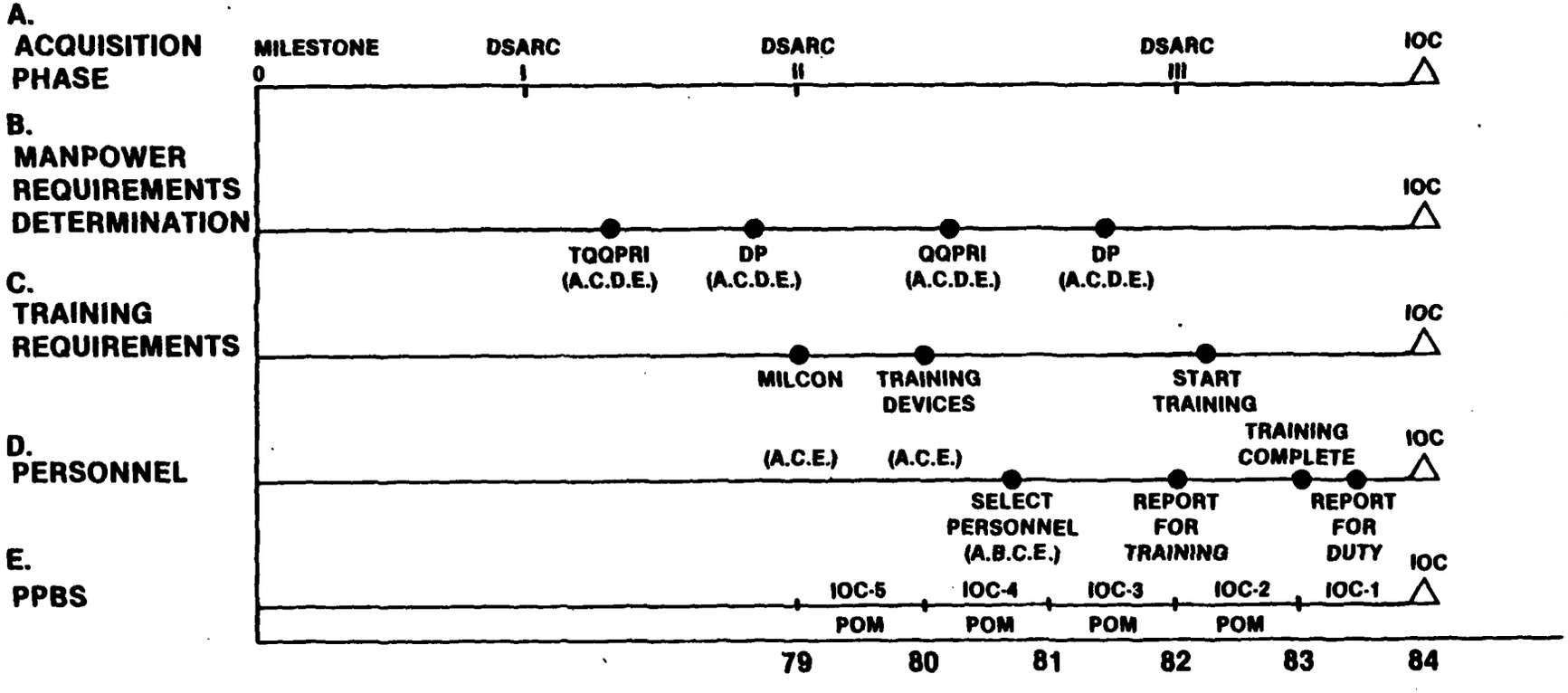
The key individuals interviewed agreed that staff personnel should identify potential issues prior to the ASARC. They further agreed that as many issues as possible should be resolved prior to the ASARC. Many questions should be addressed in order to determine if the Army will be able to man the system with an adequate amount of properly trained personnel in accordance with the fielding schedule; and maintain the personnel support necessary for the life of the system. DT/OT tests will be used and should confirm the manpower requirement estimates. Prior to Milestone III, appropriate planning, programming and budgeting actions should have been completed. Training schedules, personnel distribution, and resulting plans should also have completed. The critical issues at Milestone III appear to be the validity of prior MPT actions and the ability to man the system on schedule.

F. SUMMARY

Personnel directly involved in providing MPT information in preparation for ASARCS stated that no standard approach has been established. They indicated that the development of questions designed to identify and/or help resolve issues was appropriate and would be helpful. It was noted that some questions would be time sensitive to certain key points. It was further noted that even though the acquisition process was event-driven, certain MPT actions must be timed to other events such as IOC data and the POM cycle. Figure IV-1 is a notional display of interrelated activities and program milestones which must be coordinated to ensure that properly trained personnel are available when needed.

The information gained during the interviews supports development of an approach and questions for the various ASARC/DSARC reviews which will be discussed in the following chapter.

PROGRAM MILESTONES (NOTIONAL TIME PHASE RELATIONSHIPS) EXAMPLE



- SOME ACTIONS TIME SENSITIVE TO KEY MILESTONES SUCH AS IOC OR POM ENTRY DATE.
- BACKWARD PLANNING CAN BE DONE FROM IOC.
- INFORMATION REQUIRED AT ASARC/DSARC MAY REQUIRE ADDRESSING SOONER TO INSURE PROPER PROGRAMMING AND BUDGET, AND CAPABILITY AT IOC.
- DATA REQUIREMENTS FREQUENTLY SENSITIVE TO SEVERAL KEY MILESTONES, *i.e.*, ASARC/DSARC REVIEWS, POM, AND IOC.
- ( ) SHOWS CATEGORIES IN WHICH TIME RELATIONSHIPS EXIST.

Figure IV-1

CHAPTER V
DISCUSSION AND CONCLUSION

A. ANALYSIS DISCUSSION

An analysis of information requirements for ASARC/DSARC reviews, MPT information which should be included in designated events within each phase of acquisition, and interviews with key personnel indicate that it is both feasible and desirable to develop a line of MPT questions to be addressed for ASARC preparation. Questions should be designed to address the stated and implied issues for each ASARC/DSARC review. Further, it was noted that many events in the LCSMM should contain valuable MPT planning information. Proper preparation of documents associated with these events should facilitate the MPT planning process and provide ready reference of MPT planning information when preparing for system reviews.

In determining the feasibility of developing questions to assist DCSPER in ASARC reviews, consideration was given to DCSPER responsibilities regarding ASARC. To execute these assigned responsibilities DCSPER personnel must have several elements of information. First, complete knowledge of the system undergoing acquisition is required, including information such as the projected IOC date, stage of development, mission area, and MPT implications. Other needed information includes the specific requirements of each review level, sources of information and an insight into how the data will be presented. In the final analysis, DCSPER must judge the affordability of personnel for the system.

