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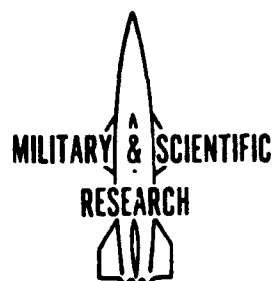
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STRUCTURED ANALYSIS
ILS REVIEW ELEMENT E11
DESIGN INFLUENCE

APJ 966-212

APJ



AMERICAN POWER JET CO. RIDGEFIELD N.J.

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APJ 966-212

STRUCTURED ANALYSIS

ILS REVIEW ELEMENT E11 DESIGN INFLUENCE

under

CONTRACT DAAA21-86-D-0025

for

HQ US AMCCOM
INTEGRATED LOGISTIC SUPPORT OFFICE
AMSMC-LSP
ROCK ISLAND, IL

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RIDGEFIELD, NJ
FT. EUSTIS, VA
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January 1989

FOREWORD

APJ, under contract to HQs, AMCCOM, has initiated the automation of the LSA Tasks (MIL-STD-1388-1) and the assessment of the ILS elements (AR 700-127). A major goal is to unify military and contractor approach to the performance of ILS and LSA.

Detailed to meet all requirements of ILS and LSA, the automated process will continue to provide the flexibility in selecting tasks and elements to be addressed at each life cycle stage. A major advantage of this approach is to insure that the application of each task element is consistent with prescribed Army policies and procedures.

This report is one of a series presenting the Structured Analysis of each LSA Task and ILS Element. Structured Analysis comprises a description of the process being automated in terms which facilitate system design and subsequent programming. It is increasingly the preferred approach in both industry and Government.

This Technical Note reports on the Data Flow Diagrams (DFDs) of ILS Assessment Element Ell, "Design Influence" and provides definitions of the processes, data flows, data stores, and external entities involved on each DFD (Annex A)*/. The report provides an overview of the ILS Assessment Element analysis procedures and a guide to the overall assessment process.

To view this work in context, this report also presents a brief overview of Structured Analysis and its place in the overall systems development process. Additionally, Annex B provides a brief working description of Structured Systems Analysis fundamentals. The overview and certain portions of the introductory text are repeated verbatim in every report in this series so that each one can stand alone.

The numerical identification assigned corresponds to the task/subtask/element identified in AR 700-127 in effect as of the APJ contract start date (October 1986). This regulation has been updated and may alter the numbering of the respective elements. The latest updated guides will, however, be used in the Structured Analysis Program. Comments are welcomed.

*/As identified in AR 700-127, "Integrated Logistic Support", Appendix E, effective 15 June 1983.

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INTRODUCTION

PURPOSE

The purpose of this report series is to present the results of the APJ efforts under Contract DAAA21-86-D-0025 for coordination with the AMCCOM Program Manager prior to in-depth structured design of ILS and LSA functions and processes. Design Influence, ILS Assessment Element Ell, is addressed in the report.

BACKGROUND

The Department of the Army has a requirement for management control over contractor and Government agency response to the requirements of AR 700-127, "Integrated Logistic Support", and MIL-STD-1388-1, "Logistic Support Analysis". HQs AMCCOM has initiated action to structure each of the LSA tasks, the assessment of each ILS element, the form of the results, and the detailed processes to insure consistency with current Army policies, procedures, and techniques.

This approach (undertaken by AMCCOM and APJ) will insure uniformity in efforts and products, reproducibility of analyses, and a well-defined structure which can be coordinated among all participants in the logistic process to arrive at common understanding and procedures.

SCOPE

This report summarizes the results of the Structured Analysis of the Assessment of Design Influence, ILS Element E11 and presents the associated Data Flow Diagrams (DFDs) developed from the Structured Analysis. The portions of the Data Dictionary relating to labels, names, descriptions, processes, data flows, data stores, and external entities are included in their present degree of completeness. (The Data Dictionary is a "living document" that evolves through the analysis and design process).

To place this work in context, this report presents a brief overview of Structured Analysis and its place in the overall systems design process to assist the reader who may not be fully briefed on the symbols and conventions used. It is supported by Annex B, which defines each element in Structured Analysis, and a Glossary.

ILS ASSESSMENT ELEMENT E11 DESCRIPTION

ILS Assessment Element E11 concerns the investigation of the extent to which the life cycle Integrated Logistic Support considerations have influenced the design of the specific equipment or system and all of its major assemblies, subassemblies, and parts.

Almost every area of logistics concern may impact or influence the design of the equipment/system if addressed during concept development or demonstration/validation, commonly referred to as "front end logistics". Once the design has been firmed, the consequences of design changes are often too severe to consider any changes other than possible product improvement programs downstream.

The areas of concern in this assessment were selected from AR 700-127 supplemented by an advance copy of revisions being developed by the Army ILS Executive Committee, System Assessment Subcommittee. There may be many overlaps with specific requirements in other ILS areas. However, because of the major payoffs in front-end logistics, it is beneficial to consider design influence as an independent identified entity to insure that each potential area of influence has been addressed.

For purposes of organization, these areas of front-end logistics concern have been categorized into seven (7) major groups:

1. Manpower and Personnel

- Skills required
- Manpower
- Human factors engineering
- Physical Constraints
- Training Requirements

2. Safety

- Hazard Analysis
- Operations Safety Considerations
- Maintenance Safety considerations
- Hazardous Materials Use and Disposal Provisions

3. Technology & State of the Art

Operational Constraints
Pre-Planned Improvement Program
State-of-the-Art Improvement Recommendations

4. Reliability, Availability and Maintainability

RAM Growth Analysis
RAM Engineering Analysis
RAM Accounting
Life Cycle RAM Planning
RAM Apportionment
Maintainability Evaluation

5. Program Interface

Peculiar Ground Support Equipment (PGSE) & Test
Equipment
Critical Support Characteristics
ILS Constraints
Standardization and Interoperability
Packaging, Handling, i.e., barcoding
Transportability
Facilities

6. Economics

Program Funding Constraints
LCC Influence
O&S Cost Reduction Potentials
Design for Discard
Level of Repair Analysis
Energy Efficiency & Program Constraints

7. Program Procedures

ILS Statement of Work
Logistics Specification
Contractor Incentives
Source Selection or Weighting

Development of the design influence assessment required
consideration of all aspects of logistics individually or
synergistically influencing equipment/systems optimum design.

There is a parallel requirement that the review/assessment team have an awareness of current Army policies and procedures related to these areas.

The outputs of this ILS assessment will be the identification of those areas of the Army support systems and acquisition processes/plans which provide potential economic savings or optimized equipment/system performance over their life cycle based on early consideration of the influence of logistics.

The data flow diagrams and the associated data dictionary developed for ILS Element E11, Design Influence assessment considerations from AR 700-127, "Integrated Logistic Support", are included as Annex A.

APPROACH

The APJ approach to Structured Analysis of the ILS Element is:

1. Scope the process defined in AR 700-127 in the context of the other ILS assessment tasks.
2. Review the guidance provided in MIL-STD-1369A (PROPOSED), "Integrated Logistics Support Program Requirements", and DA-PAM 700-55, "Instructions for Preparing the Integrated Logistic Support Plan".
3. Review the applicable Data Item Descriptions (DIDs) from the Acquisition Management Systems and Data Requirements Control List (AMSDL) published by the Department of Defense.
4. Review all source documents referenced in the AMSDL as applicable to the referenced DIDs of interest.
5. Apply staff experience in logistics support analysis and integrated logistics support to assure that the intent of the ILS element assessment has been addressed.

6. Validate results in discussions with Army activities and personnel directly involved in the applicable or related ILS tasks, such as the U.S. Army Logistic Evaluation Agency (LEA).

Structured Analysis and preparation of Data Flow Diagrams (DFDs) was further assisted by the application of Structured Analysis software. Licensed by Index Technology Corporation, Excelerator provides for automated tracking of names, labels, descriptions, multiple levels of detail in the data flow diagrams, and industry standards in symbols and diagramming practices.

Following completion of the draft DFDs, the diagrams and data dictionary were made available to working Army logisticians currently (or recently) directly involved in the application of the same ILS assessment in current Army development programs. Comments were solicited relative to the logic of the processes described, the scope and details of the indicated approaches, and the outputs implied by the ILS assessment element requirements.

Draft products were well received by the external reviewers, and requests have been made for copies of the DFDs for in-house use in organizing ILS and LSA efforts. Comment was also received that the DFDs will be a useful training tool for apprentice logisticians, since they provide an overall picture of the total task and a uniform approach to its fulfillment.

STRUCTURED ANALYSIS AND DESIGN

Structured Analysis and Structured Systems Design evolved from the need to define and demonstrate the underlying logical functions and requirements of large systems. The concept of Structured Analysis involves building a logical (non-physical) model of a system, using graphic techniques which enable users, analysts, and designers to get a clear and common picture of the system and how its parts fit together to meet the user's needs. It is followed by structured design, and then by programming, and test and validation. Annex B provides a brief description and guide to the fundamentals of a Structured Systems Analysis.

The Structured Analysis and Structured Systems Design process, sometimes referred to as "Structured Systems Analysis and Design (SSAD)", is well documented and widely utilized in Government and industry.

As stated in "The Practical Guide to Structured Systems Design" (Meilir Page-Jones, Prentice-Hall, Englewood Cliffs, NJ, 1980):

..."Structured Design is disciplined approach to computer system design, an activity that in the past has been notoriously haphazard and fraught with problems.

"1. Structured Design allows the form of the problem to guide the form of the solution.

"2. Structured Design seeks to conquer the complexity of large systems by means of partitioning the system into "black boxes," and by organizing the black boxes into hierarchies suitable for computer implementation.

"3. Structured Design uses tools, especially graphic ones, to render systems readily understandable.

"4. Structured Design offers a set of strategies for developing a design solution from a well defined statement of a problem.

"5. Structured Design offers a set of criteria for evaluating the quality of a given design solution with respect to the problem to be solved.

"Structured Design produces systems that are easy to understand, reliable, flexible, long lasting, smoothly developed, and efficient to operate - and that WORK...."

The organization of Structured Analysis and its relationship to Structured System Design is shown on Figure 1.

ILS ELEMENT E11 DESIGN INFLUENCE - DATA FLOW DIAGRAMS

The Data Flow Diagram is a tool that shows flow of data, i.e., data flows from sources and is processed by activities to produce intermediate or final products.

The DFD provides a useful and meaningful partitioning of a system from the viewpoint of identification and separation of all functions, actions, or processes so that each can be introduced, changed, added, or deleted with minimal disruption of the overall program, i.e., it emphasizes the underlying concept of modularity and identifiable transformations of data into actionable products.

A series of eleven (11) DFDs have been developed to structure the design influence ILS element assessment area:

1. E11.....Task Overview
2. E11.3A.....Manprint
3. E11.3A4B.....Effect of Skill
4. E11.3A6B.....Physical Constraints
5. E11.4A.....Safety
6. E11.4A2B.....Hazard Analysis
7. E11.5A.....Technology

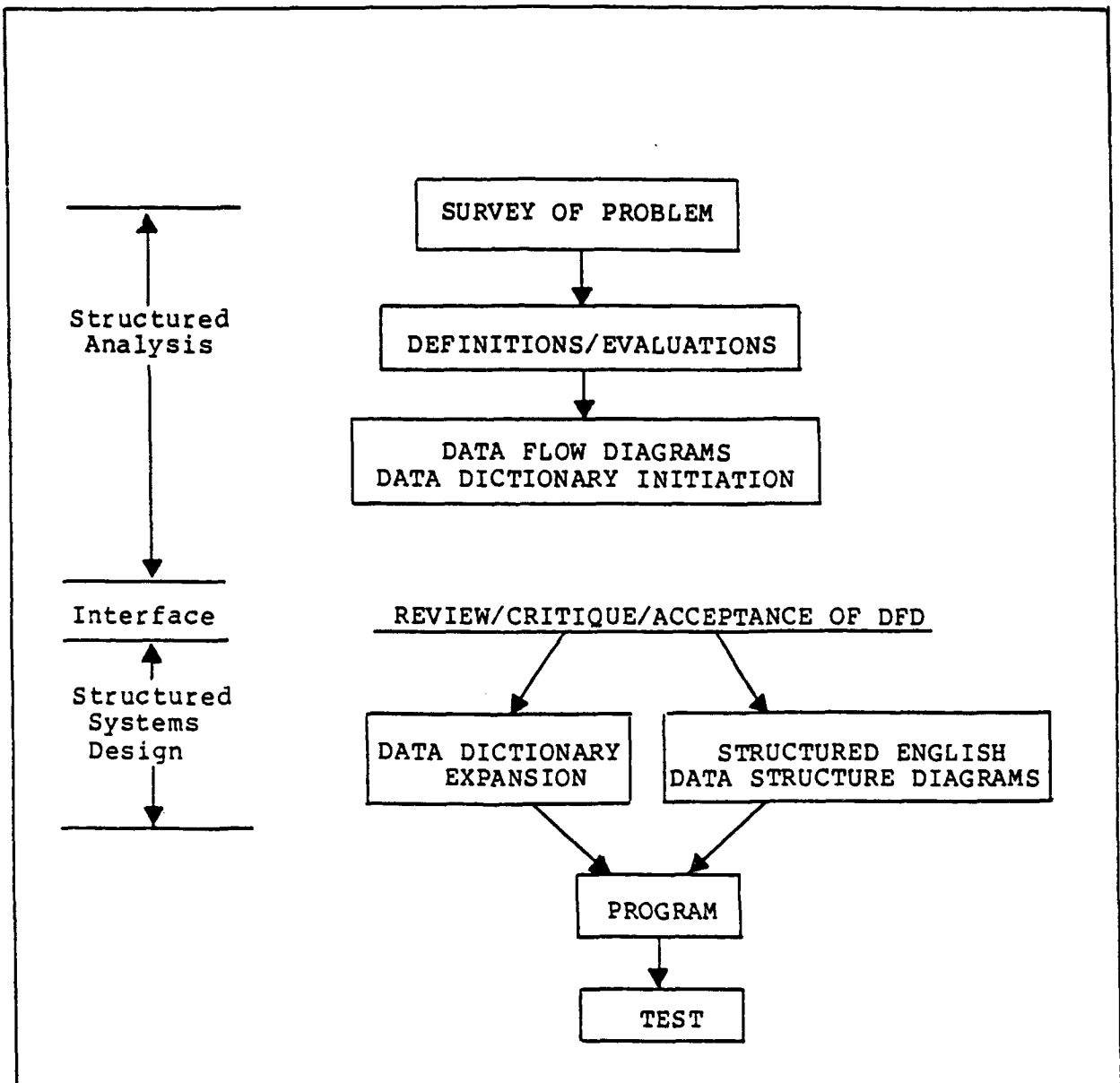


Figure 1. Structured Analysis and Structured Systems Design Organization

- 8. E11.6A.....RAM
- 9. E11.7A.....Interfaces
- 10. E11.8A.....Economics
- 11. E11.9A.....Program Procedures

Each DFD is keyed to the specific task (ILS Element, in this case) through the identification number assigned in the lower right hand box. The Alpha codes indicate the level of indenture or explosion below the top level, i.e.,:

Top Level.....E11
 First Indenture.....E11.3A
 Second Indenture.....E11.3A4B

For example, the first or top level DFD is "E11 - Design Influence", The top level process (bubble) on diagram E11.3 is expanded and identified as "E11.3A". (The Alpha "A" indicates the second level).

In this case, DFD E11.3A has two processes were further expanded - E11.3A4 and E11.3A6B (The Alpha "B" indicates the second level of indenture). Thus, for example, DFD E11.3A4B represents the second level expansion of process E11.3A4.

Four standard symbols are used in the drawing of a DFD (see Figure 2).

A copy of each DFD is presented in Annex A, accompanied by the Data Dictionary elements. Each entry made in the DFDs has a corresponding entry in the Data Dictionary, immediately following each of the DFDs.

