DEVELOPMENT OF A PROTOTYPE MANPOWER, PERSONNEL, AND TRAINING (MPT) IN ACQUISITION DECISION SUPPORT SYSTEM (DSS)

Dr. Lawrence O'Brien and
John S. Park, Jr.,
Dynamics Research Corporation

and

Captain David Dahn,
Dr. H. Barbara Sorensen, and
Dr. Bruce Gould
AL/HRMM, Brooks AFB

ABSTRACT

The Manpower, Personnel, and Training (MPT) in Acquisition Decision Support System (DSS) is a significant, four-year (February 1992 start) Air Force program that will address MPT requirements during system acquisition and design.

The MPT DSS software will have three major components: a Data Base Integration Subsystem, a Baseline Comparison System (BCS) Development Subsystem, and the Analysis Tools Subsystem. The Data Base Integration Subsystem will contain procedures for extracting historical MPT data from Air Force data bases and new system data from the LSA Record (LSAR). The Data Base Integration Subsystem will also contain procedures for structuring and maintaining the MPT data base needed to support analysis of the BCS and new system. The BCS Development Subsystem will help Air Force MPT analysts construct a BCS. The Analysis Tools Subsystem will contain an integrated set of MPT analysis methodologies and tradeoff techniques.

ABOUT THE AUTHORS

Dr. Lawrence O'Brien is the MPT DSS Program Manager at Dynamics Research Corporation, Wilmington, MA.

Mr. John S. Park, Jr. is principle investigator of the MPT DSS BCS Development and Data Base Integration Subsystems at Dynamics Research Corporation, Wilmington, MA.

Captain David A. Dahn is the program manager for the MPT DSS in the MPT Integration Branch of the Human Resources Directorate, Armstrong Laboratory, Brooks AFB, TX.

Dr. Barbara Sorensen leads the Acquisition MPT Technology Team at the Air Force Armstrong Laboratory (AL/HRMM), Brooks AFB, TX.

Dr. R. Bruce Gould is the Senior Scientist in the MPT Integration Branch of the Human Resources Directorate, Armstrong Laboratory, Brooks AFB, TX.

DEVELOPMENT OF A PROTOTYPE MANPOWER, PERSONNEL, AND TRAINING (MPT) IN ACQUISITION DECISION SUPPORT SYSTEM (DSS)

by
Dr. Lawrence O'Brien and
John S. Park, Jr.,
Dynamics Research Corporation

and

Captain David Dahn,
Dr. H. Barbara Sorensen, and
Dr. Bruce Gould
AL/HRMM, Brooks AFB

THE MPT DSS PROGRAM

The Manpower, Personnel, and Training (MPT) in Acquisition Decision Support System (DSS) is a significant, four-year (February 1992 start) Air Force program that will address MPT requirements during system acquisition and design. The MPT DSS program will produce a prototype software package for assessing MPT requirements for emerging systems. During mission analysis and preconceptual planning, the MPT DSS will generate a credible baseline of measurable MPT goals and constraints. During the concept exploration phase, the MPT DSS will provide MPT inputs needed for system and subsystem tradeoff studies. For these early phases, the MPT DSS will document the MPT requirements for the system being replaced, or predecessor system, and estimate MPT requirements for a Baseline Comparison System (BCS), as defined in MIL-STD-1388-1A. During the demonstration/validation and full scale development phases, the MPT DSS will address the MPT implications of design alternatives and verify achievement of the MPT goals and constraints established in early acquisition phases.

MPT-related Acquisition Products and Processes

Requirements for the MPT DSS have been well documented in past studies (e.g., AFHRL's Front-End Analysis Study). DoDI 5000.2 requires the Air Force to integrate MPT considerations into the design process of new systems. However, the Air Force does not yet have an integrated system for assessing MPT impacts. Most Air Force MPT tools were developed for specific, functional organizational purposes and are not capable of integrating across the MPT domains. Also, the output of some of the tools is not in a format required by system developers.

The MPT DSS will support four primary MPT acquisition products or processes - the Manpower Estimate Report (MER); the Integrated Manpower, Personnel, and Comprehensive Training and Safety (IMPACTS)

Program Plan; the MPTS Description; and MIL-STD-1388-1A Logistic Support Analysis (LSA) Task 303 tradeoff analyses.