The following outline has been developed to assist in addressing MPT issues at each individual milestone for each level of review. The plan includes a proposed cover sheet which provides appropriate system information, a format addressing key issues, a matrix which associates MPT information areas with sources (to be used as a reference and check-off list), and a series of questions which are pertinent to each particular level of review. It should be noted that answers to the listed questions may generate the need for follow-on questions which are not contained in this plan. Such follow-on questions should be encouraged.

B. REVIEW PLAN MILESTONE 0

Although Milestone 0 is not an ASARC review as such, there is a need for MPT to be addressed and for DCSPER to participate in MPT matters. The key issue at this point is the development, review, and approval of manpower constraint which is a MENS requirement. Figures V-1 through V-4 contain an approach for addressing this review

GLOSSARY OF ACRONYMS

AHWG	Ad Hoc Working Group
AR	Army Regulation
ARI	Army Research Institute
ARTP	Advance Resident Training Plan
ASARC	Army Systems Acquisition Review Council
BCE	Baseline Cost Estimate
BOIP	Basis of Issue Plan
BTA	Best Technical Approach
CIVPERS	Civilian Personnel
CFP	Concept Formulation Package
COA	Comptroller of the Army
CTA	Common Tables of Allowance
DA	Department of the Army
DA Pam	Department of the Army Pamphlet
DAPR	Department of the Army Preliminary Review
DARCOM	Development Acquisition and Readiness Command
DCP	Decision Coordinating Paper
DCS	Deputy Chief of Staff
DCSOPS	Deputy Chief of Staff for Operations and Plans
DCSPER	Deputy Chief of Staff for Personnel
DCSRDA	Deputy Chief of Staff for Research, Development, and Acquisition
DOD	Department of Defense
DODD	Department of Defense Directive
DODI	Department of Defense Instruction
DP	Development Plan
DSARC	Defense Systems Acquisition Review Council
DT	Development Test
FLG	Force Level Guidance
FM	Field Manual
FMCO	Force Modernization Coordination Office
FYDP	Five Year Defense Plan
HQDA	Headquarters of Department of the Army
IOC	Initial Operating Capability

IPS	Integrated Program Summary
JTA	Joint Table of Allowances
LCSMM	Life Cycle System Management Model
LOA	Letter of Agreement
LSPD	Logistics Support Planning Document
MENS	Mission Element Need Statement
MILPERS	Military Personnel
MILPERCEN	Military Personnel Center
MOS	Military Occupational Safety
MPT	Manpower, Personnel, and Training
MRF	Milestone Reference File
MRIS	Modernization Requirements Information System
NETP	New Equipment Training Plan
ODP	Outline Development Plan
O&M	Operating and Maintenance
OJT	On the Job Training
OT	Operational Test
POM	Program Objectives Memorandum
PPBS	Planning, Programming, and Budgeting System
QQPRI	Qualitative and Quantitative Personnel Requirements Information
RDA	Research, Development, and Acquisition
SDDM	Secretary of Defense Decision Memorandum
SECDEF	Secretary of Defense
SSC	Soldier Support Center
TDA	Table(s) of Distribution and Allowances
TDR	Training Device Requirements
TOA	Trade-Off Analysis
TOD	Trade-Off Determination
TOE	Table(s) of Organization and Equipment
TQQPRI	Tentative Qualitative and Quantitative Personnel Requirements Information
TRADOC	Training and Doctrine Command
TSM	Training and Doctrine Command System Manager

MPT REVIEW PLAN AND QUESTIONS

MILESTONE 0 PROGRAM DATA

PROGRAM

MILESTONES:

MENS PREPARATION DATE _____

DSCPER MENS REVIEW DATE _____

MILESTONE 0 DECISION _____

FIGURE V-1

MPT REVIEW PLAN AND QUESTIONS

MILESTONE 0 PROGRAM DATA

MPT REVIEW PLAN AND QUESTION

MILESTONE 0 KEY ISSUES

ISSUES: ESTABLISHMENT OF MANPOWER CONSTRAINTS

VALIDITY OF CONSTRAINTS

BASELINE FOR CONSTRAINTS

OTHERS (AS OCCUR)

FIGURE V-2

MPT REVIEW PLAN AND QUESTIONS

MILESTONE 0 KEY ISSUES

PRE-MILESTONE 0

MPT INFORMATION AREAS/SOURCES

INFORMATION NEEDS / POSSIBLE INFORMATION SOURCES	MENS	FUNCTIONAL REVIEWS	MANPOWER PROJECTIONS	SOLDIER SUPPORT CENTER	DCSPER	TRADOC
Manpower						
o Constraints	x					
o Constraints Baseline		x	x	x	x	x
o Critical Skills		x	x	x	x	
o Training Limitations		x	x	x		x
o Recruiting Limitations			x		x	
o Credibility	x	x	x	x	x	x

Figure V-3
MPT INFORMATION AREAS/SOURCES
PRE-MILESTONE 0

PREPARATION TYPE QUESTIONS/WORKSHEET

QUESTIONS / AMPLIFYING DATA	SOURCE	USER	TIME REQUIREMENTS BASELINE	REMARKS
1. Have Manpower Constraints been established?	MENS	DCSPER	MENS Preparation and Review	
2. From what baseline are the stated constraints addressed? i.e.- numbers, skills, grades, human factors, intelligence levels, critical skill areas.	MENS	DCSPER	MENS Preparation and Review	
3. Have Functional Area or other manpower reviews been conducted that support baseline establishment, if any?	DCSPER SCC	DCSPER/ TRADOC	MENS Preparation and Review	
4. Have critical skills been determined to exist in the Functional Area?	DCSPER SSC	DCSPER/ TRADOC	MENS Preparation and Review	
5. If Critical Skill Areas have been identified, is it reasonable to believe that the army can provide more qualified people into the critical areas (Recruitment and Training)?	DCSPER	DCSPER/ TRADOC	MENS Preparation and Review	
6. Do the Constraints appear reasonable?	DCSPER	DCSPER/ TRADOC	MENS Preparation and Review	

Figure V-4
PREPARATION TYPE QUESTIONS/WORKSHEET
PRE-MILESTONE 0

C. REVIEW PLAN MILESTONE I

Milestone I is conducted at the completion of the Concept Exploration Phase. Figures V-5 through V-8 provide an approach for addressing MPT issues in preparation for ASARC/DSARC I reviews.