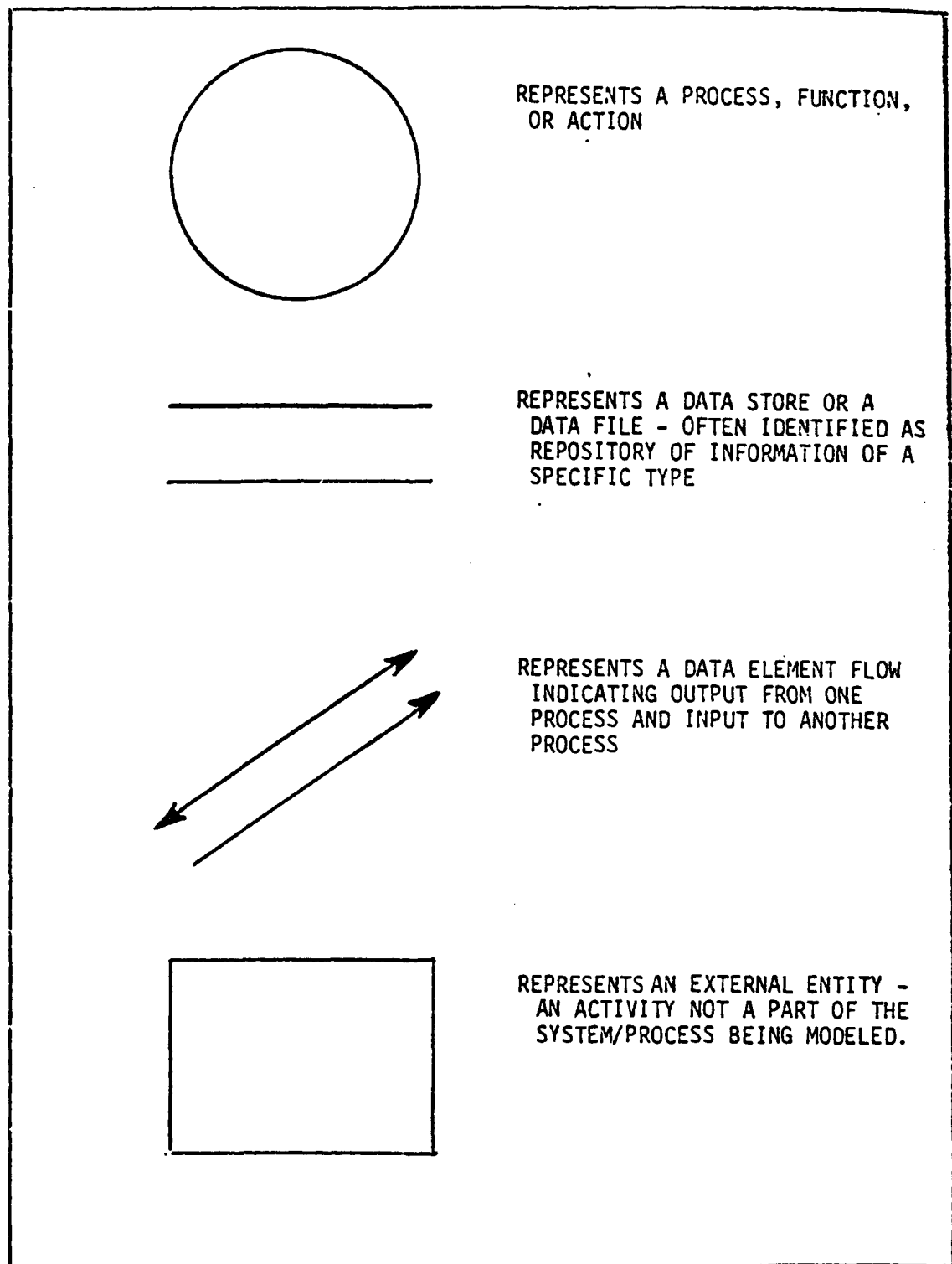


Figure 2. STANDARD DFD SYMBOL DEFINITIONS

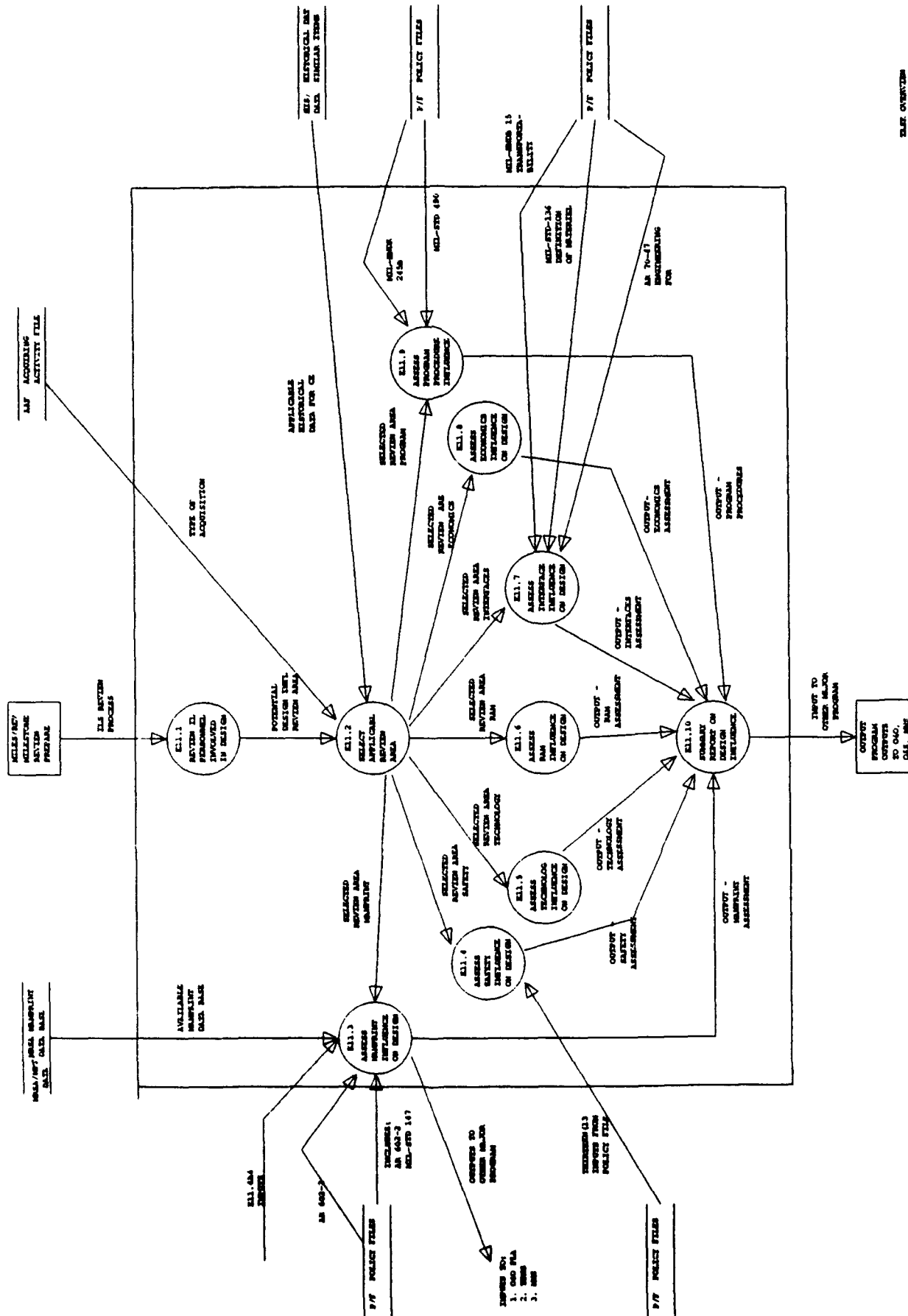
This Technical Note presents those Data Dictionary entries necessary for the coordination of the overall concept and details of the processes. To facilitate review, data flow diagrams, data flow identifications, process, external entities and data store descriptions are provided. As noted above, they will continue to evolve and be expanded in the System Design phase.

As the DFDs progress through Structured System Design, the Data Dictionary will continue to be expanded and completed. Since they are working documents rather than final submissions, only minimum effort has been devoted to editorial niceties, e.g., spelling, typography, etc.

It is noted that the output structure of Excelerator automatically truncates the number of letters and lines displayed as a function of image size. Thus, in the format size of this report, the full identifying entry may well be forcibly shortened, thereby introducing the possibility of misunderstanding. Therefore, in all cases, identifications are fully presented in the Data Dictionary accompanying the diagrams.

ANNEX A

**Design Influence Data Flow Diagrams
and Associated Data Dictionary**



FILE OVERVIEW

Created by: JMC
 Revised by: JMC
 Date changed: 04-23-93

DATE: 6-JAN-89
TIME: 15:59

APJ 966-212
E11 PROCESSES

PAGE 1
EXCELERATOR 1.8

Name	Label	Description
E11.1	REVIEW ILS ACRONYM: PERSONNEL INVOLVED IN DESIGN REVIEW	ILS - INTEGRATED LOGISTIC SUPPORT LSA - LOGISTIC SUPPORT ANALYSIS THE PRIMARY FUNCTION OF THIS PROCESS IS TO REVIEW THE ILS PERSONNEL ASSIGNED TO THE DESIGN INFLUENCE ASSESSMENT AS A MEASURE OF THE POTENTIAL REVIEW AREAS WHICH MAY BE CONSIDERED IN THIS PROCESS. EACH OF THE DESIGN REVIEW AREAS SHOULD BE ADDRESSED DURING DESIGN, PROGRAM AND/OR LSA REVIEWS, AS IDENTIFIED IN LSA TASK 103, BY SOMEONE WELL VERSED AND EXPERIENCED IN THE SPECIFIC AREAS, AS WELL AS FAMILIAR WITH ALL CURRENT ARMY, DOD REGULATIONS, PHAMPLETS, INSTRUCTIONS, AND DIRECTIVES RELATED TO THE SUBJECT AREA. PERSONNEL INCLUDE: HUMAN FACTORS ENGINEER, MAINTAINABILITY ENGINEER, RELIABILITY ENGINEER, MAINTENANCE ENGINEER, SAFETY ENGINEER, PROVISIONERS/CATALOGERS, PACKAGING ENGINEER, TRAINERS, TRANSPORTABILITY ENGINEER, AND OTHERS RESPONSIBLE FOR SYSTEM/EQUIPMENT PROGRAMS IDENTIFIED IN THE LSA PLAN, LSA TASK 102.
E11.2	SELECT ACRONYM: APPLICABLE REVIEW AREA	ILS - INTEGRATED LOGISTIC SUPPORT REVIEW AREAS SELECTED MUST INCLUDE SUPPORTABILITY PROBLEMS AND SUPPORTABILITY, COST, AND READINESS DRIVERS IDENTIFIED IN THE BASELINE COMPARISON SYSTEM, LSA TASK 203 OR MIL-STD-1388-1A.
E11.3	ASSESS MANPRINT INFLUENCE ON DESIGN	ASSESSMENT OF THE MANPRINT INFLUENCE ON DESIGN OF A MATERIEL SYSTEM/EQUIPMENT IS TO ASSURE CONFORMANCE TO THE CAPABILITIES AND LIMITATIONS OF MILITARY AND CIVILIAN PERSONNEL WHO WILL OPERATE AND MAINTAIN THOSE SYSTEMS. THE MANPRINT DOMAINS ARE MANDATORY CONSIDERATIONS FOR DESIGN, AND INFLUENCES THE INITIAL FUNCTIONAL ALLOCATION OF TASKS BETWEEN PEOPLE, HARDWARE, AND SOFTWARE. IN ADDITION, HUMAN PERFORMANCE CAPABILITIES MUST BE CONSIDERED WITH DETERMINING SYSTEM PERFORMANCE REQUIREMENTS.
E11.4	ASSESS SAFETY INFLUENCE ON DESIGN	SAFETY FEATURES MUST BE DESIGNED INTO A SYSTEM TO ELIMINATE OR CONTROL HAZARDS AND REDUCE RISKS WITHIN THE BOUNDS OF OPERATIONAL EFFECTIVENESS, TIME, AND COST.
E11.5	ASSESS TECHNOLOGY INFLUENCE ON DESIGN	DEVELOPMENT OF AN ADVANCED TECHNOLOGICAL SYSTEM/EQUIPMENT TO INCREASE COMBAT POWER MUST BE DESIGNED FOR OPERATION, MAINTENANCE, AND REPAIR BY THE AVERAGE SOLDIER WITHIN THE PROJECTED FORCE STRUCTURE WITH CONSTRAINTS ON INCREASED SOLDIER TRAINING TO ACQUIRE THE NEEDED APTITUDES AND SKILLS. ASSESSMENT OF TECHNOLOGY INFLUENCE ON DESIGN OF ADVANCED EQUIPMENT WITH A HIGH CAPABILITY TECHNOLOGY AND COMPLEXITY MUST INCLUDE HUMAN PERFORMANCE AS AN INTEGRAL ELEMENT AND THE REQUIREMENTS FOR ASSOCIATED SUPPORT ITEMS OF EQUIPMENT AND TRAINING DEVICES TOGETHER WITH THEIR RESPECTIVE LOGISTICAL TAILS NECESSARY FOR SUSTAINMENT.

DATE: 6-JAN-89
TIME: 16:00

APJ 966-212
E11 PROCESSES

PAGE 2
EXCELERATOR 1.8

Name	Label	Description
E11.6	ASSESS RAM INFLUENCE ON DESIGN	ACRONYM: RAM - RELIABILITY, AVAILABILITY AND MAINTAINABILITY RAM ARE KEY DESIGN PARAMETERS OF A MATERIEL SYSTEM THAT EFFECT BOTH THE PERFORMANCE (MISSION EFFECTIVENESS AND SYSTEM AVAILABILITY) AND ECONOMICS (SUPPORT REQUIREMENTS AND LIFE CYCLE COSTS). ASSESSMENT OF RAM INFLUENCE ON DESIGN MUST ASSURE THAT THE MATERIEL SYSTEM WILL BE OPERATIONALLY READY FOR USE, WILL SUCCESSFULLY PERFORM ASSIGNED FUNCTIONS, AND CAN BE ECONOMICALLY OPERATED AND MAINTAINED WITH SKILLS AND TRAINING EXPECTED TO BE AVAILABLE. RAM PROGRAMS MUST INCLUDE A BALANCED AND TAILORED MIX OF RAM ENGINEERING AND ACCOUNTING TASKS TO ACHIEVE THE MOST COST EFFECTIVE BALANCE BETWEEN LIFE CYCLE COSTS AND SYSTEM EFFECTIVENESS AND READINESS.
E11.7	ASSESS INTERFACE INFLUENCE ON DESIGN	ACRONYM: LSA -LOGISTIC SUPPORT ANALYSIS ASSESSMENT OF INTERFACING INFLUENCE AND INTEROPERABILITY REQUIREMENTS ON THE DESIGN OF A SYSTEM OR EQUIPMENT, INCORPORATING THE SYSTEM ENGINEERING PROCESS TO TRANSFORM OPERATIONAL NEED INTO PERFORMANCE PARAMETERS. THE SYSTEM CONFIGURATION SHOULD INCLUDE INTEGRATION OF APPLICABLE RELATED DISCIPLINES AND ELEMENTS OF SUPPORT INTO THE TOTAL ENGINEERING EFFORT. LSA IS AN INTEGRAL PART OF THE SYSTEM ENGINEERING PROCESS AND PROVIDES EARLY AND SUBSEQUENCE DESIGN INFLUENCE.
E11.8	ASSESS ECONOMICS INFLUENCE ON DESIGN	ASSESSMENT OF THE ECONOMICS INFLUENCE ON DESIGN WILL ASSURE CONSIDERATION OF KEY AREAS TO ACQUIRE A SYSTEM THAT IS AFFORDABLE, OPERABLE, SUPPORTABLE, AND TRANSPORTABLE WITHIN THE RESOURCES AVAILABLE.
E11.9	ASSESS PROGRAM PROCEDURES INFLUENCE ON DESIGN	ACRONYMS: ILS - INTEGRATED LOGISTIC SUPPORT RAM - RELIABILITY, AVAILABILITY AND MAINTAINABILITY ASSESSMENT OF THE PROGRAM PROCEDURES INFLUENCE ON DESIGN WILL ASSURE THAT ILS REQUIREMENTS ARE INCLUDED IN SOLICITATION DOCUMENTS, SOURCE SELECTION FACTORS, AND CONTRACTS AND THAT ILS CONSIDERATIONS WILL INFLUENCE CONTRACT TYPE, INCENTIVES, AND THE DEGREE OF COMPETITION. INCLUDED ARE MANAGEMENT EFFORTS FOR INTEGRATED DEVELOPMENT OF ILS ELEMENTS WITH MANPRINT TO INFLUENCE SYSTEM DESIGN AS WELL AS QUANTITATIVE AND QUALITATIVE RAM AND OTHER ILS REQUIREMENTS AND CONSTRAINTS.

DATE: 6-JAN-89
TIME: 16:00

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E11 PROCESSES

PAGE 3
EXCELERATOR 1.8

Name	Label	Description
E11.10	SUMMARY	ACRONYM:
	REPORT ON	ILS - INTEGRATED LOGISTIC SUPPORT
	DESIGN	
	INFLUENCE	THE SUMMARY REPORT ON DESIGN INFLUENCE CONSISTS OF OUTPUTS FROM EACH OF THE SEVEN (7) PROCESSES OR TASK DESCRIPTIONS WHICH ADDRESSES A SPECIFIC AREA OR FUNCTION APPLICABLE TO ILS AND MANPRINT MANAGEMENT AND TECHNICAL ACTIVITIES DURING THE MATERIEL ACQUISITION OF DEVELOPMENTAL, NONDEVELOPMENTAL AND PROJECT IMPROVED SYSTEMS AND EQUIPMENT. RESULTS FROM THE SUMMARY REPORT ON DESIGN INFLUENCE MUST BE GIVEN EQUAL CONSIDERATION WITH OTHER SYSTEM FACTORS SUCH AS PERFORMANCE, COST, AND SCHEDULE TO ENSURE A FULLY SUPPORTABLE MATERIEL SYSTEM.

DATE: 6-JAN-89
TIME: 13:58

APJ 966-212
E11 DATA FLOWS

PAGE 1
EXCELERATOR 1.8

Name	Label	Description
AR 602-2	AR 602-2	MANPRINT IN THE MATERIEL ACQUISITION PROCESS.
AR 70-47	AR 70-47	PROVIDES GUIDELINES FOR ARMY APPLICATIONS OF ENGINEERING FOR ENGINEERING TRANSPORTABILITY FOR TRANSPORTA- BILITY

DATE: 6-JAN-89
TIME: 15:58

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E11 DATA FLOWS

PAGE 2
EXCELERATOR 1.8

Name	Label	Description
DES/AREA	POTENTIAL	THE SPECIFIC DESIGN INFLUENCE AREAS TO BE CONSIDERED INCLUDE:
	DESIGN INFL.	MANPRINT
	REVIEW AREAS	SKILLS REQUIRED
		MANPOWER
		PHYSICAL CONSTRAINTS
		TRAINING REQUIREMENTS
		SAFETY
		HAZARD ANALYSIS
		OPERATIONS SAFETY CONSIDERATIONS
		MAINTENANCE SAFETY CONSIDERATIONS
		HAZARDOUS MATERIALS USE AND DISPOSAL PROVISIONS
		SYSTEM SAFETY PROGRAM PLAN (SSPP)
		TECHNOLOGY & STATE OF THE ART
		OPERATIONAL CONSTRAINTS
		PRE-PLANNED IMPROVEMENT PROGRAM
		STATE-OF-THE-ART IMPROVEMENT RECOMMENDATIONS
		RAM
		RELIABILITY EVALUATION
		1. PROGRAM SURVEILLANCE AND CONTROL
		2. DESIGN AND EVALUATION
		3. DEVELOPMENT AND PRODUCTION TESTING
		RAM GROWTH ANALYSIS
		RAM ENGINEERING ANALYSIS
		RAM ACCOUNTING
		LIFE CYCLE RAM PLANNING
		RAM APPORTIONMENT
		MAINTAINABILITY EVALUATION
		1. PROGRAM SURVEILLANCE AND CONTROL
		2. DESIGN AND ANALYSIS
		3. EVALUATION AND TEST
		PROGRAM INTERFACES
		PGSE & TEST EQUIPMENT
		EMBEDDED TRAINING
		CRITICAL SUPPORT CHARACTERISTICS
		ILS CONSTRAINTS
		STANDARDIZATION AND INTEROPERABILITY PACKAGEING AND HANDLING
		TRANSPORTABILITY
		FACILITIES
		ECONOMICS
		PROGRAM FUNDING CONSTRAINTS
		LCC INFLUENCE
		O&S COST REDUCTION POTENTIALS
		DESIGN FOR DISCARD
		LEVEL OF REPAIR ANALYSIS
		ENERGY EFFICIENCY & PROGRAM CONSTRAINTS
		PROGRAM PROCEDURES
		ILS STATEMENT OF WORK
		LOGISTICS SPECIFICATION
		CONTRACTOR INCENTIVES
		SOURCE SELECTION OR WEIGHTING

DATE: 6-JAN-89
TIME: 15:58

APJ 966-212
E11 DATA FLOWS

PAGE 3
EXCELERATOR 1.0

Name	Label	Description
E11.4A6	E11.4A6	RESULTS OF THE ASSESSMENT OF THE IMPACT OF SAFETY INFLUENCE ON DESIGN. INPUTS
EIGHT/INPUTS	THIRTEEN(13)	CONSOLIDATION OF THIRTEEN (13) SEPARATE INPUTS TO THIS ILS SUBTASK FROM INPUTS FROM THE POLICY FILE. POLICY FILE THESE CONSIST OF: 1. AR 200-2, ENVIRONMENT EFFECTS OF ARMY ACTIONS 2. AR 385-16, SAFETY-SYSTEM SAFETY ENGINEERING AND MANAGEMENT 3. DA PAM 385-16, SYSTEM SAFETY MANAGEMENT 4. DI-H 1322, SAFETY STATEMENT REQUIREMENTS 5. DI-H-1326A, SAFETY ANALYSIS AND HAZARD EVALUATION REPORT 6. DI-H-1327, SURFACE DANGER AREA DATA 7. DI-H-1332, RADIOACTIVE MATERIEL DATA 8. DI-H-1333A, SAFETY ANALYSIS - AVIATION SYSTEMS 9. DI-H-1336, NOISE MEASUREMENT REPORT 10. DI-H-7047A, SSPP 11. DI-H-7049A, SAFETY ASSESSMENT REPORT 12. MIL-STD-882, SYSTEM SAFETY PROGRAM REQUIREMENTS 13. STANDARDS ON FAULT TREE ANALYSIS.
HIS/DATA	APPLICABLE	HISTORICAL DATA INCLUDES OPERATION AND SUPPORT COSTS, LOGISTIC SUPPORT HISTORICAL RESOURCE REQUIREMENTS, RELIABILITY AND MAINTAINABILITY AND READINESS DATA FOR CER VALVES, AND QUALITATIVE SUPPORTABILITY PROBLEMS WHICH SHOULD BE ANALYSES PREVENTED ON THE NEW SYSTEM/EQUIPMENT.
HUMAN FACT DOCS	INCLUDES:	THE IL MANPRINT REVIEWER SHOULD BE FAMILIAR WITH THE SPECIFIC AR 602-2 REQUIREMENTS OF THE KEY POLICY DOCUMENTS AND SOURCES OF INFORMATION MIL-STD 1472 RELATED TO MANPRINT AS APPLIED IN THE DEPARTMENT OF THE ARMY: MIL-H-46855 AR 602-2 - MANPRINT IN THE MATERIEL ACQUISITION PROCESS. MIL-STD 1472 - HUMAN ENGINEERING DESIGN CRITERIA FOR MILITARY SYSTEMS, EQUIPMENT AND FACILITIES MIL-H-46855 - HUMAN ENGINEERING REQUIREMENTS FOR MILITARY SYSTEMS, EQUIPMENT AND FACILITIES MIL-H-759 - HUMAN FACTORS ENGINEERING DESIGN FOR ARMY MATERIAL.
ILS/REV	ILS REVIEW PROCESS	THE ILS REVIEW PROCESS PROVIDES FOR OFFICIAL REVIEW, ASSESSMENT AND CONTROL OF RELEASED DESIGN INFORMATION TO ASSURE THAT SUPPORTABILITY AND SUPPORTABILITY DESIGN REQUIREMENTS ARE BEING ACHIEVED. REVIEWS INCLUDE SYSTEM DESIGN REVIEW, PRELIMINARY DESIGN REVIEW, CRITICAL DESIGN REVIEW, SYSTEM/EQUIPMENT PROGRAM REVIEWS, LSA REVIEWS, AND ILS REVIEWS.
INPUT/OTHER	INPUT TO OTHER MAJOR PROGRAM ELEMENT	PROVIDES INPUTS TO OTHER MAJOR PROGRAM ELEMENTS SUCH AS: 1. O&O PLAN 2. TRAINING DEVICE NEEDS STATEMENT (TDNS) 3. MMS
MIL-HDBK-245B	MIL-HNDR 245B	PREPARATION OF STATEMENT OF WORK (SOW)