MPT DSS Overview Description

As shown in Figure 1, the MPT DSS software will have three major components: a BCS Development Subsystem, a Data Base Integration Subsystem, and the Analysis Tools Subsystem. The BCS Development Subsystem will help Air Force MPT analysts construct a BCS. The Data Base Integration Subsystem will contain procedures for extracting historical MPT data from Air Force data bases and new system data from the MIL-STD-1388-2B LSA Record (LSAR). The Data Base Integration Subsystem will also contain procedures for structuring and maintaining the MPT data base needed to support analysis of the BCS and new system. The Analysis Tools Subsystem will contain an integrated set of MPT analysis methodologies and tradeoff techniques. The Analysis Tools Subsystem will produce the key MPT products needed to support the acquisition and design process.

The prototype MPT DSS will focus on supporting the MPT analysis of Air Force aircraft systems but will be designed so that it can be applied to any type of system. Application to systems other than Air Force aircraft systems will require analysts to expand existing library files. The MPT DSS will focus on the assessment of MPT requirements for the maintainers and support personnel who directly work on the system in the operational units in which the weapon system will be fielded. More specifically, task-level MPT analyses will be conducted on maintainers and the support personnel whose workload is directly driven by the system. Operator crew size will be an input to MPT DSS. Total manpower for operators, training personnel, and support personnel whose workload is not directly driven by the system will be determined by algorithms that deal with aggregate workload, not individual tasks. The MPT DSS will contain both existing and new analytical tools. MPT DSS software will be developed concurrently with the ongoing research needed to develop the new tools. The product of the MPT DSS program, however, will be operational software, not research reports. Recognition of this fact will have a direct impact on the MPT DSS design decisions. For example, the MPT DSS design will focus on usability, such as minimizing user input requirements. The basic design philosophy of MPT DSS is to select, modify, and integrate existing tools. Consequently, most of the MPT DSS resources will be devoted to the development of functional requirements, software specifications, and software prototypes and working code.