MPT REVIEW PLAN AND QUESTIONS

MILESTONE I PROGRAM DATA

PROGRAM _____

PROGRAM DESCRIPTION _____

IOC _____

ACQUISITION STATUS _____

AD HOC WORKING GROUP (AHWG) ESTABLISHED _____

DEPARTMENT OF ARMY PRELIMINARY REVIEW (DAPR) _____

PRE ASARC _____

ASARC _____

DSARC _____

FIGURE V-5

MPT REVIEW PLAN AND QUESTIONS

MILESTONE I PROGRAM DATA

MPT REVIEW PLAN AND QUESTIONS

MILESTONE I KEY ISSUES

ISSUES:

MANPOWER REQUIREMENTS FOR EACH ALTERNATIVE

VALIDITY OF REQUIREMENTS DETERMINATION

SYSTEMS DESIGN CONSIDERATION TO REDUCE MPT REQUIREMENTS

LONG TERM MPT IMPLICATIONS FOR EACH ALTERNATIVE (PEACETIME AND WARTIME)

PROJECTED REQUIREMENTS VERSUS PUBLISHED CONSTRAINTS

OTHERS (AS OCCUR)

FIGURE V-6

MPT REVIEW PLAN AND QUESTIONS

MILESTONE I KEY ISSUES

MPT INFORMATION AREA/SOURCES

INFORMATION AREAS / MPT INFORMATION DATA FEEDER SOURCE	MILESTONE O PAPERS/ MENS CONSTRAINTS	LSPD	LOA	FLG	BCE	CFP	ODP	FYDP/POM
A. MANPOWER								
o Constraints	x					x		
o Requirements					x	x		
o Costs								
o Current Manning Estimate							x	
o Last Approved Manning Goal/Threshold	x						x	
o Recommended Manning Goal/Threshold								
o Anticipated Force Structure				x				
o Operational Concept				x		x		
o Designed to Minimize Manpower Costs or Increased Productivity			x					x
o Planned								x
o Programmed								x
o Budgeted								
B. PERSONNEL								
o Skill Limitations		x						
o Personnel Concepts Defined			x				x	
o Skill Requirements					x			
o Human Factors Evaluation					x			
o Task/Skill Analysis								
C. TRAINING			x					
o Training Concepts		x					x	
o Training Programs		x					x	
o Training Devices							x	
o Training Facilities								
o Individual and Collective Crew Training (Requirements for)						x	x	
o Alternative Training Differences								

Figure V-7
MPT INFORMATION AREA/SOURCES
FOR MILESTONE I

ASARC/DSARC I

PREPARATION TYPE QUESTIONS/WORKSHEET

QUESTIONS \ AMPLIFYING DATA	SOURCE	USER	TIME REQUIREMENT BASELINE	REMARKS
1. Have limitations regarding skilled personnel, training programs and training devices been identified? If so, what are they?	LSPD	DCSPER SSC MILPERCEN	ASARC	
2. What manpower constraints have been established for the overall system?	MENS	DCSPER, SSC	ASARC	
3. Have manpower constraints related to mission area or force level been identified?	MENS/ LOA	DCSPER	ASARC	
4. Has a requirement been established to assess alternatives to reduce manpower requirements or to increase productivity?	LOA	DCSPER	ASARC	
5. Has the above requirement been complied with?	MATDEV	DCSPER	ASARC	
6. Have Personnel and Training Concepts been defined in the LOA?	LOA	DCSPER	ASARC	
7. Have manpower requirements in the LOA been examined to determine their acceptability and force structure implications?	LOA TRADOC DARCOM SSC DCSOPS	DCSPER	ASARC	
8. What are the total manpower requirements projected for the system at this time?	CFP	DCSPER	ASARC	
9. Have manpower costs been included in BCE?	BCE	DCSPER	ASARC	

Figure V-8
PREPARATION TYPE QUESTIONS/WORKSHEET

ASARC/DSARC I

PREPARATION TYPE QUESTIONS/WORKSHEET

QUESTIONS \ AMPLIFYING DATA	SOURCE	USER	TIME REQUIREMENT BASELINE	REMARKS
10. Has initial identification of required skills been accomplished? If so, are any in critical skill areas?	ODP	DCSPER	ASARC	
11. Has initial identification for training devices and training facilities been accomplished?	ODP	DCSPER SSC	ASARC	
12. Has initial identification been made of requirements for individual and collective crew training?	ODP	DCSPER SSC	ASARC	
13. Are projected manpower needs within the established constraints?	MENS ODP	DCSPER	ASARC	
14. Do personnel projections indicate ability to support?	DCSPER SSC	DCSPER	ASARC	
15. Have manpower requirements been entered into the PPBS?	DCSPER MRIS FMCO	DCSPER	PPBS	
16. Do initial projections indicate ability to train personnel as and when required to meet fielding needs?	LSPD LOA ODP	DCSPER	ASARC	
17. Is Training Military Construction (MILCON) required?	LSPD	DCSPER	ASARC	
18. If MILCON is required, has it been programmed and is sufficient time available to fund and build in accordance with current systems schedule?	FYDP/ POM TSM	DCSPER	ASARC PPBS	

Figure V-8 (continued)

D. REVIEW PLAN MILESTONE II

ASARC/DSARC II reviews are associated with the Milestone II decision. MPT requirements development and planning information should be more complete than that at Milestone I. Figures V-9 through V-12 provide an approach and initial questions for preparing for ASARC/DSARC III reviews.

MPT REVIEW PLAN AND QUESTIONS

MILESTONE II PROGRAM DATA

PROGRAM _____

PROGRAM DESCRIPTION _____

IOC _____

ACQUISITION STATUS _____

AHWG ESTABLISHED _____

DAPR _____

PRE ASARC II _____

ASARC II _____

DSARC II _____

* ASARC I MANNING - ESTIMATE:

OFFICER	WARRANT OFFICER	ENLISTED

* IF AVAILABLE

FIGURE V-9

MPT REVIEW PLAN AND QUESTIONS

MILESTONE II PROGRAM DATA

MPT REVIEW PLAN AND QUESTIONS

MILESTONE II - KEY ISSUES

ISSUES:

REQUIREMENTS VERSUS CONSTRAINTS

VALIDITY OF MANNING ESTIMATES

CRITICAL SKILL ASSESSMENT

PROGRAMMING AND BUDGETING

PERSONNEL AVAILABILITY

PERSONNEL/TRAINING PHASING WITH IOC

AFFORDABILITY/SUPPORTABILITY

FIGURE V-10

MPT REVIEW PLAN AND QUESTIONS

MILESTONE II KEY ISSUES

PRE-MILESTONE II

MPT INFORMATION AREAS/SOURCES

INFORMATION AREAS \ MPT INFORMATION DATA FEEDER SOURCE	MASTER REFERENCE FILE INFORMATION	DT/OT I TEST REPORTS	LOGISTIC SUPPORT ANALYSIS PLANNING UPDATE	TRAINING SUPPORT PLANNING UPDATE	TQQPRI	BOIPI	TRAINING DEVICE REQUIREMENT (TDR)	TENTATIVE MOS EVALUATION	ADVANCED RESIDENT TRAINING PLAN (ARTP)	NEW EQUIPMENT TRAINING PLAN (NETP)	DEVELOPMENT PLAN (DP)	FYDP/POM
A. MANPOWER												
o Constraints	x											
o Previous manning	x				x	x						
o Current manning					x	x					x	
o Recommended manning											x	
o Test and Evaluation												
o Requirements vs Constraints	x		x	x	x	x		x			x	
o Costs												
o Trade-offs conducted	x		x	x								
o Significant differences old vs new system	x		x	x							x	
o Sensitivity to maintenance goals			x		x							
o Further trade-off analysis plans											x	
o Organization requirements					x						x	
o MACOM requirements					x							
o TRADOC requirements					x							
o DARCOM requirements					x							
o Plans to verify manpower estimates											x	
o Contract support											x	
o Depot requirements											x	
o Net changes in total force					x							x
o Planned												x
o Programmed												x
o Budgeted												x
o Credibility	x	x	x	x	x	x	x	x	x	x	x	

Figure V-11
MPT INFORMATION AREAS/SOURCES

PRE-MILESTONE II

MPT INFORMATION AREAS/SOURCES

MPT INFORMATION AREAS / DATA FEEDER SOURCE	MASTER REFERENCE FILE INFORMATION	DT/OT 1 TEST REPORTS	LOGISTIC SUPPORT ANALYSIS PLANNING UPDATE	TRAINING SUPPORT PLANNING UPDATE	TQQPRI	BOIPI	TRAINING DEVICE REQUIREMENT (TDR)	TENTATIVE MOS EVALUATION	ADVANCED RESIDENT TRAINING PLAN (ARTP)	NEW EQUIPMENT TRAINING PLAN (NETP)	DEVELOPMENT PLAN (DP)	FYDP/POM
B. PERSONNEL												
o Man-machine interface supportability		x	x									
o Personnel requirements					x			x				
o Duties/Tasks					x			x				
o Performance standards					x			x				
o Manpower authorization factors					x							
o MOS'S					x							
o Skill levels					x							
o Organization					x							
o New MOS					x			x				
o Proposed MOS structure vs Current MOS Structure					x			x				
o Personnel qualifications					x			x				
o Human factors evaluation		x										
o Critical skill area					x							
o CONUS - OCONUS rotation impact					x							
o Recruiting					x							
o Personnel affordability					x							
C. TRAINING												
o Requirements		x		x								
o Strategy				x								
o Research				x								
o HFE implications				x								
o Training device requirement							x					
o Resident training course(s)										x		
o Course length										x		

Figure V-11 (continued)
MPT INFORMATION AREAS/SOURCES
PRE-MILESTONE II

PRE-MILESTONE II

MPT INFORMATION AREAS/SOURCES

MPT INFORMATION AREAS / DATA FEEDER SOURCE	MASTER REFERENCE FILE INFORMATION	DT/OT I TEST REPORTS	LOGISTIC SUPPORT ANALYSIS PLANNING UPDATE	TRAINING SUPPORT PLANNING UPDATE	TQQPRI	BOIPI	TRAINING DEVICE REQUIREMENT (TDR)	TENTATIVE MOS EVALUATION	ADVANCED RESIDENT TRAINING PLAN (ARTP)	NEW EQUIPMENT TRAINING PLAN (NETP)	DEVELOPMENT PLAN (DP)	FYDP/POM
o Number of personnel									x			
o Equipment requirements									x			
o Training location									x			
o Instructor/training support requirements									x			
o Net requirements										x		
o ID NET personnel for instruction										x		
o Schedules vs requirements (numbers)											x	
o Schedules vs fielding needs											x	
o Planned												x
o Programmed												x
o Budgeted												x
o Affordable/supportable												

Figure V-11 (continued)
MPT INFORMATION AREAS/SOURCES

ASARC/DSARC II

PREPARATION TYPE QUESTIONS/WORKSHEET

QUESTIONS \ AMPLIFYING DATA	SOURCE	USER	TIME REQUIREMENT BASELINE	REMARKS
1. What are the current manning estimates?	SSC MILPERCEN TQQPRI	DCSPER	ASARC IOC	
2. What were the previous manning estimates?	DSARC I DCP/IPS	DCSPER	ASARC	
3. What is the current recommended manning?	TQQPRI SSC TSM DARCOM	DCSPER	ASARC	
4. Are current requirements within latest constraints established?	DSARC I DCP/IPS	DCSPER	ASARC	
5. What are the significant differences in the new system and the system being replaced regarding MPT?	SSC MILPERCEN	DCSPER	ASARC	
6. Did DT/OT I tests examine military utility of the system in terms of supportability, organization and training?	DT/OT I TEST REPORTS	DCSPER SSC MILPERCEN TRADOC	ASARC	
7. Did DT/OT I tests identify any crucial MPT issues , supportability problems or human factors issues which reflect personnel manning and/or training?	DT/OT I TEST REPORTS	DCSPER SSC MILPERCEN TRADOC	ASARC	

Figure V-12
PREPARATION TYPE QUESTIONS/WORKSHEET
ASARC/DSARC II

ASARC/DSARC II

PREPARATION TYPE QUESTIONS/WORKSHEET

QUESTIONS \ AMPLIFYING DATA	SOURCE	USER	TIME REQUIREMENT BASELINE	REMARKS
8. What trade-off analyses have been conducted regarding MPT?	DARCOM TSM SSC	DCSPER	ASARC	
9. Did any of the trade-offs conducted result in significant MPT savings?	DARCOM TSM SSC	DSCPER	ASARC	
10. What other manpower requirements have been identified? i.e. - Contract support, Depot. List these requirements by category and totals.	LSAD TQQPRI	DCSPER	ASARC IOC	
11. What are the net changes in the total force due to the new system?	TQQPRI DP	DCSPER	ASARC IOC PPBS	
12. Have the TQQPRI and BOIP I been prepared and received?	DCSPER MILPERCEN SSC DARCOM TRADOC	DCSPER	TC IOC	
13. Are organizational requirements published?	O&O CONCEPTS TQQPRI SSC	DCSPER	ASARC	
14. What are the individual MACOM requirements?	TQQPRI MRIS FMCO SSC	DCSPER	ASARC PPBS	