DATE: 6-JAN-89
TIME: 15:58

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E11 DATA FLOWS

PAGE 4
EXCELEATOR 1.8

Name	Label	Description
MIL-HNDB 157	MIL-HNDB 157	MILITARY HANDBOOK ON TRANSPORTABILITY CRITERIA.
	TRANSPORTA-	
	BILITY	
	CRITERIA	
MIL-STD-1366	MIL-STD-1366	MIL-STD 1366 PROVIDES A BASELINE OF ARMY MATERIEL SIZES SUITABLE FOR
	DEFINITION	ESTABLISHING TRANSPORTABILITY FACTORS. THIS MIL-STD INCLUDES MATERIEL
	OF MATERIEL	TRANSPORTATION DIMENSIONS AND WEIGHT CONSTRAINTS.
	TRANSP DIMEN	
	& WGT CONSTS	
MIL-STD-490	MIL-STD 490	SPECIFICATION PRACTICES
MPT/DATA	AVAILABLE	
	MANPRINT	
	DATA BASE	
OUTPUT/ECONO	OUTPUT-	THE RESULTS OF THE ASSESSMENT OF ECONOMICS ON DESIGN INFLUENCE WILL BE
	ECONOMICS	A BASIC INPUT TO THE SUMMARY REPORT IN SUBTASK E11.10.
	ASSESSMENT	
	ON DESIGN	
	INFLUENCE	
OUTPUT/INTERF	OUTPUT -	THE RESULTS OF THIS ASSESSMENT OF THE INTERFACES ON THE DESIGN
	INTERFACES	INFLUENCE WILL BE A BASIC INPUT TO THE SUMMARY REPORT TO BE PREPARED IN
	ASSESSMENT	ILS SUBTASK E11.10.
	ON DESIGN	
	INFLUENCE	
OUTPUT/MANPRINT	OUTPUT -	THE RESULTS OF THE ASSESSMENT OF MANPRINT AND ALL ITS IMPLICATIONS ON
	MANPRINT	DESIGN INFLUENCE WILL BE A BASIC INPUT TO THE SUMMARY REPORT TO BE
	ASSESSMENT	PREPARED IN ILS SUBTASK E11.10.
	ON DESIGN	
	INFLUENCE	
OUTPUT/PROG/PROC	OUTPUT -	THE RESULTS OF THE ASSESSMENT OF PROGRAM PROCEDURES ON DESIGN INFLUENCE
	PROGRAM	WILL BE A BASIC INPUT TO THE SUMMARY REPORT IN ILS TASK E11.10.
	PROCEDURES	
	ASSESSMENT	
	ON DESIGN	
OUTPUT/RAM	OUTPUT -	THE RESULTS OF THE ASSESSMENT OF THE INFLUENCE OF RAM ON THE DESIGN
	RAM	WILL BE A BASIC INPUT TO THE SUMMARY REPORT TO BE PREPARED IN ILS
	ASSESSMENT	SUBTASK E11.10.
	ON DESIGN	
	INFLUENCE	
OUTPUT/SAFETY	OUTPUT -	THE RESULTS OF THE ASSESSMENT OF THE INFLUENCE OF SAFETY ON THE DESIGN
	SAFETY	WILL BE A BASIC INPUT TO THE SUMMARY REPORT TO BE PREPARED IN ILS
	ASSESSMENT	SUBTASK E11.10.
	ON DESIGN	
	INFLUENCE	

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Name	Label	Description
OUTPUT/TECH	OUTPUT - TECHNOLOGY ASSESSMENT ON DESIGN INFLUENCE	THE RESULTS OF THE ASSESSMENT OF THE INFLUENCE OF TECHNOLOGY ON THE DESIGN WILL BE A BASIC INPUT TO THE SUMMARY REPORT TO BE PREPARED IN ILS SUBTASK E11.10.
OUTPUTS	OUTPUTS TO OTHER MAJOR PROGRAM ELEMENTS	ACRONYMS: MNS - MISSION NEEDS STATEMENT O&O - ORGANAZATION & OPERATIONS TDNS - TRAINING DEVICE NEEDS STATEMENT RESULTS OF THE MANPRINT ASSESSMENT WILL BE SIGNIFICANT INPUTS TO MAJOR PROGRAM DOCUMENTS: 1. O&O PLAN 2. TRAINING DEVICE NEEDS STATEMENT (TDNS) 3. MNS 4. SYSTEM SPECIFICATION.
SEL/ECONO/AREA	SELECTED REVIEW AREA- ECONOMICS	SELECTED AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE MANPRINT, SAFETY, TECHNOLOGY, RAM, PROGRAM INTERFACES, ECONOMICS, AND PROGRAM PROCEDURES. IN THIS DATA FLOW DIAGRAM, ECONOMICS IS THE SELECTED AREA FOR ANALYSIS.
SEL/INTERF/AREA	SELECTED REVIEW AREA- INTERFACES	THE SELECTED AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE MANPRINT, SAFETY TECHNOLOGY, RAM, PROGRAM INTERFACES, ECONOMICS, AND PROGRAM PROCEDURES. IN THE DATA FLOW DIAGRAM, THE ASSESSMENT CONCERNS THE INFLUENCE OF PROGRAM INTERFACES ON DESIGN.
SEL/MAN/AREA	SELECTED REVIEW AREA- MANPRINT	SELECTED MANPRINT AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE HUMAN FACTORS ENGINEERING ANALYSIS, SYSTEM MANPRINT MANAGEMENT PLAN, PERSONNEL SKILL, MANPOWER, PHYSICAL CONSTRAINTS, AND REQUIRED TRAINING.
SEL/PROC/AREA	SELECTED REVIEW AREA- PROGRAM PROCEDURES	SELECTED PROGRAM PROCEDURE AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE EVALUATION OF THE ILS STATEMENT OF WORK, LOGISTICS SPECIFICATIONS, CONTRACTOR INCENTIVES PROGRAM, AND SOURCE SELECTION TECHNIQUES AND WEIGHTING.
SEL/RAM/AREA	SELECTED REVIEW AREA- RAM	SELECTED RAM AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE RAM ENGINEERING ANALYSIS, RAM GROWTH ANALYSIS, RAM ACCOUNTING ANALYSIS, LIFE CYCLE RAM PLANNING, RAM APPORTIONING, AND MAINTAINABILITY EVALUATION.
SEL/SAFETY/AREA	SELECTED REVIEW AREA- SAFETY	SELECTED SAFETY AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE HAZARD ANALYSIS, SYSTEM SAFETY PROGRAM PLAN, SAFETY COMPLIANCE ASSESSMENT, AND ENVIRONMENT IMPACT. IN THIS SUBTASK, THE ASSESSMENT WILL CONCERN THE HAZARD ANALYSIS
SEL/TECH/AREA	SELECTED REVIEW AREA- TECHNOLOGY	SELECTED TECHNOLOGY AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE EVALUATION OF TECHNOLOGY ON OPERATING CONTRAINTS, EVALUATION OF PREPLANNED PRODUCT IMPROVEMENTS, A RELIABILITY GROWTH PLAN AND STATE-OF-THE-ART IMPACT.

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Name	Label	Description
TYPE ACQ	TYPE OF ACQUISITION	THE TYPE OF ACQUISITION INCLUDES ALL DEVELOPMENTAL, NONDEVELOPMENTAL, AND PRODUCT-IMPROVED SYSTEMS, MATERIEL, AND EQUIPMENT WITH FORMAL ILS PROGRAMS STRUCTURED TO MEET PEACETIME AND WARTIME SROs. THE OVERALL PLAN AND ACQUISITION METHOD FOR EXECUTING THE MATERIEL SYSTEM ACQUISITION PROGRAM IS CONTAINED IN THE ACQUISITION STRATEGY. NOTE THAT NEW DESIGN OR DEVELOPMENTAL PROGRAMS REQUIRE EARLY ILS, LSA, AND MANPRINT EFFORTS WHICH MUST BE INCLUDED IN THE COMPETITIVE REQUIREMENTS AND MUST BE A MAJOR FACTOR IN SOURCE SELECTION.

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Name	Label	Description
HIS/DATA	HISTORICAL DATA SIMILAR ITEMS	REPRESENTS CHARACTERISTICS OF THE NEW SYSTEM/EQUIPMENT BASED ON EXISTING SYSTEMS AND SUBSYSTEMS INCLUDING HARDWARE DESIGN AND OPERATION AND SUPPORT CONCEPTS TO PROJECT SUPPORTABILITY RELATED PARAMETERS, IDENTIFY TARGETS FOR IMPROVEMENT, AND DETERMINE SUPPORTABILITY, COST AND READINESS DRIVERS. CAN BE OBTAINED FROM LSA TASK 203, COMPARATIVE ANALYSIS, OF MIL-STD-1388-1A.
AAF	ACQUIRING ACTIVITY FILE	CONTAINS THOSE RECORDS, DOCUMENTS, DECISION PAPERS, SCHEDULES THAT WERE PREPARED AS PART OF THE ACQUISITION INITIATION, JUSTIFICATION, AND PLANNING PRIOR TO THE ASSIGNMENT OF A PROGRAM MANAGER. THE ITEMS IN THIS DATA STORE INCLUDE: A. THREAT ANALYSIS DATA B. O&O PLAN C. READINESS OBJECTIVES DATA D. FUNCTIONAL REQUIREMENTS DATA E. PROJECTED SCHEDULE DATA F. LOGISTICS RESOURCES DATA G. DESIRED R & M PARAMETERS H. TOA I. TOD J. COST & OPERATIONAL EFFECTIVENESS ANALYSIS (COEA) DATA K. PROJECTED COST DATA L. JUSTIFICATION OF MAJOR SYSTEM NEW START (JMSNS) DATA M. REQUIRED OPERATIONAL CAPABILITY(ROC)

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Name	Label	Description
F/F	POLICY FILES	CONTAINS THOSE MILITARY PUBLICATIONS, DECISION PAPERS, MISSIONS & FUNCTIONS, etc, WHICH ARE NEEDED TO ESTABLISH THE LOGISTICAL SUPPORT AND REVIEW REQUIREMENTS OF THE ITEM/EQUIPMENT DEVELOPMENT PROGRAM. THIS DATA STORE INCLUDES: 1. AR 12-16, "MUTUAL LOGISTICS SUPPORT BETWEEN THE U.S. AND OTHER NORTH ATLANTIC TREATY ORGANIZATION FORCES" 1a. AR 70-1, "SYSTEMS ACQUISITION POLICY AND PROCEDURES" 1b. AR 70-2, "RESEARCH, DEVELOPMENT, & ACQUISITION MATERIEL STATUS RECORDING" 1c. AR 70-10, "R&D - TEST & EVALUATION DURING DEVELOPMENT AND ACQUISITION OF MATERIEL" 1d. "AR 570-9, "MANPOWER AND EQUIPMENT CONTROL - HOST NATION SUPPORT" 2. AR 700-9, "POLICIES OF THE ARMY LOGISTIC SYSTEM" 3. AR 700-82, "JOINT REGULATION GOVERNING THE USE AND APPLICATION OF UNIFORM SOURCE MAINTENANCE AND RECOVERABILITY CODES" 4. AR 700-127, "INTEGRATED LOGISTICS SUPPORT" 5. AR 725-50, "REQUISITIONING, RECEIPT AND ISSUE SYSTEM" 6. AR 750-1, "MAINTENANCE OF SUPPLIES & EQUIPMENT - ARMY MATERIEL MAINTENANCE CONCEPTS & POLICIES" 7. AMC-R-700-27, "LEVEL OF REPAIR ANALYSIS (LORA) PROGRAM" 8. AMC-R-750-10, "DEPOT MAINTENANCE INTERSERVICE" 9. DA PAM 700-4 10. DA PAM 700-28, "INTEGRATED LOGISTIC SUPPORT PROGRAM ASSESSMENT ISSUES AND CRITERIA" 11. DA PAM 700-50, "INTEGRATED LOGISTIC SUPPORT - DEVELOPMENTAL SUPPORTABILITY TEST AND EVALUATION GUIDE" 12. DA PAM 700-55, "INSTRUCTIONS FOR PREPARING THE INTEGRATED LOGISTIC SUPPORT PLAN" 12a. DA PAM 736-750, "THE ARMY MAINTENANCE MANAGEMENT SYSTEMS (TAMMS)" 13. DA PAM 750-21, "LOGISTIC SUPPORT MODELLING" 14. AMC PAM 700-4, "LOGISTICS SUPPORT ANALYSIS TECHNIQUES GUIDE (WITH PALMAN)" 14a. AMC PAM 700-11, "LOGISTICS SUPPORT ANALYSIS REVIEW TEAM GUIDE" 15. AMC PAM 750-2, "MAINTENANCE OF SUPPLIES AND EQUIPMENT GUIDE TO RELIABILITY CENTERED MAINTENANCE" 16. MIL-STD-152, "TECH REVIEW GUIDELINES" 17. MIL-STD-210A, "CLIMATIC EXTREMES FOR MILITARY EQUIPMENT" 18. MIL-STD-470, -471, "MAINTAINABILITY STANDARDS" 19. MIL-STD-756, "RELIABILITY MODELLING & PREDICTIONS" 20. MIL-STD-780, "MAINTENANCE ENGINEERING ANALYSIS CONTROL NUMBER (MEACNS) FOR AERONAUTICAL EQUIPMENT, UNIFORM NUMBERING SYSTEM" 21. MIL-STD-781, "RELIABILITY DESIGN QUALIFICATION AND PRODUCTION ACCEPTANCE TESTS: EXPONENTIAL DISTRIBUTION" 22. MIL-STD-785B, "RELIABILITY PROGRAM FOR SYSTEMS AND EQUIPMENT DEVELOPMENT & PRODUCTION" 23. MIL-STD-810, "ENVIRONMENTAL TEST METHODS & ENGINEERING GUIDELINES" 24. MIL-STD-881, "WORK BREAKDOWN STRUCTURES FOR DEFENSE MATERIEL ITEMS" 25. MIL-STD-882, "SYSTEM SAFETY PROGRAM REQUIREMENTS" 26. MIL-STD-965, "PARTS CONTROL PROGRAM" 27. MIL-STD-1369A, "INTEGRATED LOGISTIC SUPPORT PROGRAM REQUIREMENTS"

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Name	Label	Description
		28. MIL-STD-1388-1A, "LOGISTICS SUPPORT ANALYSIS"
		29. MIL-STD-1388-2A, "LOGISTICS SUPPORT ANALYSIS RECORD"
		30. MIL-STD-1629, "PROCEDURES FOR PERFORMING A FAILURE MODE, EFFECTS & CRITICALITY ANALYSIS"
		31. MIL-HDBK-472, "MAINTAINABILITY PREDICTION"
		32. MIL-M-24100B, "FUNCTIONALLY ORIENTED MAINTENANCE MANUALS (FOMM) FOR EQUIPMENT & SYSTEMS"
P/F(2)	POLICY FILES(2) SUPPLEMENT	33. AR 70-38, "RESEARCH, DEVELOPMENT, TEST & EVALUATION OF MATERIEL FOR EXTREME CLIMATIC CONDITIONS"
		34. AR 602-1, "PERSONNEL-MATERIEL SYSTEMS - HUMAN FACTORS ENGINEERING PROGRAM"
		35. AR 602-2, "MANPOWER AND PERSONNEL INTEGRATION (MANPRINT) IN MATERIEL ACQUISITION PROCESS"
		36. AR 700-47, "LOGISTICS - DEFENSE STANDARDIZATION AND SPECIFICATION PROGRAM"
		37. AR 700-60, "LOGISTICS - DEPARTMENT OF DEFENSE PARTS CONTROL PROGRAM"
		38. AR 700-129, "MANAGEMENT AND EXECUTION OF INTEGRATED LOGISTIC SUPPORT (ILS) PROGRAMS FOR MULTISERVICE ACQUISITIONS"
		39. DA PAM 700-55, "INSTRUCTIONS FOR PREPARING THE INTEGRATED LOGISTIC SUPPORT PLAN."
		40. MIL-STD 210G "CLIMATIC INFORMATION TO DETERMINE DESIGN AND TEST REQUIREMENTS FOR MILITARY SYSTEMS AND EQUIPMENT."
DIDS	DATA ITEM DESCRIPTIONS	41. DI-R-1734, FAILURE MODES, EFFECTS, AND CRITICALITY REPORT
		42. DI-R-2114, RELIABILITY ALLOCATION REPORT
		43. DI-R-2115A, FAILURE MODE AND EFFECT ANALYSIS REPORT
		44. DI-R-2129, MAINTAINABILITY DEMONSTRATION PLAN
		45. DI-R-2130A, MAINTAINABILITY DEMONSTRATION REPORT
		46. DI-S-3604, FUNCTIONAL FLOW DIAGRAM
		47. DI-R-7033, RELIABILITY TEST PLAN
		48. DI-R-7034, RELIABILITY TEST AND DEMONSTRATION REPORTS
		49. DI-R-7035, RELIABILITY TEST AND DEMONSTRATION PROCEDURES
		50. DI-R-7040, BURN-IN TEST REPORT
		51. DI-R-7041, FAILURE SUMMARY AND ANALYSIS REPORT
		52. DI-R-7079, RELIABILITY PROGRAM PLAN
		53. DI-R-7080, RELIABILITY STATUS REPORT
		54. DI-R-7081, RELIABILITY MATHEMATICAL MODEL(S)
		55. DI-R-7082, RELIABILITY PREDICTIONS REPORT
		56. DI-R-7083, SNEAK CIRCUIT ANALYSIS REPORT
		57. DI-R-7084, ELECTRONIC PARTS/CIRCUITS TOLERANCE ANALYSIS REPORT
		58. DI-R-7085, FAILURE MODE, EFFECTS, AND CRITICALITY ANALYSIS REPORT
		59. DI-R-7105, DATA COLLECTION, ANALYSIS AND CORRECTIVE ACTION SYSTEM REPORT
		60. DI-R-7106, MAINTAINABILITY MODELLING REPORT
		61. DI-R-7107, MAINTAINABILITY ALLOCATIONS REPORT
		62. DI-R-7108, MAINTAINABILITY PREDICTIONS REPORT
		63. DI-R-7109, MAINTAINABILITY ANALYSIS REPORT
		64. DI-R-7110, MAINTAINABILITY DESIGN CRITERIA PLAN
		65. DI-R-7111, INPUTS TO THE DETAILED MAINTENANCE PLAN AND LOGISTICS SUPPORT ANALYSIS

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Name	Label	Description

		66. DI-R-7112, MAINTAINABILITY DEMONSTRATION TEST PLAN
		67. DI-R-7113, MAINTAINABILITY DEMONSTRATION REPORT
		68. DI-R-35011, CRITICAL ITEM CONTROL PLAN

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E11 EXTERNAL ENTITIES

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Name	Label	Description
MILES/REV	MILESTONE REVIEW PREPARE	PREPARATION FOR THE MILESTONE REVIEW REQUIRES THE ASSESSMENT OF THE INFLUENCE OF LOGISTIC ELEMENTS ON THE DESIGN OF THE ITEM/EQUIPMENT UNDER DEVELOPMENT. THIS APPLIES TO ALL MILESTONES IN THE ITEM/EQUIPMENT LIFE CYCLE, INCLUDING CONTRACTUAL MILESTONES AND GOVERNMENT MANAGEMENT DECISION REVIEWS MADE AT MILESTONE DECISION POINTS APPROPRIATE TO THE PARTICULAR PROGRAM.
OUTPUT	PROGRAM OUTPUTS TO O&O, O&S, MNS	ACRONYMS: ILS - INTEGRATED LOGISTIC SUPPORT MNS - MISSION NEEDS STATEMENT O&O - ORGANIZATION & OPERATIONS RAM - RELIABILITY, AVAILABILITY AND MAINTAINABILITY ROC - REQUIRED OPERATIONAL CAPABILITY SRO - SYSTEM READINESS OBJECTIVES TDR - TRAINING DEVICE REQUIREMENT THE CONSTRAINTS PARAGRAPH OF THE SYSTEM/EQUIPMENT MISSION NEED STATEMENT (MNS) AND OPERATIONAL AND ORGANIZATIONAL (O&O) PLAN MUST INCLUDE LOGISTICS AND MANPRINT IMPLICATIONS FOR INCLUSION IN ANALYSES OF ALTERNATIVE CONCEPT SOLUTIONS. SYSTEM CONCEPTS MUST CONFORM TO CAPABILITIES AND LIMITATIONS OF THE FULLY EQUIPED SOLDIER TO OPERATE AND MAINTAIN THE MATERIEL IN THE OPERATIONAL ENVIRONMENT CONSISTENT WITH TACTICAL REQUIREMENTS AND LOGISTICS CAPABILITIES. THE REQUIRED OPERATIONAL CAPABILITY (ROC), TRAINING DEVICE REQUIREMENT (TDR), AND OTHER APPLICABLE REQUIREMENTS DOCUMENTS AND CONTRACTUAL DOCUMENTS (E.G., SYSTEM SPECIFICATION) MUST INCLUDE ILS CONSTRAINTS, RAM REQUIREMENTS, AND WARTIME AND PEACETIME SYSTEM READINESS OBJECTIVES (SRO) THAT RELATES QUANTITATIVELY TO MATERIEL SYSTEM DESIGN AND TO SYSTEM SUPPORT RESOURCE REQUIREMENTS.