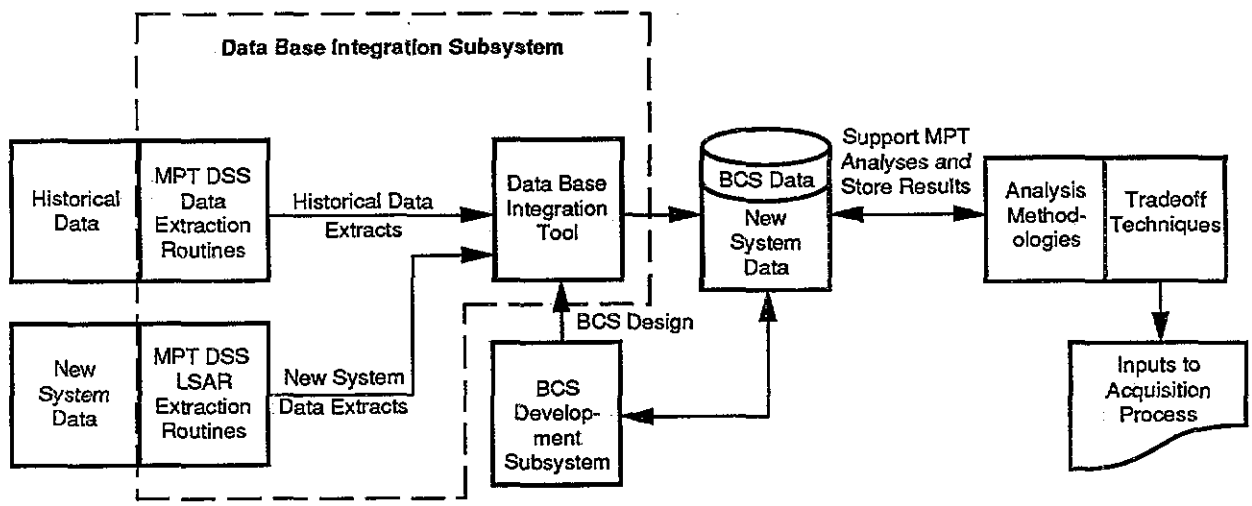


Figure 1. Overview of the MPT DSS

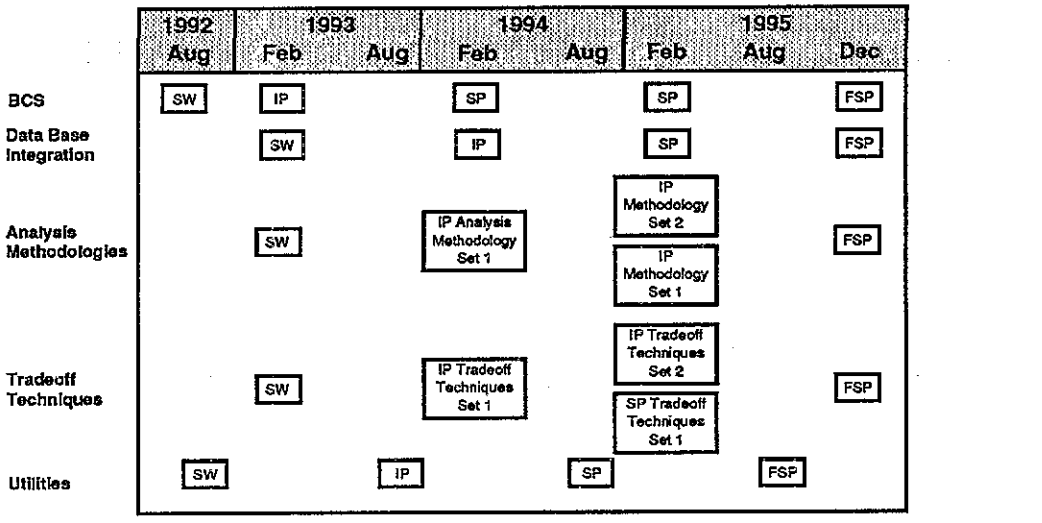
Program Schedule

The MPT DSS program schedule is presented in Figure 2, organized around the four major MPT DSS tasks: (1) Develop BCS Subsystem, (2) Develop Data Base Integration Subsystem, (3) Develop Analysis Tools Subsystem, and (4) Conduct Test and Evaluation. Key milestones in the MPT DSS schedule are the semi-annual and annual structured walkthroughs and software prototype demonstrations. Two mature Air Force aircraft systems for which historical MPT data exist will be used for sample data. During and after each walkthrough/demonstration, users will be encouraged to submit comments and recommendations to the ongoing MPT DSS design and development.

MPT DSS SOFTWARE COMPONENTS

The following sections detail each of the MPT DSS subsystems that were described in the overview above. Selecting the BCS is a significant first step in any MPT analysis. The MPT DSS BCS Development Subsystem will assist MPT analysts in constructing the BCS, populating the BCS task-level data bases with appropriate government and contractor-furnished data, and maintaining and updating the BCS data throughout the acquisition process. The BCS development methodology includes techniques to match new system functional, performance, and design characteristics with those of existing Air Force equipment, at appropriate levels of system indenture.

An integrated MPT data base is needed to support the MPT DSS. The MPT DSS must be capable of extracting and integrating MPT data from external Air Force data sources in a user-friendly manner. The Data Base Integration Subsystem will help Air Force MPT analysts obtain and use the input data needed for an MPT DSS application. The subsystem will request, extract, and process data from external sources; integrate input data within a



SW = Structured Walkthrough
IP = Initial Prototypes
SP = Subsequent Prototypes
FSP = Final Software Product

Tradeoff Techniques Set 1 - Integrated MPT Analysis Tool

Tradeoff Techniques Set 2 - MPT Pipeline
MPT Analysis Navigation Aid

Analysis Methodology Set 1 - Inventory Projection
Manpower Estimates
Force Structure
Training Resources and Requirements

Analysis Methodology Set 2 - Life Cycle Cost
Specialty Structuring
Personnel Aptitudes and Characteristics

Figure 2. The MPT DSS Schedule

comprehensive MPT DSS data architecture; and configure the data to support MPT analyses and tradeoffs.

The Analysis Tools Subsystem attempts to maximize the use of existing tools and techniques.

BCS Development Subsystem

The BCS is one of the three key system constructs used to analyze the MPT resource requirements of a planned new system or system modification. The Predecessor System is the system being replaced, if one exists. The Predecessor System defines the resource "footprint" for the new system. As required in MIL-STD-1388-1A, the BCS is a notional system construct for performing comparability analyses. The BCS is a composite of existing systems, subsystems, and other system components (such as support and test equipment) that performs the new system functions and approximates new system performance requirements and design. BCS design features and MPT requirements are compared to one or more versions of the third key system construct - the Proposed System.