Figure V-12 (continued)
PREPARATION TYPE QUESTIONS/WORKSHEET

ASARC/DSARC II

PREPARATION TYPE QUESTIONS/WORKSHEET

QUESTIONS / AMPLIFYING DATA	SOURCE	USER	TIME REQUIREMENT BASELINE	REMARKS
15. What are the total TRADOC MPT requirements?	TQQPRI MRIS FMCO SSC	DCSPER	ASARC PPBS	
16. What are the total DARCOM MPT requirements for the system?	TQQPRI MRIS FMCO SSC	DCSPER	ASARC PPBS	
17. Have the manpower and training requirements been planned, programmed and budgeted?	MRIS FYDP/POM	DCSPER	ASARC IOC PPBS	
18. Has an analysis been conducted of the proposed MOS structure for the new system relative to the current system?	SSC MILPERCON	DCSPER	ASARC	
a. Are all MOS requirements in skills that can be supported (availability, rotation, etc.)?				
b. If not - what are the critical areas and what action is being taken to resolve the problem?				
19. Considering IOC of the system, training device requirements, etc. is sufficient time available to get the proper numbers of personnel trained to meet the need?	TRADOC SSC MILPERCEN	- DCSPER	ASARC IOC	

Figure V-12 (continued)
PREPARATION TYPE QUESTIONS/WORKSHEET

ASARC/DSARC II

PREPARATION TYPE QUESTIONS/WORKSHEET

QUESTIONS / AMPLIFYING DATA	SOURCE	USER	TIME REQUIREMENT BASELINE	REMARKS
20. Is it reasonable to believe that adequate numbers of qualified personnel can be recruited?	DCSPER RECRUITING COMMAND	DCSPER	ASARC	
21. Considering IOC and training requirements, is sufficient time available to recruit the required personned?	DP MRF	DCSPER	ASARC IOC	
22. Are the needs within the PPBS threshold?	DSARC-I DCP	DCSPER	ASARC IOC PPBS	
23. Has training research and analysis been conducted and a training strategy established?	TSP	DCSPER	ASARC	
24. If training strategy has been established, does it satisfy the time requirements for IOC?	TSP	DCSPER	ASARC IOC	
25. Are training devices required? If so, can they be obtained sufficiently early to meet the IOC requirements?	TDR	DCSPER	ASARC IOC	
26. Have proposed training courses, equipment requirements, training locations and numbers of people to be trained been established, Planned, programmed and budgeted?	ARTP	DCSPER	ASARC IOC PPBS	

Figure V-12 (continued)
PREPARATION TYPE QUESTIONS/WORKSHEET
ASARC/DSARC II

ASARC/DSARC II

PREPARATION TYPE QUESTIONS/WORKSHEET

QUESTIONS / AMPLIFYING DATA	SOURCE	USER	TIME REQUIREMENT BASELINE	REMARKS
27. Have new equipment training (NET) plans been formulated and necessary action taken to initiate NET?	NETP	DCSPER	ASARC	
28. Have plans been made for future trade-off analysis and job task identification?	SSC TSM DARCOM	DCSPER	ASARC	
29. Have plans been or will they be incorporated into DT/OT II tests plans to verify manpower estimates?	SSC	DCSPER	ASARC	
30. Has a MPT supportability assessment been conducted? What crucial problems have been identified?	SSC MILPERCEN	DCSPER	ASARC	
31. Has a distribution plan been developed?	MILPERCEN	DCSPER	ASARC IOC	
32. If so, is it consistent with the need?	MILPERCEN	DCSPER	ASARC IOC	

Figure V-12 (continued)
PREPARATION TYPE QUESTIONS/WORKSHEET

E. REVIEW PLAN MILESTONE III

A favorable decision at Milestone III authorizes the system to enter production. The key issues at this point are personnel affordability for the long term and availability and scheduling of appropriate personnel to man the system when fielded. Figures V-13 through V-16 provide an approach and initial questions for preparing for ASARC/DSARC III reviews.

F. CONCLUSIONS

Information requirements and critical issues review, interview results and a comparative analysis indicates that questions can and should be developed to assist in ASARC/DSARC review preparation. Analysis reveals that the questions contained in this chapter are appropriate however not all inclusive. These questions and associated plan of organization should be verified against systems approaching various ASARC/DSARC levels of review. Questions and plans should be updated as required and used in developing a standardized method and tool for DSCPER use.

MPT REVIEW PLAN AND QUESTIONS

MILESTONE III PROGRAM DATA

PROGRAM _____

PROGRAM DESCRIPTION _____

IOC _____

ACQUISITION STATUS _____

AHWG ESTABLISHED _____

DAPR _____

PRE ASARC _____

ASARC III _____

DSARC III _____

* ASARC II MANNING - ESTIMATE:

OFFICER	WARRANT OFFICER	ENLISTED

* IF AVAILABLE

FIGURE V-13

MPT REVIEW PLAN AND QUESTIONS

MILESTONE III PROGRAM DATA

MPT REVIEW PLAN AND QUESTIONS

MILESTONE III KEY ISSUES

ISSUES:

ABILITY TO MEET MPT FIELDING NEEDS OF SYSTEM

ABILITY TO MEET MPT LIFE CYCLE NEEDS OF SYSTEM

PERSONNEL SHORTFALLS

TRAINING SHORTFALLS

FUNDING SHORTFALLS

VERIFICATION OF MANPOWER ESTIMATES

OTHERS (AS OCCUR)

FIGURE V-14

MPT REVIEW PLAN AND QUESTIONS

MILESTONE III KEY ISSUES

PRE-MILESTONE III

MPT INFORMATION AREAS/SOURCES

MPT INFORMATION AREAS / DATA FEEDER SOURCE	MASTER REFERENCE FILE INFORMATION	DT/OT II TEST RESULTS	LOGISTIC SUPPORT PLANNING MANUALS	TRAINING PLANNING UPDATE	LOGISTIC SUPPORT PLANNING SUMMARY	QQPRI	BOIP	DP	DRAFT TOE/ AURS	FYDP POM
A. Manpower										
o Previous Manning	x									
o Current Manning						x	x	x	x	
o Recommended Manning						x	x	x	x	
o Total System Requirements (Operating & Support)						x	x	x	x	
o MACOM Requirements						x	x	x	x	
o TRADOC Requirements						x	x	x	x	
o DARCOM Requirements						x	x	x	x	
o Manpower Effects - One System						x	x		x	
o Planning										x
o Programming										x
o Budget										x
o Affordable Budget Year										x
o Affordable Post Years										x
o Credibility	x	x	x	x	x	x	x	x	x	x
B. Personnel										
o Requirements						x	x			
o Duty/Task Analysis						x				
o Work Units						x				
o Performance Standards						x				
o Manpower Authorization Factors						x				
o MOS's						x				
o Skill Levels										
o Organization						x				