ELL.3A
Created by: JMC
Revised by: JMC
Date changed: 10-100-00

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Name	Label	Description
E11.3A1	IDENTIFY	PRIMARY GOAL IS TO IDENTIFY THE INFLUENCE OF MANPRINT ON THE DESIGN POTENTIAL OF THE ITEM/EQUIPMENT BY CONSIDERING HUMAN PERFORMANCE AND RELIABILITY MANPRINT ISSUES, AND TO ASSESS WHETHER CONSIDERATION HAS BEEN GIVEN TO THE INFLUENCES OPTIMIZATION OF THE DESIGN INCLUDING THE FUNCTIONAL ALLOCATION OF TASKS ON DESIGN AMONG PEOPLE, HARDWARE, AND SOFTWARE IN LIGHT OF MANPRINT REQUIREMENTS. THE SIX MAJOR DOMAINS OF MANPRINT MAY BE STATED AS: 1. HUMAN FACTORS ENGINEERING 2. MANPOWER 3. PERSONNEL 4. TRAINING 5. SYSTEM SAFETY 6. HEALTH HAZARDS. THE ASSESSMENT OF MANPRINT INFLUENCE ON DESIGNS IS ADDRESSED IN SIX (6) SPECIFIC AREAS IN THIS DATA FLOW DIAGRAM: 1. HUMAN FACTORS ENGINEERING 2. SYSTEM MANPRINT MANAGEMENT PLAN (SMMP) 3. SKILLS 4. MANPOWER 5. PHYSICAL CONSTRAINTS 6. TRAINING. IT SHOULD BE NOTED THAT SAFETY WAS CONSIDERED TO BE IMPORTANT ENOUGH TO BE CARRIED IN AN INDEPENDENT DATA FLOW DIAGRAM (SEE E11.4A). TO ASSESS INFLUENCE OF MANPRINT ON DESIGNS, REFERENCE SHOULD BE MADE TO: 1. AR 602-2, "MANPRINT" 2. AR 602-1, "HUMAN FACTORS ENGINEERING PROGRAM" 3. MIL-STD 1472C, "HUMAN ENGINEERING DESIGN CRITERIA FOR MILITARY SYSTEMS, EQUIPMENT & FACILITIES" 4. AR 385-16, "SYSTEM SAFETY ENGINEERING AND MANAGEMENT" 5. DA PAM 385-16, "SYSTEM SAFETY ENGINEERING AND MANAGEMENT" 6. AR 40-10, "HEALTH HAZARD ASSESSMENT PROGRAM IN SUPPORT OF THE MATERIEL ACQUISITION DECISION PROCESS" 7. MIL-H-46855, "HUMAN ENGINEERING REQUIREMENTS FOR MILITARY SYSTEMS, EQUIPMENT & FACILITIES" 8. DI-H-1336, "NOISE MEASUREMENT REPORT" 9. DI-H-7051, "HUMAN ENGINEERING PROGRAM PLAN" 10. DI-H 7052, "HUMAN ENGINEERING DYNAMIC SIMULATION PLAN" 11. DI-H 7053, "HUMAN ENGINEERING TEST PLAN" 12. DI-H 7054, "HUMAN ENGINEERING SYSTEM ANALYST REPORT" 13. DI-H 7055, "CRITICAL TASK ANALYSIS REPORT" 14. DI-H 7056, "HUMAN ENGINEERING DESIGN APPROACH DOCUMENT - OPERATOR" 15. DI-H-7057, "HUMAN ENGINEERING DESIGN APPROACH DOCUMENT - MAINTENANCE." 16. DI-H-7058, "HUMAN ENGINEERING DESIGN TEST REPORT" 17. DI-H-7059, "HUMAN ENGINEERING DESIGN PROGRESS REPORT". FOR EACH OF THE AREAS ADDRESSED UNDER MANPRINT, CONSIDERATION MUST BE GIVEN TO THE EFFECTIVE SOLDIER-MATERIEL INTERACTION PARAMETERS: 1. PERFORMANCE TIMES 2. TRAINING TIMES 3. SOLDIER ABILITIES & SKILLS 4. PHYSICAL CAPABILITIES 5. PHYSIOLOGICAL TOLERANCE LIMITS.

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Name	Label	Description
E11.3A5	ASSESS	CONSIDERATION OF THE NET EFFECT OF SYSTEM OR EQUIPMENT ON OVERALL ARMY EVALUATION HUMAN RESOURCE REQUIREMENTS (WHAT NEEDED) AND AUTHORIZATIONS (WHAT - MANPOWER AVAILABLE) TO ENSURE THAT SYSTEM IS AFFORDABLE FROM THE STANDPOINT OF REQUIRED MANPOWER.
E11.3A4	ASSESS	EVALUATION OF SKILLS INFLUENCE LISTED IN DFD PROCESS E11.3A4B1-3, INCLUDING CONSIDERATION OF THE AVAILABILITY OF QUALIFIED SOLDIERS IN OF SKILLS TERMS OF SPECIFIC SKILLS, EXPERIENCE, AND OTHER HUMAN CHARACTERISTICS INFLUENCE NEEDED TO USE, OPERATE, MAINTAIN AND SUPPORT THE SYSTEMS/EQUIPMENT.
E11.3A8	SUMMARY	SINCE MANPRINT IS REQUIRED TO BE ADDRESSED DURING THE PRECONCEPT PHASE IMPACT- AND CONTINUE THROUGHOUT THE SYSTEM LIFE CYCLE, THE ABOVE PROCESSES MUST MANPRINT BE INCLUDED IN EARLY DESIGN REVIEWS SUCH AS PRELIMINARY AND/OR CRITICAL INFLUENCE DESIGN REVIEWS.
E11.3A6	ASSESS	THE EVALUATION OF PHYSICAL CONSTRAINTS ON THE SYSTEM DESIGN ARE LISTED EVALUATION IN DFD PROCESS E11.3A6B1-3 TO INCLUDE PHYSICAL CONSTRAINT CATEGORIES - PHYSICAL AND DESIGN ASSESSMENT CRITERIA, CENTERING ON HUMAN PHYSICAL CONSTRAINT CAPABILITIES, CHARACTERISTICS, AND LIMITATIONS AND THEIR IMPACT ON ON DESIGN DESIGN CHARACTERISTICS.
E11.3A7	ASSESS	ASSESS EVALUATION OF THE TRAINING NECESSARY AND TIME REQUIRED TO EVALUATION IMPART THE REQUISITE KNOWLEDGE, SKILLS AND ABILITIES TO QUALIFY OF THE SOLDER FOR USE, OPERATION, MAINTENANCE AND SUPPORT OF THE SYSTEM TRAINING WITH PARTICULAR REFERENCE TO: REQUIRED 1. TRAINING BURDEN 2. MANPOWER CAPABILITIES & SKILLS AVAILABLE OR ACHIEVEABLE 3. APPLICATION OF CONCEPT TO ANALYSIS, DESIGN, AND DEVELOPMENT OF TRAINING DEVIDES 4. USE OF EMBEDDED TRAINING SPECIFIC REFERENCE SHOULD BE GIVEN TO; 1. DA PAM 700-28, 2. AR 602-2, "MANPRINT" 3. AR 602-1, "HUMAN FACTORS ENGINEERING PROGRAM" 4. MIL-STD 1472C, "HUMAN ENGINEERING DESIGN CRITERIA FOR MILITARY SYSTEMS, EQUIPMENT, AND FACILITIES
E11.3A3	ASSESS SYS	ASSESS SYSTEM MANPRINT MANAGEMENT PLAN (SMMP) TO DETERMINE IF REALISTIC MANPRINT GOALS AND DATA SOURCES HAVE BEEN CITED AND TO PROVIDE GUIDANCE RELATIVE MANAGEMENT TO THE SMMP PREPARATION IN ACCORDANCE WITH AR 602-2, CHAP. 4 (SMMP PLAN PURPOSE, POLICY AND PROCEDURES), AND APPENDIX B (SMMP FORMAT). THE SMMP (SMMP) DOCUMENTS DATA THAT IS AVAILABLE OR MUST BE GENERATED, HOW AND WHEN THE DATA WILL BE GENERATED, AND HOW IT WILL BE EMPLOYED TO ADDRESS MANPRINT ISSUES AND CONCERNS. IT PROVIDES AN AUDIT TRAIL AND DOCUMENTS THE DATA SOURCES, ANALYSES, TRADE-OFFS, AND DECISIONS MADE THROUGHOUT THE ACQUISITION PROCESS. IT ALSO SERVES AS DOCUMENTATION OF WHAT WAS CONSIDERED AND WHY IT WAS OR WAS NOT EMPLOYED. A TARGET AUDIENCE DESCRIPTION (TAD) MUST BE INCLUDED TO PROVIDE THE QUANTITY AND QUALIFICATIONS OF THE SOLDIERS WHO WILL OPERATE, MAINTAIN, AND SUPPORT THE SYSTEMS.

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Name	Label	Description
E11.3A2	ASSESS	ASSESS PLANS FOR HUMAN FACTORS ENGINEERING ANALYSIS BASED ON PLANS FOR REQUIREMENTS OF AR 602-1 AND THE INTERFACE COORDINATION WITH HUMAN HUMAN FACT ENGINEERING LABORATORIES ASSIGNED TO MAJOR SUBORDINATE COMMANDS. THE ENGINEER DEGREE OF ANALYSIS WILL BE DEPENDENT UPON THE TYPE COMMODITY INVOLVED ANALYSIS AND THE POTENTIAL MAN-MACHINE INTERACTION, INCLUDING QUALITATIVE MAINTAINABILITY CHARACTERISTICS INCORPORATED IN THE DESIGN.

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E11.3A DATA FLOWS

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Name	Label	Description
AR 602-2	AR 602-2	MANPRINT IN THE MATERIEL ACQUISITION PROCESS.
E11.4A6	E11.4A6	RESULTS OF THE ASSESSMENT OF THE IMPACT OF SAFETY INFLUENCE ON DESIGN. INPUTS
HUMAN FACT DOCS	INCLUDES:	THE ILS MANPRINT REVIEWER SHOULD BE FAMILIAR WITH THE SPECIFIC AR 602-2 REQUIREMENTS OF THE KEY POLICY DOCUMENTS AND SOURCES OF INFORMATION MIL-STD 1472 RELATED TO MANPRINT AS APPLIED IN THE DEPARTMENT OF THE ARMY: MIL-H-46855 AR 602-2 - MANPRINT IN THE MATERIEL ACQUISITION PROCESS. MIL-STD 1472 - HUMAN ENGINEERING DESIGN CRITERIA FOR MILITARY SYSTEMS, EQUIPMENT AND FACILITIES MIL-H-46855 - HUMAN ENGINEERING REQUIREMENTS FOR MILITARY SYSTEMS, EQUIPMENT AND FACILITIES MIL-H-759 - HUMAN FACTORS ENGINEERING DESIGN FOR ARMY MATERIAL.
OUTPUT/MANPRINT	OUTPUT - MANPRINT ASSESSMENT ON DESIGN INFLUENCE	THE RESULTS OF THE ASSESSMENT OF MANPRINT AND ALL ITS IMPLICATIONS ON DESIGN INFLUENCE WILL BE A BASIC INPUT TO THE SUMMARY REPORT TO BE PREPARED IN ILS SUBTASK E11.10.
OUTPUTS	OUTPUTS TO OTHER MAJOR PROGRAM ELEMENTS	ACRONYMS: MNS - MISSION NEEDS STATEMENT O&O - ORGANIZATION & OPERATIONS TDNS - TRAINING DEVICE NEEDS STATEMENT RESULTS OF THE MANPRINT ASSESSMENT WILL BE SIGNIFICANT INPUTS TO MAJOR PROGRAM DOCUMENTS: 1. O&O PLAN 2. TRAINING DEVICE NEEDS STATEMENT (TDNS) 3. MNS 4. SYSTEM SPECIFICATION.
SEL/MAN/AREA	SELECTED REVIEW AREA- MANPRINT	SELECTED MANPRINT AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE HUMAN FACTORS ENGINEERING ANALYSIS, SYSTEM MANPRINT MANAGEMENT PLAN, PERSONNEL SKILL, MANPOWER, PHYSICAL CONSTRAINTS, AND REQUIRED TRAINING.
SUM/MAN/OUT	SUM - OUTPUT ASSESSMENT ON DESIGN INFLUENCE	THE SUMMARY OUTPUT FOR MANPRINT ASSESSMENT ON DESIGN INFLUENCE INCLUDES FOR MANPRINT SUMMARY IMPACTS OF EACH SELECTED MANPRINT AREA FOR WHICH A DESIGN INFLUENCE ASSESSMENT HAS BEEN CONDUCTED. AREAS INCLUDE HUMAN FACTORS ENGINEERING ANALYSIS, SYSTEM MANPRINT MANAGEMENT PLAN, PERSONNEL SKILLS, MANPOWER, PHYSICAL CONSTRAINTS, AND TRAINING.

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Name	Label	Description
P/F	POLICY FILES	CONTAINS THOSE MILITARY PUBLICATIONS, DECISION PAPERS, MISSIONS & FUNCTIONS, etc, WHICH ARE NEEDED TO ESTABLISH THE LOGISTICAL SUPPORT AND REVIEW REQUIREMENTS OF THE ITEM/EQUIPMENT DEVELOPMENT PROGRAM. THIS DATA STORE INCLUDES: 1. AR 12-16, "MUTUAL LOGISTICS SUPPORT BETWEEN THE U.S. AND OTHER NORTH ATLANTIC TREATY ORGANIZATION FORCES" 1a. AR 70-1, "SYSTEMS ACQUISITION POLICY AND PROCEDURES" 1b. AR 70-2, "RESEARCH, DEVELOPMENT, & ACQUISITION MATERIEL STATUS RECORDING" 1c. AR 70-10, "R&D - TEST & EVALUATION DURING DEVELOPMENT AND ACQUISITION OF MATERIEL" 1d. "AR 570-9, "MANPOWER AND EQUIPMENT CONTROL - HOST NATION SUPPORT" 2. AR 700-9, "POLICIES OF THE ARMY LOGISTIC SYSTEM" 3. AR 700-82, "JOINT REGULATION GOVERNING THE USE AND APPLICATION OF UNIFORM SOURCE MAINTENANCE AND RECOVERABILITY CODES" 4. AR 700-127, "INTEGRATED LOGISTICS SUPPPORT" 5. AR 725-50, "REQUISITIONING, RECEIPT AND ISSUE SYSTEM" 6. AR 750-1, "MAINTENANCE OF SUPPLIES & EQUIPMENT - ARMY MATERIEL MAINTENANCE CONCEPTS & POLICIES" 7. AMC-R-700-27, "LEVEL OF REPAIR ANALYSIS (LORA) PROGRAM" 8. AMC-R-750-10, "DEPOT MAINTENANCE INTERSERVICE" 9. DA PAM 700-4 10. DA PAM 700-28, "INTEGRATED LOGISTIC SUPPORT PROGRAM ASSESSMENT ISSUES AND CRITERIA" 11. DA PAM 700-50, "INTEGRATED LOGISTIC SUPPORT - DEVELOPMENTAL SUPPORTABILITY TEST AND EVALUATION GUIDE" 12. DA PAM 700-55, "INSTRUCTIONS FOR PREPARING THE INTEGRATED LOGISTIC SUPPORT PLAN" 12a. DA PAM 738-750, "THE ARMY MAINTENANCE MANAGEMENT SYSTEMS (TAMMS)" 13. DA PAM 750-21, "LOGISTIC SUPPORT MODELLING" 14. AMC PAM 700-4, "LOGISTICS SUPPORT ANALYSIS TECHNIQUES GUIDE (WITH PALMAN)" 14a. AMC PAM 700-11, "LOGISTICS SUPPORT ANALYSIS REVIEW TEAM GUIDE" 15. AMC PAM 750-2, "MAINTENANCE OF SUPPLIES AND EQUIPMENT GUIDE TO RELIABILITY CENTERED MAINTENANCE" 16. MIL-STD-152, "TECH REVIEW GUIDELINES" 17. MIL-STD-210A, "CLIMATIC EXTREMES FOR MILITARY EQUIPMENT" 18. MIL-STD-470, -471, "MAINTAINABILITY STANDARDS" 19. MIL-STD-756, "RELIABILITY MODELLING & PREDICTIONS" 20. MIL-STD-780, "MAINTENANCE ENGINEERING ANALYSIS CONTROL NUMBER (MEACNS) FOR AERONAUTICAL EQUIPMENT, UNIFORM NUMBERING SYSTEM" 21. MIL-STD-781, "RELIABILITY DESIGN QUALIFICATION AND PRODUCTION ACCEPTANCE TESTS: EXPONENTIAL DISTRIBUTION" 22. MIL-STD-785B, "RELIABILITY PROGRAM FOR SYSTEMS AND EQUIPMENT DEVELOPMENT & PRODUCTION" 23. MIL-STD-810, "ENVIRONMENTAL TEST METHODS & ENGINEERING GUIDELINES" 24. MIL-STD-881, "WORK BREAKDOWN STRUCTURES FOR DEFENSE MATERIEL ITEMS" 25. MIL-STD-882, "SYSTEM SAFETY PROGRAM REQUIRMENTS" 26. MIL-STD-963, "PARTS CONTROL PROGRAM" 27. MIL-STD-1369A, "INTEGRATED LOGISTIC SUPPORT PROGRAM REQUIREMENTS"