Comparisons between the BCS and the Proposed System are made throughout the acquisition process as the Proposed System design evolves and design alternatives are considered. Comparison of the BCS to the Proposed System requirements in the early phases of the acquisition process helps identify areas of technical risk. Comparison of contractor design alternatives to the BCS in later phases also helps identify risk areas (i.e., areas for which the contractor is proposing to deliver improvements that are significantly better than what is currently being achieved).

To support the construction of an appropriate BCS, the BCS Development Subsystem will use functional, performance, design similarity, and data availability BCS selection criteria. The MPT DSS will contain BCS library files that contain an inventory of existing Air Force aircraft systems for consideration as BCS candidate equipment. In coordination with the MPT DSS Data Base Integration Subsystem, the BCS Development Subsystem will support efficient and expeditious BCS data collection and population of task-level data bases. The MPT analyst will be provided with the ability to update and maintain BCS library files and task-level data bases throughout the acquisition process.

The fact that BCS development logic is straightforward does not guarantee selection of the best combination of BCS candidate systems, subsystems, and equipment to support MPT comparability analyses. Suboptimal BCS development may occur when the MPT analyst fails to thoroughly consider all BCS selection criteria or fails to consider the entire inventory of existing Air Force systems as candidates for BCS inclusion. Suboptimal BCS development increases the risk associated with proposed system MPT projections. The increased risk results from having to extrapolate historical task and MPT data across a larger BCS-to-proposed system design "gap." The MPT DSS BCS development methodology is designed to minimize such gaps by guiding the user in considering all key factors related to BCS development.

In the BCS Development Subsystem, the MPT analyst will be presented with structured prompts that guarantee thorough consideration of functional, performance, and design similarity BCS selection criteria. These processes will be supported by BCS library files containing generic listings of Air Force missions and system functions, system performance characteristics, and system design concepts, features, and technologies. The MPT DSS software will automatically match missions and functions, performance characteristics, and design of existing Air Force equipment to new system requirements, producing a ranked list of existing equipment from most to least suitable for BCS selection. The ranked list of BCS candidate equipment will guide the MPT analyst's assessment of availability of historic MPT data for the existing equipment. The MPT analyst will construct the BCS by selecting BCS components at appropriate levels of Work Unit Code (WUC) indenture (i.e., at indenture levels that are consistent with new system concepts and requirements as they are updated

throughout the acquisition cycle). To identify the Predecessor System, the MPT analyst will interact directly with existing system library files.

Data Base Integration Development

Data base integration in support of Air Force MPT analyses has never been accomplished on the scale required by the MPT DSS. Currently, MPT-related data that are distributed among diverse data bases cannot be conveniently and efficiently collected and integrated. The MPT DSS data integration challenge involves answering the following questions: What data and data relationships are required to support MPT analyses and tradeoffs? In what DoD and Air Force data bases (data base type and location) do the data reside? What required data are missing and how will the gaps be filled? How will the MPT DSS access source data bases? How will the MPT DSS common data structure accommodate inconsistent data element definition in external data bases? How will data relationships best be established between diverse external data bases and the MPT DSS common data structure? Will the MPT DSS design support MPT analyses and tradeoffs as intended?

The MPT DSS Data Base Integration Subsystem will establish efficient data interfaces with MPT DSS external data sources, use a common MPT DSS data architecture that will accommodate all anticipated task and MPT data sources, and automate a well-structured data base integration methodology that will link MPT source data to the data architecture. Included will be automated steps that help the MPT analyst identify, locate, and request required MPT data sources. The MPT analyst will be able to access, extract, and preprocess data from specific DoD and Air Force data bases. MPT DSS data extraction procedures will provide seamless interfaces to DDN and other dial-out networks, control access for library lookups, and provide MPT DSS connections to all required data. After data are obtained from an external data source, the MPT analyst will be appropriately prompted to establish a source-specific set of integration rules that define the proper placement of data from that source into the MPT DSS relational data architecture. MPT analyst procedures to configure the data to produce Predecessor, BCS, and Proposed System input files will be straightforward.

Information about how to investigate the data that are available from various sources will be provided to the MPT analyst in the form of help screens. The generic content and structure of data within each source will be described, including the level of equipment indenture for which data are usually available. For data sources hosted at a single or a few geographic locations, the help screens will include contact points to whom data inquiries or requests may be directed. A second type of information to assist the MPT analyst will be detailed descriptions of data already collected and stored within the MPT DSS. These descriptions will be built as a part of the Data Base Integration Subsystem and will include essential information regarding collected data, such as data source type, date, point of contact, and pertinent assumptions regarding production of the data set or its content.