Figure V-15
MPT INFORMATION AREAS/SOURCES

PRE-MILESTONE III

MPT INFORMATION AREAS/SOURCES

INFORMATION AREAS / MPT INFORMATION DATA FEEDER SOURCE	MASTER REFERENCE FILE INFORMATION	DT/OT II TEST RESULTS	LOGISTIC SUPPORT PLANNING MANUALS	TRAINING PLANNING UPDATE	LOGISTIC SUPPORT PLANNING SUMMARY	QQPRI	BOIP	DP	DRAFT TOE/ AURS	FYDP POM
o Distribution plan consistent with fielding schedule.				x		x			x	
o Critical Skills				x		x			x	
o Test and Evaluation Confirmation of Personnel (Suitable in operational environment)	x	x								
o HFE Implication		x				x	x		x	
o Recruiting										
o Personnel Affordability										
o Credibility	x	x	x	x	x	x	x	x	x	x
C. Training										
o Requirements				x						
o Validation	x			x						
o Availability				x						
o Devices				x						
o Facilities				x						
o Instructors/Support						x	x	x		
o Scheduling				x						x
o Training Supportability consistent with fielding.				x						x
o Planned										x
o Programmed										x
o Budgeted										x

Figure V-15 (continued)
MPT INFORMATION AREAS/SOURCES

ASARC/DSARC III

PREPARATION TYPE QUESTIONS/WORKSHEET

QUESTIONS / AMPLIFYING DATA	SOURCE	USER	TIME REQUIREMENT BASELINE	REMARKS
1. What was the previous manning estimate?	DSARC II DCP	DCSPER	ASARC	
2. What is the current manning estimate?	QQPRI	DCSPER	ASARC IOC TC	
3. Is the current manning within the established constraint/threshold?	DSARC II DCP	DCSPER	ASARC	
4. Have DT/OT test and evaluation verified the manpower estimates?	DT/OT II TEST RESULTS	DCSPER	ASARC IOC	
5. Did DT/OT test prove system to be supportable from the MPT point of view?	DT/OT II TEST RESULTS	DCSPER	ASARC IOC	
a. Human engineering factors				
b. Training support packages				
c. Suitability in realistic environment				
6. What is the manpower requirements breakdown?	TQQPRI	DCSPER	ASARC IOC PPBS	
a. Total				
b. Each MACOM				
C. TRADOC				
d. DARCOM				

Figure V-16
PREPARATION TYPE QUESTIONS/WORKSHEET

PREPARATION TYPE QUESTIONS/WORKSHEET

QUESTIONS / AMPLIFYING DATA	SOURCE	USER	TIME REQUIREMENT BASELINE	REMARKS
7. What is the impact on MPT of one system? a. Operating and support billets b. Number and type personnel c. Training requirements d. Recruiting	QQPRI SSC	DCSPER	ASARC	
8. Have MPT trade off analyses been conducted and alternatives considered?	TP DP	DCSPER	ASARC	
9. Has a personnel affordability assessment been conducted?	SSC MILPERCEN	DCSPER	ASARC IOC	
10. If so, what personnel limitations were identified?	SSC MILPERCEN	DCSPER	ASARC IOC	
11. Can any personnel limitations identified be resolved - or is it an issue?	DCSPER SSC MILPERCEN	DCSPER	ASARC IOC PPBS	
12. Have training schedules been established?	SSC TP	DCSPER	ASARC IOC PPBS	
13. Have sufficient training seats been programmed and budgeted to meet the system needs - and in accordance with the fielding needs?	SSC TP	DCSPER	ASARC IOC PPBS	
14. Have recruiting and distribution plans been prepared relative to the system and system implementation? What problems, if any, are anticipated?	MILPERCEN DCS	DCSPER "	ASARC IOC	

Figure V-16 (continued)
PREPARATION TYPE QUESTIONS/WORKSHEET

ASARC/DSARC III

PREPARATION TYPE QUESTIONS/WORKSHEET

QUESTIONS / AMPLIFYING DATA	SOURCE	USER	TIME REQUIREMENT BASELINE	REMARKS
15. Have retirement plans for the old system been prepared?	MILPERCEN DCSOPS DSCPER	DCSPER	ASARC IOC	
16. If so, is it compatible with the introduction of the new system?	MILPERCEN SSC	DCSPER		
17. Has the final QQPRI been submitted?	QQPRI MILPERCEN	DCSPER	ASARC IOC TC	
18. Is it consistent with previous requirement estimates? If not, what are the current requirements?	QQPRI MRF	DCSPER	ASARC	
19. Has MILPERCEN provided a MOS decision?	QQPRI MILPERCEN	DCSPER	ASARC IOC TC	
20. Have the MPT requirements been programmed?	FYDP/POM MRIS FMCO	DCSPER	ASARC IOC PPBS	
21. Is the programmed manpower consistent with stated requirements?	QQPRI AURS TOE	DCSPER SSC	ASARC	
22. Are the various documents which state requirements consistent?	QQPRI AURS TOE	DCSPER	ASARC	

Figure V-16 (continued)
PREPARATION TYPE QUESTIONS/WORKSHEET
ASARC/DSARC III

ASARC/DSARC III

PREPARATION TYPE QUESTIONS/WORKSHEET

QUESTIONS \ AMPLIFYING DATA	SOURCE	USER	TIME REQUIREMENT BASELINE	REMARKS
23. Does a summary analysis indicate that proper numbers of trained personnel will be available when the system is fielded? If not, what problems have been identified?	QQPRI TRAINING PLAN DP MRF	DCSPER	ASARC IOC	
24. Does a summary analysis indicate that proper numbers of trained personnel will be available as the system is totally integrated into the army. If not, what problems have been identified?	QQPRI TRAINING PLAN DP MRF	DCSPER	ASARC IOC	

Figure V-16 (continued)
PREPARATION TYPE QUESTIONS/WORKSHEET

APPENDIX A

INTERVIEW QUESTIONS AND SUMMARY OF RESULTS

ATTACHMENT (1) - INITIAL INTERVIEW QUESTIONS

ATTACHMENT (2) - LIST OF PERSONNEL INTERVIEWED

ATTACHMENT (3) - SUMMARY OF RESULTS

MANPOWER, PERSONNEL AND TRAINING
MATERIEL ACQUISITION

DCSPER is now a regular member of the ASARC. One of the responsibilites of an ASARC review is to consider MPT issues. Currently the Affordability Branch within DSCPER conducts a review of the MPT aspects of a system which is scheduled for review.