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Name	Label	Description
		28. MIL-STD-1388-1A, "LOGISTICS SUPPORT ANALYSIS"
		29. MIL-STD-1388-2A, "LOGISTICS SUPPORT ANALYSIS RECORD"
		30. MIL-STD-1629, "PROCEDURES FOR PERFORMING A FAILURE MODE, EFFECTS & CRITICALITY ANALYSIS"
		31. MIL-HDBK-472, "MAINTAINABILITY PREDICTION"
		32. MIL-M-24100B, "FUNCTIONALLY ORIENTED MAINTENANCE MANUALS (FOMM) FOR EQUIPMENT & SYSTEMS"
P/F (2)	POLICY FILES (2) SUPPLEMENT	33. AR 70-38, "RESEARCH, DEVELOPMENT, TEST & EVALUATION OF MATERIEL FOR EXTREME CLIMATIC CONDITIONS"
		34. AR 602-1, "PERSONNEL-MATERIEL SYSTEMS - HUMAN FACTORS ENGINEERING PROGRAM"
		35. AR 602-2, "MANPOWER AND PERSONNEL INTEGRATION (MANPRINT) IN MATERIEL ACQUISITION PROCESS"
		36. AR 700-47, "LOGISTICS - DEFENSE STANDARDIZATION AND SPECIFICATION PROGRAM"
		37. AR 700-60, "LOGISTICS - DEPARTMENT OF DEFENSE PARTS CONTROL PROGRAM"
		38. AR 700-129, "MANAGEMENT AND EXECUTION OF INTEGRATED LOGISTIC SUPPORT (ILS) PROGRAMS FOR MULTISERVICE ACQUISITIONS"
		39. DA PAM 700-55, "INSTRUCTIONS FOR PREPARING THE INTEGRATED LOGISTIC SUPPORT PLAN."
		40. MIL-STD 210G "CLIMATIC INFORMATION TO DETERMINE DESIGN AND TEST REQUIREMENTS FOR MILITARY SYSTEMS AND EQUIPMENT."
DID	DATA ITEM DESCRIPTIONS	41. DI-R-1734, FAILURE MODES, EFFECTS, AND CRITICALITY REPORT
		42. DI-R-2114, RELIABILITY ALLOCATION REPORT
		43. DI-R-2115A, FAILURE MODE AND EFFECT ANALYSIS REPORT
		44. DI-R-2129, MAINTAINABILITY DEMONSTRATION PLAN
		45. DI-R-2130A, MAINTAINABILITY DEMONSTRATION REPORT
		46. DI-S-3604, FUNCTIONAL FLOW DIAGRAM
		47. DI-R-7033, RELIABILITY TEST PLAN
		48. DI-R-7034, RELIABILITY TEST AND DEMONSTRATION REPORTS
		49. DI-R-7035, RELIABILITY TEST AND DEMONSTRATION PROCEDURES
		50. DI-R-7040, BURN-IN TEST REPORT
		51. DI-R-7041, FAILURE SUMMARY AND ANALYSIS REPORT
		52. DI-R-7079, RELIABILITY PROGRAM PLAN
		53. DI-R-7080, RELIABILITY STATUS REPORT
		54. DI-R-7081, RELIABILITY MATHEMATICAL MODEL(S)
		55. DI-R-7082, RELIABILITY PREDICTIONS REPORT
		56. DI-R-7083, SNEAK CIRCUIT ANALYSIS REPORT
		57. DI-R-7084, ELECTRONIC PARTS/CIRCUITS TOLERANCE ANALYSIS REPORT
		58. DI-R-7085, FAILURE MODE, EFFECTS, AND CRITICALITY ANALYSIS REPORT
		59. DI-R-7105, DATA COLLECTION, ANALYSIS AND CORRECTIVE ACTION SYSTEM REPORT
		60. DI-R-7106, MAINTAINABILITY MODELLING REPORT
		61. DI-R-7107, MAINTAINABILITY ALLOCATIONS REPORT
		62. DI-R-7108, MAINTAINABILITY PREDICTIONS REPORT
		63. DI-R-7109, MAINTAINABILITY ANALYSIS REPORT
		64. DI-R-7110, MAINTAINABILITY DESIGN CRITERIA PLAN
		65. DI-R-7111, INPUTS TO THE DETAILED MAINTENANCE PLAN AND LOGISTICS SUPPORT ANALYSIS

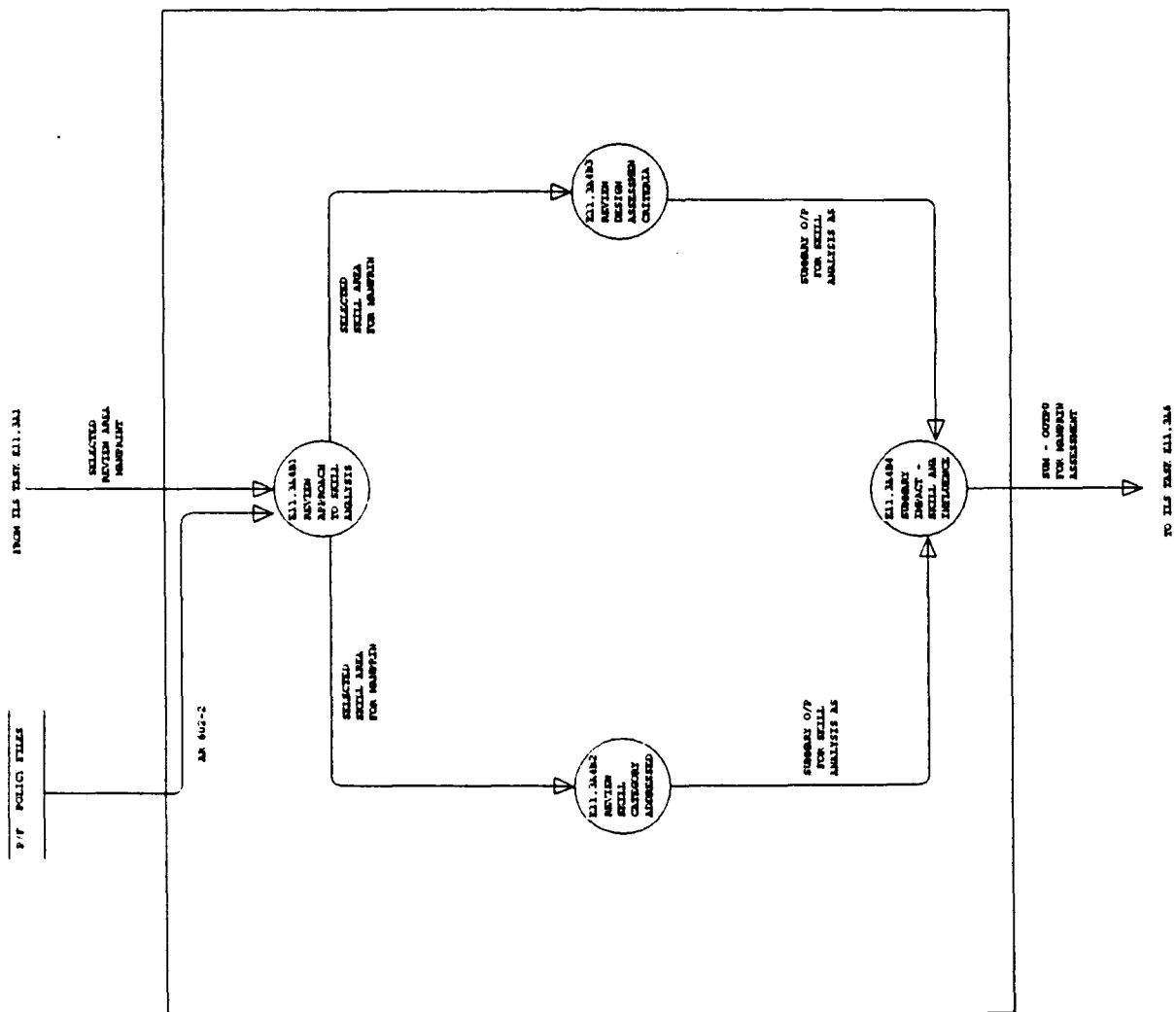
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Name	Label	Description
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		66. DI-R-7112, MAINTAINABILITY DEMONSTRATION TEST PLAN
		67. DI-R-7113, MAINTAINABILITY DEMONSTRATION REPORT
		68. DI-R-35011, CRITICAL ITEM CONTROL PLAN



E11.3A.04
Created by: MC
Revised by: JSM
Date changed: 11-23-05

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Name	Label	Description
E11.3A4B1	REVIEW APPROACH TO SKILL ANALYSIS	REVIEW OF THE APPROACH TO SKILL ANALYSIS SHOULD BE BASED ON THE TARGET AUDIENCE DESCRIPTION CONTAINED IN TAB G OF THE SYSTEM MANPRINT MANAGEMENT PLAN WHICH DESCRIBES QUALIFICATIONS OF PERSONNEL WHO WILL OPERATE, MAINTAIN AND SUPPORT THE SYSTEM, AND IS USED TO MAKE DESIGN DECISIONS TO MEET PERFORMANCE REQUIREMENTS.
E11.3A4B2	REVIEW SKILL CATEGORY ADDRESSED	SPECIFIC SKILLS REQUIRED FOR OPERATIONS AND SUPPORT OF THE ITEM/EQUIPMENT ASSESSED RELATIVE TO; 1. SKILL QUALIFICATION LEVEL 2. HIGH DEMAND (SHORTAGE) MOS 3. HIGHLY TRAINED MOS 4. HIGH IQ REQUIREMENTS 5. UNIQUE PHYSICAL REQUIREMENTS 6. SECURITY CLEARANCE REQUIREMENTS EACH OF THE SPECIAL SKILL AREAS WHICH WERE ASSESSED TO HAVE POTENTIAL MAJOR IMPACT ON THE DESIGN (SEE DFD PROCESS E11.3A4B3) ARE FURTHER ASSESSED RELATIVE TO: 1. CRITICAL TO ITEM OPERATIONS 2. CRITICAL TO ITEM MAINTENANCE/SUPPORT 3. POTENTIAL DESIGN CHANGE TO REDUCE IMPACT 4. HIGH TECHNOLOGY AREA OF CONSIDERATION
E11.3A4B3	REVIEW DESIGN ASSESSMENT CRITERIA	IN ASSESSING THE INFLUENCE OF SKILLS ON THE THE DESIGN, THE RELATIVE ASSESSMENT SHOULD REPORT ON: 1. PARAMETER ASSESSED - NO IMPACT 2. PARAMETER ASSESSED - MINOR IMPACTS 3. PARAMETER ASSESSED - MAJOR IMPACT 4. NOT ASSESSED FOR THOSE AREAS NOT ASSESSED: 1. NOT CONSIDERED APPLICABLE 2. OVERLOOKED - TO BE DONE BEFORE NEXT REVIEW 3. APPLICABLE - NOT FUNDED IN BASIC DEVELOPMENT/PRODUCTION CONTRACT 4. INADEQUATE DETAILS AVAILABLE AT THIS TIME
E11.3A4B4	SUMMARY IMPACT - SKILL ANAL INFLUENCE ON DESIGN	ASSESSMENT OF SKILL REQUIREMENTS IN SYSTEM DESIGN IS NECESSARY TO OBTAIN PREDICTED SYSTEM PERFORMANCE WITHOUT EXTENDED TRAINING TIME OR REQUIRING MORE OR BETTER QUALIFIED PERSONNEL TO OPERATE AND MAINTAIN THE SYSTEM/EQUIPMENT. HUMAN PERFORMANCE WHICH IS THE DEGREE TO WHICH AN INDIVIDUAL IS ABLE TO ACCOMPLISH A TASK OR SERIES OF TASKS TO MEET A SPECIFIED STANDARD AND HUMAN RELIABILITY WHICH IS THE PROBABILITY THAT A HUMAN WILL MAKE AN ERROR IN THE OPERATION, MAINTENANCE OR SUPPORT OF A SYSTEM MUST BE CONSIDERED AS DESIGN CONSIDERATIONS.

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Name	Label	Description
AR 602-2	AR 602-2	MANPRINT IN THE MATERIEL ACQUISITION PROCESS.
SEL/MAN/AREA	SELECTED REVIEW AREA- MANPRINT	SELECTED MANPRINT AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE HUMAN FACTORS ENGINEERING ANALYSIS, SYSTEM MANPRINT MANAGEMENT PLAN, PERSONNEL SKILL, MANPOWER, PHYSICAL CONSTRAINTS, AND REQUIRED TRAINING.
SEL/SKILL/AREA	SELECTED SKILL AREA FOR MANPRINT DESIGN INFLE ASSESSMENT	SELECTED SKILL ANALYSIS AREAS FOR MANPRINT DESIGN INFLUENCE ASSESSMENT INCLUDE SKILL CATEGORY AND DESIGN ASSESSMENT CRITERIA.
SUM/MAN/OUT	SUM - OUTPUT	THE SUMMARY OUPUT FOR MANPRINT ASSESSMENT ON DESEIGN INFLUENCE INCLUDES FOR MANPRINT SUMMARY IMPACTS OF EACH SELECTED MANPRINT AREA FOR WHICH A DESIGN ASSESSMENT INFLUENCE ASSESSMENT HAS BEEN CONDUCTED. AREAS INCLUDE HUMAN ON DESIGN FACTORS ENGINEERING ANALYSIS, SYSTEM MANPRINT MANAGEMENT PLAN, PERSONNEL INFLUENCE SKILLS, MANPOWER, PHYSICAL CONSTRAINTS, AND TRAINING.
SUM/SKILL/OUT	SUMMARY O/P	THE SUMMARY OUTPUT FOR SKILL ANALYSIS ASSESSMENT ON MANPRINT DESIGN FOR SKILL INFLUENCE INCLUDES SUMMARY IMPACTS OF EACH SELECTED SKILL ANALYSIS AREA ANALYSIS ASS FOR WHICH A MANPRINT DESIGN INFLUENCE ASSESSMENT HAS BEEN CONDUCTED. ON MANPRINT AREAS INCLUDE SKILL CATEGORIES AND DESIGN ASSESSMENT CRITERIA. DESIGN INFLU

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Name	Label	Description
P/F	POLICY FILES	CONTAINS THOSE MILITARY PUBLICATIONS, DECISION PAPERS, MISSIONS & FUNCTIONS, etc, WHICH ARE NEEDED TO ESTABLISH THE LOGISTICAL SUPPORT AND REVIEW REQUIREMENTS OF THE ITEM/EQUIPMENT DEVELOPMENT PROGRAM. THIS DATA STORE INCLUDES: 1. AR 12-16, "MUTUAL LOGISTICS SUPPORT BETWEEN THE U.S. AND OTHER NORTH ATLANTIC TREATY ORGANIZATION FORCES" 1a. AR 70-1, "SYSTEMS ACQUISITION POLICY AND PROCEDURES" 1b. AR 70-2, "RESEARCH, DEVELOPMENT, & ACQUISITION MATERIEL STATUS RECORDING" 1c. AR 70-10, "R&D - TEST & EVALUATION DURING DEVELOPMENT AND ACQUISITION OF MATERIEL" 1d. "AR 570-9, "MANPOWER AND EQUIPMENT CONTROL - HOST NATION SUPPORT" 2. AR 700-9, "POLICIES OF THE ARMY LOGISTIC SYSTEM" 3. AR 700-82, "JOINT REGULATION GOVERNING THE USE AND APPLICATION OF UNIFORM SOURCE MAINTENANCE AND RECOVERABILITY CODES" 4. AR 700-127, "INTEGRATED LOGISTICS SUPPORT" 5. AR 725-50, "REQUISITIONING, RECEIPT AND ISSUE SYSTEM" 6. AR 750-1, "MAINTENANCE OF SUPPLIES & EQUIPMENT - ARMY MATERIEL MAINTENANCE CONCEPTS & POLICIES" 7. AMC-R-700-27, "LEVEL OF REPAIR ANALYSIS (LORA) PROGRAM" 8. AMC-R-750-10, "DEPOT MAINTENANCE INTERSERVICE" 9. DA PAM 700-4 10. DA PAM 700-28, "INTEGRATED LOGISTIC SUPPORT PROGRAM ASSESSMENT ISSUES AND CRITERIA" 11. DA PAM 700-50, "INTEGRATED LOGISTIC SUPPORT - DEVELOPMENTAL SUPPORTABILITY TEST AND EVALUATION GUIDE" 12. DA PAM 700-55, "INSTRUCTIONS FOR PREPARING THE INTEGRATED LOGISTIC SUPPORT PLAN" 12a. DA PAM 738-750, "THE ARMY MAINTENANCE MANAGEMENT SYSTEMS (TAMMS)" 13. DA PAM 750-21, "LOGISTIC SUPPORT MODELLING" 14. AMC PAM 700-4, "LOGISTICS SUPPORT ANALYSIS TECHNIQUES GUIDE (WITH PALMAN)" 14a. AMC PAM 700-11, "LOGISTICS SUPPORT ANALYSIS REVIEW TEAM GUIDE" 15. AMC PAM 750-2, "MAINTENANCE OF SUPPLIES AND EQUIPMENT GUIDE TO RELIABILITY CENTERED MAINTENANCE" 16. MIL-STD-152, "TECH REVIEW GUIDELINES" 17. MIL-STD-210A, "CLIMATIC EXTREMES FOR MILITARY EQUIPMENT" 18. MIL-STD-470, -471, "MAINTAINABILITY STANDARDS" 19. MIL-STD-756, "RELIABILITY MODELLING & PREDICTIONS" 20. MIL-STD-780, "MAINTENANCE ENGINEERING ANALYSIS CONTROL NUMBER (MEACNS) FOR AERONAUTICAL EQUIPMENT, UNIFORM NUMBERING SYSTEM" 21. MIL-STD-781, "RELIABILITY DESIGN QUALIFICATION AND PRODUCTION ACCEPTANCE TESTS: EXPONENTIAL DISTRIBUTION" 22. MIL-STD-785B, "RELIABILITY PROGRAM FOR SYSTEMS AND EQUIPMENT DEVELOPMENT & PRODUCTION" 23. MIL-STD-810, "ENVIRONMENTAL TEST METHODS & ENGINEERING GUIDELINES" 24. MIL-STD-881, "WORK BREAKDOWN STRUCTURES FOR DEFENSE MATERIEL ITEMS" 25. MIL-STD-882, "SYSTEM SAFETY PROGRAM REQUIREMENTS" 26. MIL-STD-965, "PARTS CONTROL PROGRAM" 27. MIL-STD-1369A, "INTEGRATED LOGISTIC SUPPORT PROGRAM REQUIREMENTS"