The MPT DSS task-level data bases will contain and relate data collected from a variety of disparate data sources, both historical and new system task data, and both government- and contractor-provided information.

Data Base Architecture - After task and MPT data are extracted from external sources, they must be incorporated into a common data architecture within the MPT DSS. The data architecture design will depend on the data meanings and relationships of the data extracted from the external source data bases. A different data element will be established in the MPT DSS data architecture for every unique data element "meaning" among the data elements imported into the DSS. This will accommodate the several meanings expected for data elements such as task, failure rate, etc. If task means training task in one data base, maintenance task in another, and occupational survey task in still another, these tasks will be defined as separate data elements in the MPT DSS data base. The MPT DSS data architecture will incorporate standard MPT

data elements defined by efforts such as the DoD CALS Program.

The MPT DSS data architecture will ensure that relationships between data elements within a given source data base will be preserved within any data extracted from that source. This will provide the MPT DSS with the capability to effectively relate key MPT analysis findings and tradeoff results to the processes that generate the source data. For example, the LSA control number (LCN) and task code from the LSAR are not expected to be primary keys within the MPT DSS. However, by preserving the relationship of LSAR task data to their LCNs and task codes, any system design recommendations resulting from MPT DSS analyses and tradeoffs can be communicated to system designers and logisticians using the LCN/task code keys with which they are familiar.

Analysis Tools Subsystem

The following sections describe each of the seven analytical methodologies (tools) within the MPT DSS. Tool interfaces are accomplished by sending and receiving information through the common data base.

Personnel Aptitude and Characteristics (PAC) Tool - The PAC Tool will identify the skill, knowledge, and ability (SKA) requirements associated with a system's tasks, and the overall aptitude requirements and learning difficulty of the jobs associated with these tasks. It will also identify the SKA similarity between Air Force Specialties (AFSs) or group of tasks. The major outputs of the PAC Tool are task and job characteristics requirements and AFS/task similarities.

Specialty Structuring (SS) Tool - Restructuring specialties can have a radical impact on MPT resource planning for a new system. The SS Tool will support consideration of the system-related impacts of alternative specialty structures. The tool will assist the Air Force in optimizing the number of maintenance specialties assigned to a weapon system. Reduction of the number of specialties assists both the manpower and personnel communities by minimizing manpower and simplifying personnel assignments. However, reducing specialties may present training problems. Since training time is fixed, reducing the number of specialties means training more tasks with less time. Such a situation could lead to degraded performance. The SS Tool will assign unit maintenance tasks to AFSs and assess the impact of these assignments on selected measures of effectiveness. The major outputs of the SS Tool are specialty assignments (assignment of unit maintenance specialties to tasks, task clusters, jobs, and the overall system) and specialty assignment impacts on SS Tool MOEs. Separate reports will be provided to show impacts at the overall weapon system and individual AFS level.

The SS Tool will identify potential jobs, assign tasks to jobs, and assign jobs to specialties. Task times associated with the alternative assignments will then be estimated by applying a set of functional relationships that modify the task times to reflect changes in the aptitude differences in AFSs, and differences in the required and available time to train the tasks in alternative specialties. The revised time estimates can be used to determine impacts on mission generation rate and manpower requirements. Other MPT DSS tools can be used to assess impacts on other resources and life cycle cost.

Manpower Estimates (ME) Tool - The purpose of the ME Tool is to predict the system- and unit-level maintenance manpower requirements. Outputs will include the required man-hours and manpower needed to operate, maintain, supply, and support a system at the unit level. The ME Tool will provide an extensive set of reports providing total manpower required at the unit (e.g., squadron) level. There will also be system/mission reliability, maintainability, availability (R&M) reports.

MPT analysts will be given the option of modeling manpower within the MPT DSS using the ME Tool or producing the maintenance task parameters and scenario data for transfer to and use of the Air Force's Logistics Composite Model (LCOM). The ME Tool manpower simulation model will be an improved version of the Air Force MANCAP. Task files currently stored in existing LCOM data bases will be available to the ME Tool, or task-level maintenance data from the Data Base

Integration Subsystem may be used. The analyst will review and modify the operational scenario data consisting of the sortie generation specifications (e.g., sortie length, time between sorties, length of simulation). Resource limitations that apply to system scenario data, such as manpower thresholds and tool/test constraints, will also be identified.