The amount of MPT information and level of detail will vary depending on the particular acquisition phase. Even so, it is essential that a thorough review of existing MPT information be conducted to determine at each particular decision point the ability to support/afford a system from the MPT point of view, identify MPT problems, and insure a thorough review of the MPT issue at each stage of acquisition.

This effort is aimed at consolidating the MPT issues for various reviews and determining the feasibility of developing specific questions which must be answered and determining a method to insure the questions are properly addressed. Methods could include standard formats which contain questions which must be asked, identification of the informtion source, timing of required information and the recipient of the needed information.

The following questions are designed to assist in providing the above answers.

ATTACHMENT (1)

MPT ACQUISITION QUESTIONS

Both DOD and the Army have placed added emphasis on manpower, personnel and training planning and analysis during materiel acquisition. Army policy requires manpower assessments be made throughout the LCSMM beginning with the MENS. Even so, there have been problems in determining needs sufficiently early to measure the MPT impact before major acquisition decisions have been made. Further, the principle of early MPT planning and assessment applies to the numerous less expensive systems which do not go to ASARC/DSARC reviews.

While the policy requiring manpower assessments is in place there may be disconnects in the MPT issues which must be addressed at various phases of acquisition. Further, there may be significant disconnects in information required for various reviews, information requirements necessary at lower levels needed to generate the answers and the manner in which the information is developed. The purpose of this effort is to determine the critical MPT issues which must be addressed during materiel acquisition - and to determine the feasibility of developing specific information requirements to address the major issues.

MILESTONE - 0 QUESTIONS

1. Manpower consideration/constraints questions:

    a. To what extent are manpower considerations/contraints being addressed in the MENS?

    b. To what extent should they be?

c. Who is responsible to insure that manpower constraints are addressed?

d. Who is responsible to validate/approve manpower constraints statements?

e. From what baseline are manpower constraint statements addressed (i.e. - numbers, skills, grades, human factors, intelligence levels, critical skill areas, etc)?

f. To what extent are manpower constraints being followed during the acquisition process?

2. Does the DA have a method or procedure to develop manpower constraints for the MENS?

3. If so what is the method or procedures? Are we satisfied with the method and has it been validated in anyway?

a. With a given method - do we have a specific set of questions which must be answered (or information which must be made available) as an input to developing the manpower constraints statement?

b. If so - what are the questions (or information requirements) - the User -the Provider and the directives/regulations/procedures which require it?

c. Are there questions (information requirements) which are not included above that you think should be, does it appear feasible to develop such?

4. If we do not have a current validated method:

a. Is there a specific set of questions which must be addressed (information requirements available) to arrive at a reasonable statement of manpower contraints?

b. If so is this published by a regulation/directive/procedure?

c. If so are there other questions (information requirements) which should be added to the list? - Who would you consider as providing expertise input to such a list?

5. a. If we do not have a current method or a validated list of questions (information requirements) do you think it feasible to adopt one?

b. Would this assist in developing a method/procedure/directive that would facilitate a meaningful manpower constraints statement?

c. Who do you think could provide an input to determining the information requirements needed to develop a meaningful manpower constraints statement?

d. What are some of the type questions that must be addressed to arrive at a manpower constraints statement?

6. DCSPER (Affordability) examines MPT requirements and issues prior to Milestone reviews. What specific types of information is needed at this stage?

a. Is it feasible to task a source to obtain such information?

b. Is it reasonable to develop an MPT information fact sheet that contains the catagories needed information.

MILESTONE I Questions

There are a series of actions and documents which are required during the concept exploration phase that have Manpower, Personnel and Training (MPT) implications. The requirement of some of these actions and documents clearly address MPT issues. Since this is early in the development phase detailed information may not yet be known. However, there may be questions which must be addressed at various levels to provide reasonable responses to the MPT issues which need addressing during this phase. The following questions have been prepared to assist in identifying the major issues which must be addressed during concept exploration and to determine the feasibility of developing a subset of questions (or information requirements) which must be answered at various levels to meet the MPT needs at this stage.

1. Logistic support planning commences early after a mission need is established. Part of this planning is the identification of limitations regarding requirements. Among the areas of concern are (1) skilled personnel, (2) training programs, and (3) devices. What is your experience regarding addressal of these areas of concern at this stage? i.e. -

   a. Is it normally accomplished?

   b. If so, how precise is the information?

   c. Do you feel that it is sufficient for this phase of acquisition?

d. If not, do you feel it could be improved?

e. Do you feel additional information is needed at this stage?

f. Is it feasible to develop specific information requirements to facilitate getting the answer to determine what the limitations are?

2. The LOA defines both the personnel concepts and training concepts:

a. Has experience proven the concepts to be adequate for future planning and development?

b. Is there a consistent format for personnel and training concepts requiring specific information?

c. If there is no consistent format is it feasible to develop a line of questions or issues which should be addressed in these concepts?

3. Organizational and operational concepts are required during concept exploration. Included should be organizational equipment and personnel trade-offs that would be required by inclusion of the system in the total Army force structure. Do directives require specific personnel information be provided? Is it possible to develop information requirements and sources for the information as an input to developing personnel trade-offs?

4. The Baseline Cost Estimate (BCE) includes manpower costs for the Concept Formulation Package (CFP) and initial Decision Coordinating Package (DCP). Do we have standard inputs at this phase for manpower costing? Are there significant problems during this stage? Is it feasible to establish specific manpower inputs for costing?

5. The CFP provides documentary evidence that concept formulation objectives have been satisfied. Trade-off determination, trade-off analysis, and Best Technical Approach appendices include total Army Manpower Requirements. Are there a series of inputs required from various levels in developing these requirements?

6. The Outline Development Plan (ODP) is a plan for management of advanced development. Section V is the plan for personnel and training ruqirements. This plan should address required skills, training devices, training facilities and other requirements for individual and crew training. Are there a series of inputs required from various levels in developing this information and plan?

7. The DCP and associated IPS provide for a great amount of information relative to MPT. Although the requirement at Milestone I is more limited than future milestones, estimates do require more than limited knowledge of MPT needs. Do we have information requirements for input to the MPT portion of the DCP and IPS prescribed? If not, could we develop such requirements based on as realistic information as possible?

8. If the system is not a major system it does not require ASARC/DSARC reviews. Does the Army provide for detailed MPT analysis for these systems? If so, are the requirements similar in detail and timing as for major systems?

9. After considering all of the above questions, does it appear feasible to develop a format (designating sources) for required information for use by DCSPER (Affordability) to provide a MPT fact sheet for system reviews?