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Name	Label	Description
		28. MIL-STD-1388-1A, "LOGISTICS SUPPORT ANALYSIS"
		29. MIL-STD-1388-2A, "LOGISTICS SUPPORT ANALYSIS RECORD"
		30. MIL-STD-1629, "PROCEDURES FOR PERFORMING A FAILURE MODE, EFFECTS & CRITICALITY ANALYSIS"
		31. MIL-HDBK-472, "MAINTAINABILITY PREDICTION"
		32. MIL-M-24100B, "FUNCTIONALLY ORIENTED MAINTENANCE MANUALS (FORM) FOR EQUIPMENT & SYSTEMS"
P/F(2)	POLICY FILES(2) SUPPLEMENT	33. AR 70-38, "RESEARCH, DEVELOPMENT, TEST & EVALUATION OF MATERIEL FOR EXTREME CLIMATIC CONDITIONS"
		34. AR 602-1, "PERSONNEL-MATERIEL SYSTEMS - HUMAN FACTORS ENGINEERING PROGRAM"
		35. AR 602-2, "MANPOWER AND PERSONNEL INTEGRATION (MANPRINT) IN MATERIEL ACQUISITION PROCESS"
		36. AR 700-47, "LOGISTICS - DEFENSE STANDARDIZATION AND SPECIFICATION PROGRAM"
		37. AR 700-60, "LOGISTICS - DEPARTMENT OF DEFENSE PARTS CONTROL PROGRAM"
		38. AR 700-129, "MANAGEMENT AND EXECUTION OF INTEGRATED LOGISTIC SUPPORT (ILS) PROGRAMS FOR MULTISERVICE ACQUISITIONS"
		39. DA FAM 700-55, "INSTRUCTIONS FOR PREPARING THE INTEGRATED LOGISTIC SUPPORT PLAN."
		40. MIL-STD 210G "CLIMATIC INFORMATION TO DETERMINE DESIGN AND TEST REQUIREMENTS FOR MILITARY SYSTEMS AND EQUIPMENT."
DIDS	DATA ITEM DESCRIPTIONS	41. DI-R-1734, FAILURE MODES, EFFECTS, AND CRITICALITY REPORT
		42. DI-R-2114, RELIABILITY ALLOCATION REPORT
		43. DI-R-2115A, FAILURE MODE AND EFFECT ANALYSIS REPORT
		44. DI-R-2129, MAINTAINABILITY DEMONSTRATION PLAN
		45. DI-R-2130A, MAINTAINABILITY DEMONSTRATION REPORT
		46. DI-S-3604, FUNTIONAL FLOW DIAGRAM
		47. DI-R-7033, RELIABILITY TEST PLAN
		48. DI-R-7034, RELIABILITY TEST AND DEMONSTRATION REPORTS
		49. DI-R-7035, RELIABILITY TEST AND DEMONSTRATION PROCEDURES
		50. DI-R-7040, BURN-IN TEST REPORT
		51. DI-R-7041, FAILURE SUMMARY AND ANALYSIS REPORT
		52. DI-R-7079, RELIABILITY PROGRAM PLAN
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		56. DI-R-7083, SNEAK CIRCUIT ANALYSIS REPORT
		57. DI-R-7084, ELECTRONIC PARTS/CIRCUITS TOLERANCE ANALYSIS REPORT
		58. DI-R-7085, FAILURE MODE, EFFECTS, AND CRITICALITY ANALYSIS REPORT
		59. DI-R-7105, DATA COLLECTION, ANALYSIS AND CORRECTIVE ACTION SYSTEM REPORT
		60. DI-R-7106, MAINTAINABILITY MODELLING REPORT
		61. DI-R-7107, MAINTAINABILITY ALLOCATIONS REPORT
		62. DI-R-7108, MAINTAINABILITY PREDICTIONS REPORT
		63. DI-R-7109, MAINTAINABILITY ANALYSIS REPORT
		64. DI-R-7110, MAINTAINABILITY DESIGN CRITERIA PLAN
		65. DI-R-7111, INPUTS TO THE DETAILED MAINTENANCE PLAN AND LOGISTICS SUPPORT ANALYSIS

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Name	Label	Description
		66. DI-R-7112, MAINTAINABILITY DEMONSTRATION TEST PLAN
		67. DI-R-7113, MAINTAINABILITY DEMONSTRATION REPORT
		68. DI-R-35011, CRITICAL ITEM CONTROL PLAN

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Name	Label	Description
E11.3A6B1	REVIEW	THE APPROACH TO PHYSICAL CONSTRAINT IS TO ASSURE THAT THE MATERIEL APPROACH - SYSTEM IS DESIGNED SO THAT THE PERSONNEL TASKS INVOLVED IN OPERATION, PHYSICAL MAINTENANCE, SUPPLY, AND TRANSPORTATION DO NOT EXCEED AVAILABLE OR CONSTRAINT ACHIEVABLE SOLDIER CAPABILITIES.
E11.3A6B2	REVIEW	PHYSICAL CONSTRAINT CATEGORIES INCLUDE: 1. HUMAN CHARACTERISTICS 2. ANTHROPOMETRIC DATA 3. BIOMEDICAL DATA 4. SAFETY FACTORS
E11.3A6B3	REVIEW	DESIGN ASSESSMENT CRITERIA INCLUDES: 1. WORKSPACE LAYOUT 2. WORK ENVIRONMENT 3. EFFECTIVE TRANSFER OF OPERATOR-MAINTAINER SKILLS FOR SIMILAR TASKS
E11.3A6B4	SUMMARY	RESULTS OF THE DESIGN EVALUATION FOR PHYSICAL CONSTRAINTS WILL ASSURE IMPACT OF THAT ADEQUATE SPACE IS PROVIDED FOR PERSONNEL AND THE MOVEMENTS AND PHYSICAL ACTIVITIES THEY ARE REQUIRED TO PERFORM DURING OPERATION AND CONSTRAINT MAINTENANCE TASKS WITH DESIGN FEATURES TO ASSURE RAPIDITY, SAFETY, EASE DESIGN INF AND ECONOMY OF OPERATION AND MAINTENANCE.

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Name	Label	Description
SEL/MAN/AREA	SELECTED REVIEW AREA- MANPRINT	SELECTED MANPRINT AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE HUMAN FACTORS ENGINEERING ANALYSIS, SYSTEM MANPRINT MANAGEMENT PLAN, PERSONNEL SKILL, MANPOWER, PHYSICAL CONSTRAINTS, AND REQUIRED TRAINING.
SEL/PHY/AREA	SELECTED PHYSICAL CONSTRAINT - MANPRINT DESIGN INFLU	THE SELECTED PHYSICAL CONSTRAINT AREAS FOR MANPRINT DESIGN INFLUENCE ASSESSMENT. THESE PHYSICAL CONSTRAINT AREAS INCLUDE PHYSICAL CONSTRAINT CATEGORIES AND DESIGN ASSESSMENT CRITERIA.
SUM/MAN/OUT	SUM - OUTPUT	THE SUMMARY OUTPUT FOR MANPRINT ASSESSMENT ON DESIGN INFLUENCE INCLUDES FOR MANPRINT SUMMARY IMPACTS OF EACH SELECTED MANPRINT AREA FOR WHICH A DESIGN ASSESSMENT INFLUENCE ASSESSMENT HAS BEEN CONDUCTED. AREAS INCLUDE HUMAN ON DESIGN FACTORS ENGINEERING ANALYSIS, SYSTEM MANPRINT MANAGEMENT PLAN, PERSONNEL INFLUENCE SKILLS, MANPOWER, PHYSICAL CONSTRAINTS, AND TRAINING.
SUM/PHY/AREA	SUMMARY O/P	THE SUMMARY OUTPUT FOR PHYSICAL CONSTRAINT ASSESSMENT ON MANPRINT FOR PHYSICAL DESIGN INFLUENCE INCLUDES SUMMARY IMPACTS OF EACH PHYSICAL CONSTRAINT CONSTRAINT AREAS FOR WHICH A MANPRINT DESIGN INFLUENCE ASSESSMENT HAS BEEN ASSESSMENT - CONDUCTED. AREAS INCLUDE PHYSICAL CONSTRAINT CATEGORIES AND DESIGN DESIGN INFLU ASSESSMENT CRITERIA.

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Name	Label	Description
E11.4A1	IDENTIFY	POTENTIAL SAFETY INFLUENCES ARE APPLICABLE TO ANY MATERIEL, FACILITY, POTENTIAL COMPONENT, ITEM OF EQUIPMENT, ASSOCIATED SUBSYSTEM, SOFTWARE, SAFETY PROCEDURE, OR PROCESS USED IN PRODUCTION, INSTALLATION, TESTING, INFLUENCES OPERATION, MAINTENANCE, TRANSPORTATION, HANDLING, STORAGE, TRAINING, AND DISPOSAL.
E11.4A2	ASSESS HAZARD ANALYSIS	TAKES INTO ACCOUNT ALL AREAS WHICH MAY BE CONSIDERED AS A HAZARD UNDER THE PROPER LOCAL AND ENVIRONMENTAL CONDITIONS. THESE SHOULD INCLUDE, FOR EXAMPLE: 1. SHOCK 2. VIBRATION 3. NOISE 4. TOXIC GASES AND CHEMICALS 5. RADIATION 6. LASERS 7. HEAT AND COLD THE SYSTEM SAFETY PROGRAM PLAN (SSPP), DEVELOPED IN ACCORDANCE WITH TASK 101 OF MIL-STD-882B, DESCRIBES THE ANALYSIS TECHNIQUES AND FORMATS TO BE USED IN QUALITATIVE OR QUANTITATIVE ANALYSIS TO IDENTIFY HAZARDS, THEIR CAUSES AND EFFECTS, HAZARD ELIMINATION OR RISK REDUCTION REQUIREMENTS, AND HOW THOSE REQUIREMENTS ARE MET.
E11.4A3	EVALUATE	THE SYSTEM SAFETY PROGRAM PLAN IS DEVELOPED AND DELIVERED BY IMPOSITION ADEQUACY - OF TASK 101 OF MIL-STD-882B AND DI-H-7047A TO DESCRIBE TASKS TO SYS SAFETY IDENTIFY, EVALUATE, AND ELIMINATE HAZARDS OR REDUCE ASSOCIATED RISKS TO PROGRAM AN ACCEPTABLE LEVEL. IT SHOULD ALSO DESCRIBE REQUIRED ELEMENTS FOR AN PLAN(SSPP) EFFECTIVE SYSTEM SAFETY PROGRAM, INCLUDING DESIGN CRITERIA AND SAFETY REQUIREMENTS FOR OPERATION AND SUPPORT EQUIPMENT.
E11.4A4	SAFETY COMPLIANCE ASSESSMENT	THE SAFETY COMPLIANCE ASSESSMENT IS PERFORMED AND DOCUMENTED BY IMPOSITION OF TASK 210 OF MIL-STD-882B AND DI-H-7049A TO VERIFY COMPLIANCE WITH DESIGN AND OPERATIONAL SAFETY REQUIREMENTS. IT IS AN OPERATIONALLY-ORIENTED ANALYSIS CONCERNED WITH THE SAFE USE OF A SYSTEM, OR TO ASCERTAIN THE RISKS AND PRECAUTIONS NECESSARY FOR ITS SAFE USE. IT SHOULD IDENTIFY NECESSARY SPECIALIZED SAFETY DESIGN FEATURES, DEVICES, PROCEDURES, SKILLS, TRAINING, FACILITIES, SUPPORT REQUIREMENTS, AND PERSONNEL PROTECTIVE EQUIPMENT.
E11.4A6	SUMMARY IMPACT - SAFETY INFLUENCE ON DESIGN	SAFETY INFLUENCE IS TO INSURE THAT SAFETY AND HEALTH FEATURES ARE DESIGNED INTO THE SYSTEM IN A TIMELY AND COST-EFFECTIVE MANNER BY USING SYSTEM SAFETY ENGINEERING AND MANAGEMENT PRINCIPLES TO IDENTIFY HAZARDS AND REDUCE RISKS THROUGHOUT A SYSTEM'S LIFE CYCLE. NOTE THAT BY REGULATION, NO COMPROMISES OF SYSTEM SAFETY CRITERIA WILL BE MADE WITHOUT FORMAL DOCUMENTATION OF THE ACCEPTED RISKS. IN ADDITION, DOCUMENTATION ON THE SAFETY AND HEALTH ACCEPTABILITY OF THE SYSTEM WILL BE AVAILABLE AND REVIEWED AT THE TYPE CLASSIFICATION DECISION REVIEW.

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Name	Label	Description
E11.4A5	REVIEW ENVIRONMEN IMPACT STATEMENT	REVIEW OF THE SYSTEM ENVIRONMENTAL DOCUMENTS SHOULD INCLUDE THE ENVIRONMENTAL ASSESSMENT (EA), IF PREPARED AS REQUIRED BY AR 200-2, AND LISTS THE ENVIRONMENTAL IMPACT OF THE NEW SYSTEM AND ANY ALTERNATIVES, AS WELL AS THE RESULTING ENVIRONMENTAL IMPACT STATEMENT (EIS). THE EA AND/OR EIS CAN BE A BROAD PROGRAMMATIC ENVIRONMENTAL ANALYSIS OF THE SYSTEM, AS WELL AS SUBSEQUENT TIERED EA's AND EIS's THAT EVALUATE SPECIFIC SUBPHASES, SUCH AS TESTING, PRODUCTION, USE AND ULTIMATE DISPOSAL. AN EIS ENSURES THAT ENVIRONMENTAL POLICIES AND GOALS ARE INCORPORATED INTO SYSTEM DESIGNS TO AVOID OR MINIMIZE ADVERSE IMPACTS ON THE QUALITY OF THE HUMAN ENVIRONMENT.

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Name	Label	Description
AR 200-2	AR 200-2 ENVIRONMENT EFFECTS OF ARMY ACTIONS	ARMY REGULATION CONCERNING ENVIRONMENTAL QUALITY, THE ENVIRONMENTAL EFFECTS OF ARMY ACTIONS.
AR 385-16	SYSTEMS SAFETY ENGINEERING & MANAGEMENT	SYSTEMS SAFETY ENGINEERING AND MANAGEMENT
DI 1322	DI-H-1322 SAFETY STATEMENT REQMNTS	SAFETY STATEMENTS REQUIREMENTS
DI 1333	DI-H-1333A SAFETY ANAL- AVIATION SYSTEMS	SAFETY ANALYSIS REQUIREMENTS FOR AVIATION SYSTEMS
DI-H-7047A	DI-H-7047A SSPP	ESTABLISHES ARMY REQUIREMENTS FOR A SYSTEM SAFETY PROGRAM PLAN
DI-H-7049A	DI-H-7049A SAFETY ASSESSMENT REPORT	ARMY REQUIREMENTS ON SAFETY ASSESSMENT REPORTING.
FAULT/TREE STDS	STANDARDS ON FAULT TREE ANALYSIS	ANY STANDARDS, PROCUDURES, REGULATIONS, PHAMS, OR INSTRUCTIONS ON THE PRINCIPLES AND PROCEDURES FOR THE DEVELOPMENT AND PREPARATION OF FAULT TREES FOR COMPARABLE EQUIPMENT/SYSTEMS.
MIL-STD-882	MIL-STD-882 SYSTEM SAFETY PROGRAM REQUIREMENTS	MIL-STD-882, "SYSTEM SAFETY PROGRAM REQUIREMENTS", USED AS THE BASIS FOR DEVELOPMENT OF HAZARD ANALYSES.
OUTPUT/SAFETY	OUTPUT - SAFETY ASSESSMENT ON DESIGN INFLUENCE	THE RESULTS OF THE ASSESSMENT OF THE INFLUENCE OF SAFETY ON THE DESIGN WILL BE A BASIC INPUT TO THE SUMMARY REPORT TO BE PREPARED IN ILS SUBTASK E11.10.
SEL/SAFETY/AREA	SELECTED REVIEW AREA- SAFETY	SELECTED SAFETY AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE HAZARD ANALYSIS, SYSTEM SAFETY PROGRAM PLAN, SAFETY COMPLIANCE ASSESSMENT, AND ENVIRONMENT IMPACT. IN THIS SUBTASK, THE ASSESSMENT WILL CONCERN THE HAZARD ANALYSIS

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Name	Label	Description
SEL/SAFETY/COMPL/ARE	SELECTED	THE ASSESSMENT RESULTS FOR SAFETY ASSESSMENT ON DESIGN INFLUENCE
SAFETY AREA-		INCLUDE SUMMARY IMPACTS OF EACH SAFETY AREA FOR WHICH A DESIGN INFLUENCE
COMPLIANCE		ASSESSMENT HAS BEEN CONDUCTED. AREAS INCLUDE HAZARD ANALYSIS, SYSTEM
WITH SAFETY		SAFETY PROGRAM PLAN, SAFETY COMPLIANCE ASSESSMENT, AND ENVIRONMENTAL
REQUIREMENTS		IMPACT. THIS ASSESSMENT ADDRESSES THE COMPLIANCE WITH SAFETY
		REQUIREMENTS.
SEL/SAFETY/ENVIR/ARE	SELECTED	THE ASSESSMENT RESULTS FOR SAFETY ASSESSMENT ON DESIGN INFLUENCE
SAFETY AREA-		INCLUDE SUMMARY IMPACTS OF EACH SAFETY AREA FOR WHICH A DESIGN INFLUENCE
ENVIRONMENT		ASSESSMENT HAS BEEN CONDUCTED. AREAS INCLUDE HAZARD ANALYSIS, SYSTEM
		SAFETY PROGRAM PLAN, SAFETY COMPLIANCE ASSESSMENT, AND ENVIRONMENTAL
		IMPACT. THIS ASSESSMENT ADDRESSES THE IMPACT OF ENVIRONMENT ON SAFETY.
SEL/SAFETY/HAZARD/AR	SELECTED	THE ASSESSMENT RESULTS FOR SAFETY ASSESSMENT ON DESIGN INFLUENCE
SAFETY AREA		INCLUDES SUMMARY IMPACTS OF EACH SAFETY AREA FOR WHICH A DESIGN
HAZARD		INFLUENCE ASSESSMENT HAS BEEN CONDUCTED. AREAS INCLUDE HAZARD
		ANALYSIS, SYSTEM SAFETY PROGRAM PLAN, SAFETY COMPLIANCE ASSESSMENT, AND
		ENVIRONMENTAL IMPACT. IN THIS ASSESSMENT REVIEW, THE AREA OF HAZARDS IS
		ADDRESSED.
SEL/SAFETY/PLAN/AREA	SELECTED	THE ASSESSMENT RESULTS FOR SAFETY ASSESSMENT ON DESIGN INFLUENCE
SAFETY AREA		INCLUDE SUMMARY IMPACTS OF EACH SAFETY AREA FOR WHICH A DESIGN
ADEQUACY OF		INFLUENCE ASSESSMENT HAS BEEN CONDUCTED. AREAS INCLUDE HAZARD
SAFETY PLAN		ANALYSIS, SYSTEM SAFETY PROGRAM PLAN, SAFETY COMPLIANCE ASSESSMENT, AND
		ENVIRONMENTAL IMPACT. THIS ASSESSMENT WILL ADDRESS THE ADEQUACY OF THE
		SAFETY PLAN.
SUM/HAZARD/AREA	SUMMARY O/P	THE SUMMARY OUTPUT FOR HAZARD ANALYSIS ASSESSMENT ON SAFETY DESIGN
FOR HAZARD		INFLUENCE INCLUDES SUMMARY IMPACTS OF EACH SELECTED HAZARD ANALYSIS
ANALYSIS ON		AREA FOR WHICH A SAFETY DESIGN INFLUENCE ASSESSMENT HAS BEEN CONDUCTED.
SAFETY DESIG		AREAS INCLUDE HAZARD TRACKING, PRELIMINARY HAZARD ANALYSIS, FAILURE MODE
INFLUENCE		AND HAZARDOUS EFFECTS ANALYSIS, SNEAK CIRCUIT ANALYSIS, OCCUPATIONAL
		HEALTH, OPERATING AND SUPPORT HAZARD ANALYSIS, AND FAULT TREE ANALYSIS.
SUM/SAFETY/AREA	SUMMARY O/P	THE ASSESSMENT RESULTS FOR SAFETY ASSESSMENT ON DESIGN INFLUENCE INCLUDE
OF SAFETY		SUMMARY IMPACTS OF EACH SAFETY AREA FOR WHICH A DESIGN INFLUENCE
ASSESSMENT		ASSESSMENT HAS BEEN CONDUCTED. AREAS INCLUDE HAZARD ANALYSIS, SYSTEM
ON DESIGN		SAFETY PROGRAM PLAN, SAFETY COMPLIANCE ASSESSMENT, AND ENVIRONMENTAL
INFLUENCE		IMPACT.