Training Resources and Requirements (TRR) Tool - The TRR Tool will select tasks for training, assign tasks to instructional settings, determine task training times, and determine training resource requirements. The tool is intended to be used throughout a system's life cycle and includes the ability to determine training requirements for all types of Air Force training (e.g., technical training, on-the-job training (OJT), and field training detachment (FTD)). The major outputs of the TRR Tool include task training factors (i.e., task selection for training criteria and task selection model values), instructional setting assignments (including the calculated Automated Training Indicator (ATI) value), task training time data, student input data, course resource data, graphic training pipeline displays, and OJT requirements.

The TRR analysis process begins by selecting tasks for training. Next, tasks are assigned to appropriate instructional settings. Instructional setting decisions reflect one of the greatest sources of training resource requirements and are an important factor in assessing personnel availability. Once the tasks are assigned to their appropriate instructional setting, the time to train the tasks is determined. Length of training and student throughput are primary factors in determining training costs. Finally, the training costs and resources are calculated.

Life Cycle Cost (LCC) Tool - The ability to assess life cycle cost implications of MPT alternatives is essential to the MPT DSS. While the impact of alternatives on other constrained resources is equally important, an MPT DSS must allow the user to assess the effects of an option on dollars required to support it. The LCC Tool will allow the analyst to order various MPT alternatives with respect to their relative costs. It is intended to provide acquisition managers with sound, accurate, and defendable estimates of the MPT costs for each system alternative. The LCC Tool will produce total new system MPT LCC data, MPT costs by year, manpower/ personnel costs by AFS, detailed cost per graduate data, detailed annual course cost data, and OJT training time cost.

AFR 173-13 is the best single source of supporting cost data. It provides a solid and well-maintained data base of the majority of the cost factors that will be required in the LCC Tool. AFR 173-13 is updated approximately once per year with data provided by all MAJCOMs and other supporting agencies. In addition to being an officially maintained regulation, it is a sound source of highly relevant data associated with, for example, the costs of training individual AFSCs, base pay and overhead costs of officers and enlisted pay grades, and inflation factors for out years. A number of AFR 173-13 cost factors will be embedded in the MPT DSS data bases for efficient access, review, and update.

Force Structure (FS) Tool - The FS Tool will enable analysts to identify impacts of a proposed weapon system on the Air Force's force structure early in the acquisition process. The tool will address MAJCOMs, Separate Operating Agencies (SOAs), and Direct Reporting Units (DRUs). Both operational and support MAJCOMs will be addressed at the Command, Air Force, division, service, center, wing, group, squadron, and flight levels. In addition, the FS Tool will provide a standard and automated means for developing the required MER for a new weapon system. The FS Tool will also provide reports that detail the data sources, models, and algorithms used in structuring the force. These reports will serve as an audit trail and provide the required MER methodology and rationale. The FS tool will also generate manpower numbers for input to the Cost and Operational Effectiveness Analysis (COEA) and the Program Life Cycle Cost Estimate (PLCCE) as required by DoDI 5000.2.

The FS Tool will employ a bottom-up approach, starting with a single system, to develop the force structure. As required by the MER, the FS Tool will consider total Air Force impacts (Active, Reserves (AFRES), and National Guard (ANG)), as well as civilian and contractor manpower requirements.

Inventory Projection (IP) Tool - The IP Tool will estimate and describe the population from which the operators and maintainers of the new system will be obtained. The major outputs of the IP Tool include recruitment statistics by subpopulation (including the number of recruits needed to produce required system), projected personnel inventories, and projected personnel characteristics (e.g., ASVAB composite scores) distributions.

Summary data from the U.S. Census describing the distributions of people in key subpopulations will be extracted from the Data Base Integration Subsystem. A set of propensity to enlist rates will then be applied to these data to estimate the future numbers of enlistment propensities in different subpopulations. The Air Force, like all services, has ongoing research to predict propensity to enlist as a function of a wide range of variables (e.g., econometric variables, demographics). Predictive equations for these factors are constantly being updated. An allocation module will distribute the available accessions to each AFS. A flow model will take the accessions and age, promote, or separate them through the career path using either historical or user-defined transition rates. A final set of algorithms will estimate the distribution of key personnel characteristics within the future subpopulations by applying data on the historical distribution of these characteristics within subpopulation.