MILESTONE II Questions

There are a considerable number of MPT actions specified during the Demonstration and Validation phase. DT/OT tests look at military utility and worth of a system. Information regarding MPT is used to update and refine various MPT documents and plans. There is an LSA and training support planning update. The TQQPRI is produced followed by the BOIP. Training device requirements identification is accomplished. The new equipment training plan (NETP) and Advanced Resident Training Plan (ARTP) are prepared. The Development Plan (DP) is completed and the DCP and IPS for Milestone II are prepared. There are many manpower issues which must be resolved during this phase. Advanced planning must consider not only the capability to provide the necessary people. Further, the development of training, identification of personnel, budgeting for spaces and training, procurement of training devices activities, and recruting must be accomplished. Programming of personnel and training and plans for issuance of orders must be consistent with the requirements to have the proper number of trained personnel in place when the system is fielded. Planning must also include phasing of the proper numbers of trained personnel as new units are added. In the long term, personnel replacements will be required to replace those personnel who leave the program for whatever reason.

Should all of the above requirements be accomplished on time and with complete and valid information the ability to properly man the system should be improved.

The MPT activity during this phase requires examination of our methods and procedures to insure that the information provided is as accurate as possible and that the proper issues are addressed. The following general questions pertain to the demonstration and validation phase of systems acquisition.

1. The basic issues at Milestone II are:

    a. Have the requirements be properly identified?

b. Are the grades and skills specified?

c. Have the manpower spaces been entered into the POM or EPA?

d. If not, will they be programmed to meet the manning need?

e. Have the requirements been examined to determine if they are both affordable and supportable?

Addressal of the above issues will require indepth information. Many question must be asked and answered to provide needed input to respond to issues. To insure that the details are available is it feasible to develop specific information requirements which are necessary from various levels to fully address the issues?

2. What are some of the problems we now have regarding MPT planning at this stage of acquisition? Are we getting information on time? Is it valid?

LIST OF PERSONNEL INTERVIEWED

NAME	ORGANIZATION
Lt. Col. D. Lyman	DCSPER
Lt. Col H. Wolfkill	DCSPER
Major R. Riviello	FMCO
Lt. Col. T. Fentell	FMCO
Major D. Goodman	FMCO
Mr. Hartman	DCSOPS
Col. F. Bettinger	SSC
Col. W. Gainey	SSC
Major Millson	SSC
Capt. Richardson	SSC

ATTACHMENT (2)

SUMMARY OF INTERVIEW RESULTS

Interviews were conducted with Lt. Col. D. Lyman and Lt. Col. H. Wolfkill of the DCSPER Affordability Team. A summary of results follows:

a. There is a need to determine what questions should be asked for various ASARC reviews.

b. DSCPER provides membership to the AHWG which assists in preparing for ASARC review of a system.

c. Review of MPT for a system at commences DCSPER with receipt of the TQQPRI, QQPRI or Guidance Letter.

d. One approach to developing the MPT presentation for an ASARC is to address:

1. Manpower Issues.
2. Incremental impact on one system.
3. Cost across the force.
4. Cost per MACOM.
5. Requirements versus Program.

e. Development of a set of questions to assist in ASARC preparation seems feasible and would be helpful.

f. Extensive Coordination is conducted with MILPERCERN and SSC during ASARC preparation.

g. There is not a standardized approach in developing manpower constraints for the MENS.

ATTACHMENT (3)

h. MPT documentation for developing systems particularly in the early stages is sketchy.

A summary of results of interviews with Col F. Bettinger and Col. W. Gainey at the SSC follows:

a. Manpower considerations/constraints are not being addressed very well in the MENS.

b. Functional area review conducted by the SSC may be helpful in establishing baselines for consideration regarding manpower constraints.

c. Need exists for a supply and demand model.

d. More information is needed during concept exploration than is now available.

e. MPT information in required documents is either not covered or not done well.

f. Only major systems require ASARC/DSARC review. Many of other systems under development have MPT impacts. The cumulative needs could be very high. MPT should be considered at IPR's.

g. LSA review boards should require MPT reviews.

A summary of results of interviews with Mr. Hartman of DCSOPS follows:

a. Manpower constraints statements are general statements. They could be designed to minimize the need for high-skill personnel requirements and not to exceed the minimum expected skill (prerequisite aptitude score) of maintenance and operating personnel of generally similar equipment existing in the field.

b. It is feasible to adopt a set of questions appropriate for ASARC

preparation. Initial questions developed may need to be refined over time.

c. Some MPT information is contained in various documents. In many cases it has been very sketchy. There seems to be some improvement however.

d. There is a need to emphasize MPT planning for systems that are not major. AR1000-1 requires the IPR to comply with the MPT requirements of major systems.

e. A recent Deputy Secretary of Defense decision changes DOD participation in the acquisition process. Phasing will change somewhat from the current system and there many not be a MENS requirement. Work is underway to adjust to the decision.

A summary of results of interview with Lt. Col T. Fentell, Major R. Riviello, and Major Goodman of the FMCO follows:

a. FMCO has taken an active interest in tracking all modernization systems.

b. FMCO has an officer assigned to track the MPT programs.

c. There are question areas that should be addressed during prepartaion for various ASARCS.

d. Manpower constraints are not being addressed very well in the MENS. There is a need to establish an approach or some type of baseline. Functional areas reviews are a good start but the information is perishable. Automation may be appropriate.

e. There are problems within the system in developing and promulgating MPT requirements and program data.

f. There is a need for some type of approach/checklist to be developed to assist in preparing for system reviews.

g. It is feasible to develop sets of questions and question areas appropriate to stage of development. Back phasing of information relative to IOC is a definite possibility.

h. Time phasing for certain information from the MENS forward may be difficult. However, information which must be later refined is much better than no information.

A summary of results of interviews with Major Millson and Captain Richardson of the SSC follows:

a. SSC provides direct support to DCSPER in preparing MPT information and inputs for ASARC review.

b. SSC personnel frequently prepare the MPT brief for the ASARC.

c. General areas for consideration are (1) manpower, (2) personnel, and (3) training.

d. Manpower issues include, planning, programming and budgeting. Personnel issues include MOS, standards and goals, MOS density, etc. Training issues include type of training, length of training, number of personnel to be trained, schedule and funding.

e. Steps could be taken to develop an approach and format to assist in ASARC preparation. Currently SSC does consider actions that should have occurred.

f. It is important to identify as much MPT information as possible prior to Milestone II. Considerations should be manpower implications, manpower requirements (operator-maintenance-repairer), impact on force structure by fiscal year (CONUS and OCONUS), and space imbalanced MOS problems among others.

APPENDIX B

GLOSSARY OF ACROYNMS