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Name	Label	Description
P/F	POLICY FILES	CONTAINS THOSE MILITARY PUBLICATIONS, DECISION PAPERS, MISSIONS & FUNCTIONS, etc, WHICH ARE NEEDED TO ESTABLISH THE LOGISTICAL SUPPORT AND REVIEW REQUIREMENTS OF THE ITEM/EQUIPMENT DEVELOPMENT PROGRAM. THIS DATA STORE INCLUDES: 1. AR 12-16, "MUTUAL LOGISTICS SUPPORT BETWEEN THE U.S. AND OTHER NORTH ATLANTIC TREATY ORGANIZATION FORCES" 1a. AR 70-1, "SYSTEMS ACQUISITION POLICY AND PROCEDURES" 1b. AR 70-2, "RESEARCH, DEVELOPMENT, & ACQUISITION MATERIEL STATUS RECORDING" 1c. AR 70-10, "R&D - TEST & EVALUATION DURING DEVELOPMENT AND ACQUISITION OF MATERIEL" 1d. "AR 570-9, "MANPOWER AND EQUIPMENT CONTROL - HOST NATION SUPPORT" 2. AR 700-9, "POLICIES OF THE ARMY LOGISTIC SYSTEM" 3. AR 700-82, "JOINT REGULATION GOVERNING THE USE AND APPLICATION OF UNIFORM SOURCE MAINTENANCE AND RECOVERABILITY CODES" 4. AR 700-127, "INTEGRATED LOGISTICS SUPPORT" 5. AR 725-50, "REQUISITIONING, RECEIPT AND ISSUE SYSTEM" 6. AR 750-1, "MAINTENANCE OF SUPPLIES & EQUIPMENT - ARMY MATERIEL MAINTENANCE CONCEPTS & POLICIES" 7. AMC-R-700-27, "LEVEL OF REPAIR ANALYSIS (LORA) PROGRAM" 8. AMC-R-750-10, "DEPOT MAINTENANCE INTERSERVICE" 9. DA PAM 700-4 10. DA PAM 700-28, "INTEGRATED LOGISTIC SUPPORT PROGRAM ASSESSMENT ISSUES AND CRITERIA" 11. DA PAM 700-50, "INTEGRATED LOGISTIC SUPPORT - DEVELOPMENTAL SUPPORTABILITY TEST AND EVALUATION GUIDE" 12. DA PAM 700-55, "INSTRUCTIONS FOR PREPARING THE INTEGRATED LOGISTIC SUPPORT PLAN" 12a. DA PAM 738-750, "THE ARMY MAINTENANCE MANAGEMENT SYSTEMS (TAMMS)" 13. DA PAM 750-21, "LOGISTIC SUPPORT MODELLING" 14. AMC PAM 700-4, "LOGISTICS SUPPORT ANALYSIS TECHNIQUES GUIDE (WITH PALMAN)" 14a. AMC PAM 700-11, "LOGISTICS SUPPORT ANALYSIS REVIEW TEAM GUIDE" 15. AMC PAM 750-2, "MAINTENANCE OF SUPPLIES AND EQUIPMENT GUIDE TO RELIABILITY CENTERED MAINTENANCE" 16. MIL-STD-152, "TECH REVIEW GUIDELINES" 17. MIL-STD-210A, "CLIMATIC EXTREMES FOR MILITARY EQUIPMENT" 18. MIL-STD-470, -471, "MAINTAINABILITY STANDARDS" 19. MIL-STD-756, "RELIABILITY MODELLING & PREDICTIONS" 20. MIL-STD-780, "MAINTENANCE ENGINEERING ANALYSIS CONTROL NUMBER (MEACNS) FOR AERONAUTICAL EQUIPMENT, UNIFORM NUMBERING SYSTEM" 21. MIL-STD-781, "RELIABILITY DESIGN QUALIFICATION AND PRODUCTION ACCEPTANCE TESTS: EXPONENTIAL DISTRIBUTION" 22. MIL-STD-785B, "RELIABILITY PROGRAM FOR SYSTEMS AND EQUIPMENT DEVELOPMENT & PRODUCTION" 23. MIL-STD-810, "ENVIRONMENTAL TEST METHODS & ENGINEERING GUIDELINES" 24. MIL-STD-881, "WORK BREAKDOWN STRUCTURES FOR DEFENSE MATERIEL ITEMS" 25. MIL-STD-882, "SYSTEM SAFETY PROGRAM REQUIREMENTS" 26. MIL-STD-965, "PARTS CONTROL PROGRAM" 27. MIL-STD-1369A, "INTEGRATED LOGISTIC SUPPORT PROGRAM REQUIREMENTS"

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Name	Label	Description
		28. MIL-STD-1388-1A, "LOGISTICS SUPPORT ANALYSIS"
		29. MIL-STD-1388-2A, "LOGISTICS SUPPORT ANALYSIS RECORD"
		30. MIL-STD-1629, "PROCEDURES FOR PERFORMING A FAILURE MODE, EFFECTS & CRITICALITY ANALYSIS"
		31. MIL-HDBK-472, "MAINTAINABILITY PREDICTION"
		32. MIL-M-24100B, "FUNCTIONALLY ORIENTED MAINTENANCE MANUALS (FOMM) FOR EQUIPMENT & SYSTEMS"
P/F(2)	POLICY FILES(2) SUPPLEMENT	33. AR 70-38, "RESEARCH, DEVELOPMENT, TEST & EVALUATION OF MATERIEL FOR EXTREME CLIMATIC CONDITIONS"
		34. AR 602-1, "PERSONNEL-MATERIEL SYSTEMS - HUMAN FACTORS ENGINEERING PROGRAM"
		35. AR 602-2, "MANPOWER AND PERSONNEL INTEGRATION (MANPRINT) IN MATERIEL ACQUISITION PROCESS"
		36. AR 700-47, "LOGISTICS - DEFENSE STANDARDIZATION AND SPECIFICATION PROGRAM"
		37. AR 700-60, "LOGISTICS - DEPARTMENT OF DEFENSE PARTS CONTROL PROGRAM"
		38. AR 700-129, "MANAGEMENT AND EXECUTION OF INTEGRATED LOGISTIC SUPPORT (ILS) PROGRAMS FOR MULTISERVICE ACQUISITIONS"
		39. DA PAM 700-55, "INSTRUCTIONS FOR PREPARING THE INTEGRATED LOGISTIC SUPPORT PLAN."
		40. MIL-STD 210G "CLIMATIC INFORMATION TO DETERMINE DESIGN AND TEST REQUIREMENTS FOR MILITARY SYSTEMS AND EQUIPMENT."
DID:	DATA ITEM DESCRIPTIONS	41. DI-R-1734, FAILURE MODES, EFFECTS, AND CRITICALITY REPORT
		42. DI-R-2114, RELIABILITY ALLOCATION REPORT
		43. DI-R-2115A, FAILURE MODE AND EFFECT ANALYSIS REPORT
		44. DI-R-2129, MAINTAINABILITY DEMONSTRATION PLAN
		45. DI-R-2130A, MAINTAINABILITY DEMONSTRATION REPORT
		46. DI-S-3604, FUNCTIONAL FLOW DIAGRAM
		47. DI-R-7033, RELIABILITY TEST PLAN
		48. DI-R-7034, RELIABILITY TEST AND DEMONSTRATION REPORTS
		49. DI-R-7035, RELIABILITY TEST AND DEMONSTRATION PROCEDURES
		50. DI-R-7040, BURN-IN TEST REPORT
		51. DI-R-7041, FAILURE SUMMARY AND ANALYSIS REPORT
		52. DI-R-7079, RELIABILITY PROGRAM PLAN
		53. DI-R-7080, RELIABILITY STATUS REPORT
		54. DI-R-7081, RELIABILITY MATHEMATICAL MODEL(S)
		55. DI-R-7082, RELIABILITY PREDICTIONS REPORT
		56. DI-R-7083, SNEAK CIRCUIT ANALYSIS REPORT
		57. DI-R-7084, ELECTRONIC PARTS/CIRCUITS TOLERANCE ANALYSIS REPORT
		58. DI-R-7085, FAILURE MODE, EFFECTS, AND CRITICALITY ANALYSIS REPORT
		59. DI-R-7105, DATA COLLECTION, ANALYSIS AND CORRECTIVE ACTION SYSTEM REPORT
		60. DI-R-7106, MAINTAINABILITY MODELLING REPORT
		61. DI-R-7107, MAINTAINABILITY ALLOCATIONS REPORT
		62. DI-R-7108, MAINTAINABILITY PREDICTIONS REPORT
		63. DI-R-7109, MAINTAINABILITY ANALYSIS REPORT
		64. DI-R-7110, MAINTAINABILITY DESIGN CRITERIA PLAN
		65. DI-R-7111, INPUTS TO THE DETAILED MAINTENANCE PLAN AND LOGISTICS SUPPORT ANALYSIS

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Name	Label	Description
		66. DI-R-7112, MAINTAINABILITY DEMONSTRATION TEST PLAN
		67. DI-R-7113, MAINTAINABILITY DEMONSTRATION REPORT
		68. DI-R-35011, CRITICAL ITEM CONTROL PLAN

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Name	Label	Description
E11.4A2B1	REVIEW	THE HAZARD ANALYSIS PROCESS INCLUDES IDENTIFICATION OF HAZARDS BY CONTRACTOR ANALYSES, STUDIES AND TESTING; EVALUATION OF EACH HAZARD AS TO APPROACH PROBABILITY, SEVERITY, AND COST; AND SELECTION OF BEST COUNTERMEASURES TO HAZARD SUCH AS DESIGN FOR MINIMUM ACCEPTABLE RISK, INCORPORATION OF SAFETY ANALYSIS DEVICES AND/OR WARNING DEVICES AND DEVELOPMENT OF REQUIRED PROCEDURES AND TRAINING.
E11.4A2B2	ASSESS HAZARD TRACKING SYSTEM	THE HAZARD TRACKING SYSTEM IS A CENTRALIZED FILE ESTABLISHED BY TASK 105 OF MIL-STD-882B TO DOCUMENT AND TRACK HAZARDS FROM IDENTIFICATION UNTIL THE HAZARD IS ELIMINATED OR THE ASSOCIATED RISK IS REDUCED TO AN ACCEPTABLE RISK. THIS HAZARD LOG SHOULD INCLUDE THE DESCRIPTION, STATUS, AND TRACEABILITY OF RESOLUTION ACTION FOR EACH IDENTIFIED HAZARD.
E11.4A2B3	ASSESS PRELIMINAY HAZARD ANALYSIS	ASSESS THE ADEQUACY OF THE CONTRACTORS PRELIMINARY HAZARD ANALYSIS RELATIVE TO ADDRESSING: 1. SAFETY CRITICAL AREAS 2. INHERENT HAZARDS 3. CONTROLLING DESIGN CRITERIA
E11.4A2B4	ASSESS FAILURE MODE AND HAZARD EFF ANALYSIS	ASSESS THE CONTRACTORS FAILURE MODE AND HAZARDOUS EFFECTS ANALYSIS TO INCLUDE ALL CONCEIVEABLE MODES OF FAILURE WHERE SYSTEM AND/OR PERSONNEL SAFETY ARE CONCERNED.
E11.4A2B5	ASSESS SNEAK CIRCUIT ANALYSIS	ASSESS AND EVALUATE THE ANALYSIS MADE OF HARDWARE AND SOFTWARE TO POINT OUT LATENT (SNEAK) CIRCUITS AND CONDITIONS THAT PREVENT DESIRED FUNCTIONS, CAUSE UNDESIED FUNCTIONS, OR OCCUR WITHOUT A COMPONENT HAVING FAILED.
E11.4A2B8	OCCUPATNL HEALTH HAZARD ASSESSMENT	THE OCCUPATIONAL HEALTH HAZARD ASSESSMENT IS PERFORMED AND DOCUMENTED BY IMPOSITION OF TASK 206 OF MIL-STD-882B TO IDENTIFY HEALTH HAZARDS AND RECOMMEND ENGINEERING CONTROLS, EQUIPMENT, AND/OR PROTECTIVE ASSESSMENT PROCEDURES TO REDUCE THE ASSOCIATED RISK TO AN ACCEPTABLE LEVEL. SYSTEM AND PERSONNEL PROTECTIVE DESIGN REQUIREMENTS INCLUDE VENTILATION, NOISE ATTENUATION, AND RADIATION BARRIERS TO ALLOW SAFE OPERATION AND MAINTENANCE.
E11.4A2B9	SUMMARY HAZARD ANALYSIS ASSESSMENT	THE ASSESSMENT OF THE HAZARD ANALYSIS WILL ENHANCE OPERATIONAL EFFECTIVENESS BY SATISFYING SYSTEM SAFETY REQUIREMENTS BY IDENTIFYING THE HAZARDS OF A SYSTEM AND TO IMPOSE DESIGN REQUIREMENTS AND MANAGEMENT CONTROLS TO PREVENT MISHAPS BY ELIMINATING HAZARDS OR REDUCING THE ASSOCIATED RISK TO AN ACCEPTABLE LEVEL.
E11.4A2B6	ASSESS FAULT TREE ANALYSIS	ASSESS AND EVALUATE THE CONTRACTORS FAULT TREE ANALYSIS TO INSURE THAT THE ANALYSIS ADDRESS ALL POTENTIAL ENVIRONMENTS, OPERATIONAL AND SUPPORT CONDITIONS, AND ALL COMPONENTS THAT MAY CONTRIBUTE TO THE POTENTIAL PREMATURE FAILURE OF THE ITEM/EQUIPMENT. THE RESULTS SHOULD BE IN TERMS OF THE PROBABILITY OF AN UNDESIED EVENT OCCURANCE.

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Name	Label	Description
E11.4A2B7	ASSESS OPERATING & SUPPORT HAZARD ANALYSIS	THE OPERATING AND SUPPORT HAZARD ANALYSIS IS PERFORMED AND DOCUMENTED BY IMPOSITION OF TASK 205, MIL-STD-882B TO IDENTIFY AND EVALUATE HAZARDS RESULTING FROM REQUIRED OPERATIONS OR TASKS PERFORMED BY PERSONNEL, INCLUDING THE POTENTIAL FOR HAZARDS INTRODUCED BY HUMAN ERROR. NEEDED SAFETY REQUIREMENTS MUST BE IDENTIFIED, INCLUDING CHANGES IN FUNCTIONAL OR DESIGN REQUIREMENTS TO ELIMINATE IDENTIFIED HAZARDS OR REDUCE ASSOCIATED RISKS.

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Name	Label	Description
D1 1326	DI-H-1326A SAFETY ANAL. & HAZARD EVAL REPORT	
DI 1333	DI-H-1333A SAFETY ANAL- AVIATION SYSTEMS	SAFETY ANALYSIS REQUIREMENTS FOR AVIATION SYSTEMS
FAULT/TREE STDS	STANDARDS ON FAULT TREE ANALYSIS	ANY STANDARDS, PROCUDURES, REGULATIONS, PHAMS, OR INSTRUCTIONS ON THE PRINCIPLES AND PROCEDURES FOR THE DEVELOPMENT AND PREPARATION OF FAULT TREES FOR COMPARABLE EQUIPMENT/SYSTEMS.
MIL-STD-882	MIL-STD-882 SYSTEM SAFETY PROGRAM REQUIREMENTS	MIL-STD-882, "SYSTEM SAFETY PROGRAM REQUIREMENTS", USED AS THE BASIS FOR DVELOPMENT OF HAZARD ANALYSES.
SEL/HAZARD/AREA	SELECTED HAZARD ANALY AREA FOR DESIGN INFLU ASSESSMENT	SELECTED HAZARD ANALYSIS AREAS FOR SAFETY DESIGN INFLUENCE INCLUDES HAZARD TRACKING SYSTEM, PRELIMINARY HAZARD ANALYSIS, FAILURE MODE AND HAZARDOUS EFFECTS ANALYSIS, SNEAK CIRCUIT ANALYSIS, OCCUPATIONAL HAZARD, OPERATING AND SUPPORT HAZARD ANALYSIS, AND FAULT TREE ANALYSIS.
SEL/SAFETY/HAZARD/AR	SELECTED SAFETY AREA HAZARD	THE ASSESSMENT RESULTS FOR SAFETY ASSESSMENT ON DESIGN INFLUENCE INCLUDES SUMMARY IMPACTS OF EACH SAFETY AREA FOR WHICH A DESIGN INFLUENCE ASSESSMENT HAS BEEN CONDUCTED. AREAS INCLUDE HAZARD ANALYSIS, SYSTEM SAFETY PROGRAM PLAN, SAFETY COMPLIANCE ASSESSMENT, AND ENVIRONMENTAL IMPACT. IN THIS ASSESSMENT REVIEW, THE AREA OF HAZARDS IS ADDRESSED.
SUM/HAZARD/AREA	SUMMARY O/P FOR HAZARD ANALYSIS ON SAFETY DESIG INFLUENCE	THE SUMMARY OUTPUT FOR HAZARD ANALYSIS ASSESSMENT ON SAFETY DESIGN INFLUENCE INCLUDES SUMMARY IMPACTS OF EACH SELECTED HAZARD ANALYSIS AREA FOR WHICH A SAFETY DESIGN INFLUENCE ASSESSMENT HAS BEEN CONDUCTED. AREAS INCLUDE HAZARD TRACKING, PRELIMINARY HAZARD ANALYSIS, FAILURE MODE AND HAZARDOUS EFFECTS ANALYSIS, SNEAK CIRCUIT ANALYSIS, OCCUPATIONAL HEALTH, OPERATING AND SUPPORT HAZARD ANALYSIS, AND FAULT TREE ANALYSIS.