Tradeoff Techniques - MPT MOEs will be used by the tradeoff process to provide objective criteria for evaluating the MPT impacts of design, operation, and support alternatives. MPT control variables (i.e., the variables that the MPT community controls and can change to accommodate a new system) will be identified for each MPT MOE. In conducting tradeoffs, the control variables can be viewed as input variables and the MPT MOEs can be viewed as the outcome variables that are used to assess MPT impacts for all types of tradeoffs (design, support, operations). Table 1 is a preliminary list of MPT MOEs and control variables. As Table 1 indicates, a variable can be both a control measure and an MOE. At the system level, mission generation rate and life cycle cost are the key MOEs for evaluating MPT impacts. By relating MPT factors to this critical MOE, MPT issues will be given more serious consideration during the system acquisition process. Also, relating various MPT factors to a common metric provides a mechanism for conducting integrated tradeoffs across individual MPT domains.

A set of functional relationships will describe the links between the different MPT MOEs and the control variables. To provide a rapid response capability for conducting trade off analyses, these relationships will be expressed in simple mathematical terms (e.g., algebraic equations) and will not require extensive user input to apply.

MPT Pipeline Tool - The MPT Pipeline Tool will assist Air Force analysts in scheduling the MPT resources associated with deploying new systems. Before the system can be fielded, the correct number and type of people who are needed to man the system must be present. These personnel must have received all training needed to effectively perform their assigned jobs on the system. The outputs from this tool include a master milestone chart that will be a PERT/CPM chart that illustrates the time phasing of key MPT resourcing events based on the proposed acquisition strategy. It will include detailed milestone activities and events related to MPT and general milestones for T&E and human factors engineering. The MPT Pipeline Tool will also provide system training plan information and a forecast of required PCS moves.

MPT DSS HARDWARE/SOFTWARE

The MPT DSS will operate on an IBM-compatible PC with an 80386 central processing unit and a 80387 math co-processor. Also a video graphics array (VGA) color monitor will be needed to support the graphics user interface (GUI).

Table 1.
Potential MPT-DSS MOES

AREA	CONTROL VARIABLES		MEASURES OF EFFECTIVENESS	CAN BE BROKEN OUT BY
	Variable	Level Applied		
Overall System Variables	Equipment Reliability	Subsystem, LRU, SRU	Mission Reliability	Scenario
	MTTR	Subsystem, LRU, SRU	System Availability	Scenario
	Scenario Parameters	Scenario	System Maintainability	Scenario
			System Maintainability	System, Subsystem, LRU, SRU
Manpower	Unit Maintenance Crew Size	AFS	% Hours Utilized	AFS
	Maintenance Manpower Productivity Factors and Algorithms	Unit, Base, Fleet, Theater	Manpower Requirements	AFS
				Type (Operator, Maintainer, Support, Training)
				Year
				Force Structure Level (Unit, Base, Fleet, Theater)
				Class (Requirements, Authorizations)
Personnel	Task-Job Assignments	Job	Recruits Required	AFS or Year
	Task-AFS Assignments	AFS	Task/Job Difficulty	Task, Job, or AFS
	Entry-Level Requirements	AFS	Entry Level Requirements	AFS
Training	Training Methods	Task	Training Mandays	AFS, Course, Year
	Training Time	Task, Course	Required Training Time	Task, Course, Year
	Training Site	Task		

The system will offer the option of using a mouse with the GUI. The MPT DSS will require 16 MB of random access memory (RAM) and access to 1 gigabyte (Gb) of on-line disk storage. In addition, the system will require a modem with a minimum 9600 baud rate to extract data from external data bases and a 5 - I 1.2 Mb disk drive and/or a 3 - I 1.44 Mb disk drive.

MPT DSS will require DOS, version 5.X and will run within Windows, version 3.X. The system will also require an emulation package (e.g., SmartTerm, ProComm). The system will offer users the option of using a network card for multi-user library lookups.

SUMMARY

The MPT DSS will be a comprehensive, integrated system that supports all phases of the acquisition process. It will satisfy the major MPT acquisition requirements of the DoDI 5000.2 Manpower Estimate Report, the IMPACTS Program Plan, the OSD-required Human System Integration (HSI) Plan, and MIL-STD-1388-1A LSA Task 303 tradeoff analyses. The MPT DSS will be a powerful, PC-based tool with which Air Force MPT analysts will have access to external Air Force data sources that support comprehensive MPT analyses.