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Name	Label	Description
P/F	POLICY FILES	CONTAINS THOSE MILITARY PUBLICATIONS, DECISION PAPERS, MISSIONS & FUNCTIONS, etc, WHICH ARE NEEDED TO ESTABLISH THE LOGISTICAL SUPPORT AND REVIEW REQUIREMENTS OF THE ITEM/EQUIPMENT DEVELOPMENT PROGRAM. THIS DATA STORE INCLUDES: 1. AR 12-16, "MUTUAL LOGISTICS SUPPORT BETWEEN THE U.S. AND OTHER NORTH ATLANTIC TREATY ORGANIZATION FORCES" 1a. AR 70-1, "SYSTEMS ACQUISITION POLICY AND PROCEDURES" 1b. AR 70-2, "RESEARCH, DEVELOPMENT, & ACQUISITION MATERIEL STATUS RECORDING" 1c. AR 70-10, "R&D - TEST & EVALUATION DURING DEVELOPMENT AND ACQUISITION OF MATERIEL" 1d. "AR 570-9, "MANPOWER AND EQUIPMENT CONTROL - HOST NATION SUPPORT" 2. AR 700-9, "POLICIES OF THE ARMY LOGISTIC SYSTEM" 3. AR 700-82, "JOINT REGULATION GOVERNING THE USE AND APPLICATION OF UNIFORM SOURCE MAINTENANCE AND RECOVERABILITY CODES" 4. AR 700-127, "INTEGRATED LOGISTICS SUPPPORT" 5. AR 725-50, "REQUISITIONING, RECEIPT AND ISSUE SYSTEM" 6. AR 750-1, "MAINTENANCE OF SUPPLIES & EQUIPMENT - ARMY MATERIEL MAINTENANCE CONCEPTS & POLICIES" 7. AMC-R-700-27, "LEVEL OF REPAIR ANALYSIS (LORA) PROGRAM" 8. AMC-R-750-10, "DEPOT MAINTENANCE INTERSERVICE" 9. DA PAM 700-4 10. DA PAM 700-28, "INTEGRATED LOGISTIC SUPPORT PROGRAM ASSESSMENT ISSUES AND CRITERIA" 11. DA PAM 700-50, "INTEGRATED LOGISTIC SUPPORT - DEVELOPMENTAL SUPPORTABILITY TEST AND EVALUATION GUIDE" 12. DA PAM 700-55, "INSTRUCTIONS FOR PREPARING THE INTEGRATED LOGISTIC SUPPORT PLAN" 12a. DA PAM 738-750, "THE ARMY MAINTENANCE MANAGEMENT SYSTEMS (TAMMS)" 13. DA PAM 750-21, "LOGISTIC SUPPORT MODELLING" 14. AMC PAM 700-4, "LOGISTICS SUPPORT ANALYSIS TECHNIQUES GUIDE (WITH PALMAN)" 14a. AMC PAM 700-11, "LOGISTICS SUPPORT ANALYSIS REVIEW TEAM GUIDE" 15. AMC PAM 750-2, "MAINTENANCE OF SUPPLIES AND EQUIPMENT GUIDE TO RELIABILITY CENTERED MAINTENANCE" 16. MIL-STD-152, "TECH REVIEW GUIDELINES" 17. MIL-STD-210A, "CLIMATIC EXTREMES FOR MILITARY EQUIPMENT" 18. MIL-STD-470, -471, "MAINTAINABILITY STANDARDS" 19. MIL-STD-756, "RELIABILITY MODELLING & PREDICTIONS" 20. MIL-STD-780, "MAINTENANCE ENGINEERING ANALYSIS CONTROL NUMBER (MEACNS) FOR AERONAUTICAL EQUIPMENT, UNIFORM NUMBERING SYSTEM" 21. MIL-STD-781, "RELIABILITY DESIGN QUALIFICATION AND PRODUCTION ACCEPTANCE TESTS: EXPONENTIAL DISTRIBUTION" 22. MIL-STD-785B, "RELIABILITY PROGRAM FOR SYSTEMS AND EQUIPMENT DEVELOPMENT & PRODUCTION" 23. MIL-STD-810, "ENVIRONMENTAL TEST METHODS & ENGINEERING GUIDELINES" 24. MIL-STD-881, "WORK BREAKDOWN STRUCTURES FOR DEFENSE MATERIEL ITEMS" 25. MIL-STD-882, "SYSTEM SAFETY PROGRAM REQUIREMENTS" 26. MIL-STD-963, "PARTS CONTROL PROGRAM" 27. MIL-STD-1369A, "INTEGRATED LOGISTIC SUPPORT PROGRAM REQUIREMENTS"

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Name	Label	Description
		28. MIL-STD-1388-1A, "LOGISTICS SUPPORT ANALYSIS"
		29. MIL-STD-1388-2A, "LOGISTICS SUPPORT ANALYSIS RECORD"
		30. MIL-STD-1629, "PROCEDURES FOR PERFORMING A FAILURE MODE, EFFECTS & CRITICALITY ANALYSIS"
		31. MIL-HDBK-472, "MAINTAINABILITY PREDICTION"
		32. MIL-M-24100B, "FUNCTIONALLY ORIENTED MAINTENANCE MANUALS (FOMM) FOR EQUIPMENT & SYSTEMS"
P/F(2)	POLICY FILES(2) SUPPLEMENT	33. AR 70-38, "RESEARCH, DEVELOPMENT, TEST & EVALUATION OF MATERIEL FOR EXTREME CLIMATIC CONDITIONS"
		34. AR 602-1, "PERSONNEL-MATERIEL SYSTEMS - HUMAN FACTORS ENGINEERING PROGRAM"
		35. AR 602-2, "MANPOWER AND PERSONNEL INTEGRATION (MANPRINT) IN MATERIEL ACQUISITION PROCESS"
		36. AR 700-47, "LOGISTICS - DEFENSE STANDARDIZATION AND SPECIFICATION PROGRAM"
		37. AR 700-60, "LOGISTICS - DEPARTMENT OF DEFENSE PARTS CONTROL PROGRAM"
		38. AR 700-129, "MANAGEMENT AND EXECUTION OF INTEGRATED LOGISTIC SUPPORT (ILS) PROGRAMS FOR MULTISERVICE ACQUISITIONS"
		39. DA PAM 700-55, "INSTRUCTIONS FOR PREPARING THE INTEGRATED LOGISTIC SUPPORT PLAN."
		40. MIL-STD 210G "CLIMATIC INFORMATION TO DETERMINE DESIGN AND TEST REQUIREMENTS FOR MILITARY SYSTEMS AND EQUIPMENT."
DID#	DATA ITEM DESCRIPTIONS	41. DI-R-1734, FAILURE MODES, EFFECTS, AND CRITICALITY REPORT
		42. DI-R-2114, RELIABILITY ALLOCATION REPORT
		43. DI-R-2115A, FAILURE MODE AND EFFECT ANALYSIS REPORT
		44. DI-R-2129, MAINTAINABILITY DEMONSTRATION PLAN
		45. DI-R-2130A, MAINTAINABILITY DEMONSTRATION REPORT
		46. DI-S-3604, FUNCTIONAL FLOW DIAGRAM
		47. DI-R-7033, RELIABILITY TEST PLAN
		48. DI-R-7034, RELIABILITY TEST AND DEMONSTRATION REPORTS
		49. DI-R-7035, RELIABILITY TEST AND DEMONSTRATION PROCEDURES
		50. DI-R-7040, BURN-IN TEST REPORT
		51. DI-R-7041, FAILURE SUMMARY AND ANALYSIS REPORT
		52. DI-R-7079, RELIABILITY PROGRAM PLAN
		53. DI-R-7080, RELIABILITY STATUS REPORT
		54. DI-R-7081, RELIABILITY MATHEMATICAL MODEL(S)
		55. DI-R-7082, RELIABILITY PREDICTIONS REPORT
		56. DI-R-7083, SNEAK CIRCUIT ANALYSIS REPORT
		57. DI-R-7084, ELECTRONIC PARTS/CIRCUITS TOLERANCE ANALYSIS REPORT
		58. DI-R-7085, FAILURE MODE, EFFECTS, AND CRITICALITY ANALYSIS REPORT
		59. DI-R-7105, DATA COLLECTION, ANALYSIS AND CORRECTIVE ACTION SYSTEM REPORT
		60. DI-R-7106, MAINTAINABILITY MODELLING REPORT
		61. DI-R-7107, MAINTAINABILITY ALLOCATIONS REPORT
		62. DI-R-7108, MAINTAINABILITY PREDICTIONS REPORT
		63. DI-R-7109, MAINTAINABILITY ANALYSIS REPORT
		64. DI-R-7110, MAINTAINABILITY DESIGN CRITERIA PLAN
		65. DI-R-7111, INPUTS TO THE DETAILED MAINTENANCE PLAN AND LOGISTICS SUPPORT ANALYSIS

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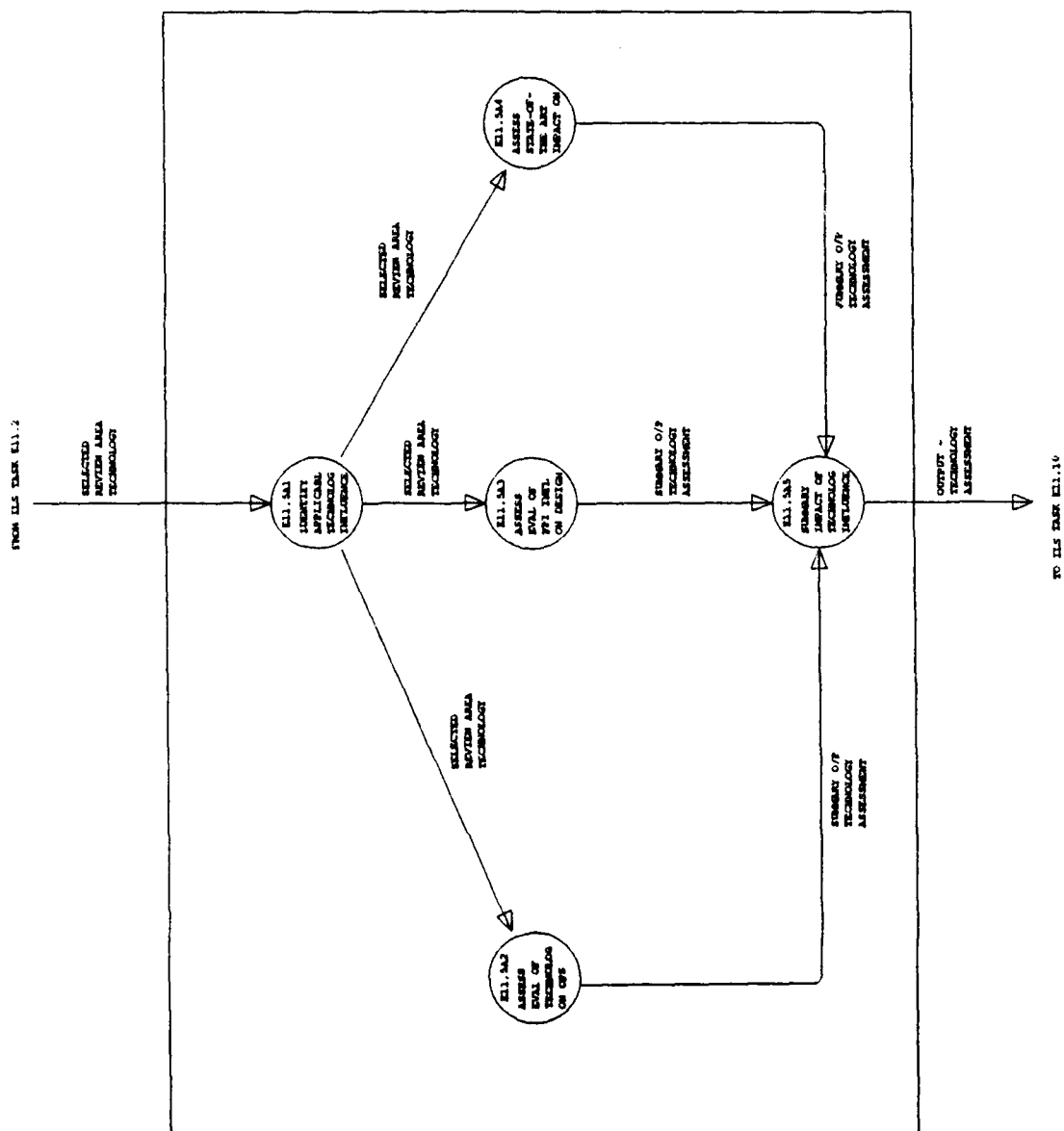
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Name	Label	Description
		66. DI-R-7112, MAINTAINABILITY DEMONSTRATION TEST PLAN
		67. DI-R-7113, MAINTAINABILITY DEMONSTRATION REPORT
		68. DI-R-35011, CRITICAL ITEM CONTROL PLAN



E11.10
Created by: JMC
Revised by: JMC
Date changed: 18-100-86

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E11.5A PROCESSES

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Name	Label	Description
E11.5A1	IDENTIFY	INCLUDES DESIGN OPPORTUNITIES FOR IMPROVEMENT OF SUPPORTABILITY APPLICABLE CHARACTERISTICS AND REQUIREMENTS IDENTIFIED IN LSA TASK 204. TECHNOLOGY INFLUENCES
E11.5A2	ASSESS	ASSESS THE EVALUATION OF DESIGN CHANGES TO MEET OPERATING REQUIREMENTS EVAL OF AND ALL SUPPORTABILITY AND SUPPORTABILITY RELATED DESIGN FACTORS TECHNOLOGY IDENTIFIED IN THE USE STUDY, LSA TASK 201, AND ESTABLISHED IN LSA TASK ON OPS 205. CONSTRAINT
E11.5A3	ASSESS	ASSESS THE PLANS AND POTENTIAL TO ENHANCE RELIABILITY AND EVAL OF SUPPORTABILITY BY PREPARATION OF A RELIABILITY GROWTH PROGRAM AND BY PPI INFL SUBSEQUENT INCORPORATION OF PRE-PLANNED PRODUCT IMPROVEMENTS. ON DESIGN
E11.5A4	ASSESS	ASSESS THE SPECIFIC DESIGN CHANGES WHICH ARE POSSIBLE BY USE OF STATE-OF- ADVANCED STATE-OF-THE ART. THE ART IMPACT ON DESIGN
E11.5A5	SUMMARY	THE IMPACT OF TECHNOLOGY INFLUENCE ON DESIGN MUST SEEK DESIGN IMPACT OF OPPORTUNITIES FOR IMPROVING RELIABILITY GROWTH POTENTIAL, ACHIEVING TECHNOLOGY IMPROVED SUPPORTABILITY CHARACTERISTICS, REDUCING LOGISTIC SUPPORT INFLUENCE RESOURCE REQUIREMENTS, REDUCING COSTS, AND/OR ENHANCING SYSTEM READINESS. ON DESIGN ASSOCIATED RISKS AND ANY COST AND SCHEDULE IMPACTS MUST ALSO BE IDENTIFIED WITH UPDATES THROUGHOUT THE ACQUISITION CYCLE.

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Name	Label	Description
OUTPUT/TECH	OUTPUT - TECHNOLOGY ASSESSMENT ON DESIGN INFLUENCE	THE RESULTS OF THE ASSESSMENT OF THE INFLUENCE OF TECHNOLOGY ON THE DESIGN WILL BE A BASIC INPUT TO THE SUMMARY REPORT TO BE PREPARED IN ILS SUBTASK E11.10.
SEL/TECH/AREA	SELECTED REVIEW AREA- TECHNOLOGY	SELECTED TECHNOLOGY AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE EVALUATION OF TECHNOLOGY ON OPERATING CONSTRAINTS, EVALUATION OF PREPLANNED PRODUCT IMPROVEMENTS, A RELIABILITY GROWTH PLAN AND STATE-OF-THE-ART IMPACT.
SUM/TECH/OUT	SUMMARY O/P TECHNOLOGY ASSESSMENT ON DESIGN INFLUENCE	THE SUMMARY OUTPUT FOR TECHNOLOGY ASSESSMENTS ON DESIGN INFLUENCE INCLUDES SUMMARY IMPACTS OF EACH SELECTED TECHNOLOGY AREA FOR WHICH A DESIGN INFLUENCE ASSESSMENT HAS BEEN CONDUCTED. AREAS INCLUDE EVALUATION OF TECHNOLOGY ON OPERATING CONSTRAINTS, EVALUATION OF PREPLANNED PRODUCT IMPROVEMENTS, AND STATE-OF-THE-ART IMPACT.

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E11.6A PROCESSES

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Name	Label	Description
E11.6A1	IDENTIFY	AVAILABILITY INCLUDES THE COMBINED EFFECTS OF READINESS-RELATED POTENTIAL RELIABILITY AND MAINTAINABILITY. SINCE BASIC RELIABILITY AND RAM DESIGN MAINTAINABILITY ARE ESTABLISHED BY DESIGN, AND A MATURE SYSTEM IS INFLUENCE ACHIEVED BY ELIMINATING DESIGN DEFICIENCIES, IDENTIFICATION OF POTENTIAL DESIGN INFLUENCES AFFECTING THESE CHARACTERISTICS IS CRITICALLY IMPORTANT IN SATISFYING SYSTEM READINESS, LOGISTIC SUPPORTABILITY, AND OPERATING AND SUPPORT COSTS. R&M PROGRAMS MUST CONTAIN A BALANCED MIX OF ENGINEERING, ACCOUNTING AND MANAGEMENT TASKS AS CONTAINED IN MIL-STDs-785B AND -470A TO OPTIMIZE THE EFFECTIVENESS OF THE OVERALL PROGRAM TO MEET R&M REQUIREMENTS AND REDUCE LIFE CYCLE COSTS.
E11.6A2	ASSESS RAM GROWTH ANALYSIS	ASSESS THE RAM GROWTH ANALYSIS TO DETERMINE IF THE RESULTS INCLUDE: 1. PREDICTIBILITY OF RAM CHARACTERISTICS FROM A RELIABLE HISTORICAL DATA BASE 2. TRACKABLE OF THE DESIGN MATURITY UTILIZING THE TEST, ANALYZE, AND FIX METHODOLOGY 3. GROWTH POTENTIAL 4. TESTING TO MONITOR GROWTH IN RAM CHARACTERISTICS
E11.6A3	ASSESS RAM ENGINEERING ANALYSIS	ASSESS RELIABILITY ENGINEERING ANALYSIS TO ASSURE FOCUS ON THE PREVENTION, DETECTION, AND CORRECTION OF RELIABILITY DESIGN DEFICIENCIES, WEAK PARTS, AND WORKMANSHIP DEFECTS. MAINTAINABILITY ENGINEERING ANALYSIS SHOULD FOCUS ON REDUCING MAINTENANCE TIME, NUMBER OF TASKS REQUIRED FOR EACH MAINTENANCE ACTION, AND NEED FOR SPECIAL SKILLS, TOOLS, AND TEST EQUIPMENT.
E11.6A4	ASSESS RAM ACCOUNTING ANALYSIS	ASSESS THE CONTRACTORS RAM ACCOUNTING ANALYSIS TO INSURE THAT THE ANALYSIS INCLUDES: 1. IDENTIFICATION OF ALL POTENTIAL HIGH FAILURE RATE ITEMS 2. IDENTIFICATION OF ALL POTENTIALLY CRITICAL ITEMS FROM THE VIEW POINT OF SAFETY OF EQUIPMENT AND PERSONNEL, MISSION CRITICALITY AND ECONOMICS 3. PLANNING OF ALL TESTS RELATIVE TO DESIGN IMPROVEMENT RECOMMENDATIONS 4. ESTIMATES OF OPERATIONAL EFFECTIVENESS AND OWNERSHIP COSTS 5. PROPER DERATING 6. ENVIRONMENTAL SUSCEPTIBILITY 7. SYSTEM EFFECTIVENESS IN A DEGRADATION CONDITION 8. OPERATIONAL LEVELS USED FOR BASIS OF RAM ACCOUNTING ANALYSIS
E11.6A5	ASSESS RAM PLANNING	ASSESS CONTRACTORS PROPOSED PROGRAM FOR RAM TASK SCHEDULING. ASSURE THE LIFE CYCLE THE CONTRACTOR HAS MADE ADEQUATE PROVISIONS TO PROVIDE THE NECESSARY RAM DESIGNER/ENGINEERING INTERFACES AT EACH OF THE RAM REVIEWS.
E11.6A6	ASSESS RAM APPORTIONMENT	REVIEW CONTRACTORS RAM APPORTIONMENT EVALUATION TO DETERMINE THE ADEQUACY AND REPRESENTATIVENESS OF THE RELIABILITY ALLOCATION IN ACCORDANCE WITH THE RELIABILITY BLOCK DIAGRAM

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Name	Label	Description
E11.6A7	ASSESS MAINTAIN- ABILITY EVALUATION	ASSESS THE CONTRACTORS MAINTAINABILITY EVALUATION WHICH SHOULD INCLUDE AS A MINIMUM (WHERE APPLICABLE) THE FOLLOWING: 1. INHERENT MAINTAINABILITY CHARACTERISTICS 2. INHERENT SIMPLICITY OF MAINTENANCE FUNCTIONS FOR USER AND FIELD SUPPORT 3. EASE OF ACCESS TO LOWEST REPLACEABLE ASSEMBLIES - REASONABLE TIME WITH COMMON TOOLS AND AVERAGE SKILLS 4. EASE OF MAINTENANCE - REPAIR, ADJUST, REPLACE, CALIBRATE, ETC 5. DOWNTIME MINIMIZING FOR MAINTENANCE FUNCTIONS 6. SKILL LEVEL IDENTIFICATIONS 7. SPECIAL TOOLS, EQUIPMENT, OR FACILITIES REQUIRED 8. RELIABILITY & DEPENDABILITY 9. SAFETY CHARACTERISTICS 10. SELF CORRECTING CHARACTERISTICS 11. REDUNDANCE 12. ENVIRONMENTAL COMPATIBILITY 13. STANDARDIZATION 14. MODULARIZATION 15. LOGISTIC SUPPORTABILITY 16. LIFE CYCLE COSTING
E11.6A8	SUMMARY	RAM REQUIREMENTS OR GOALS ARE INITIALLY EXPRESSED TO ENCOURAGE POTENTIAL INNOVATIONS AND COMPETITION IN CREATING, EXPLORING, AND DEVELOPING RAM IMPACT ALTERNATIVE SYSTEM OR EQUIPMENT DESIGN CONCEPTS. IN ADDITION, DEVELOPED ON DESIGN RAM PARAMETERS MUST RELATE DIRECTLY TO OPERATIONAL EFFECTIVENESS AND OPERATING AND SUPPORT COSTS. THE RAM PARAMETERS MUST ALSO BE MEASURED IN UNITS OF MEASUREMENT RELATED TO OPERATIONAL READINESS, MISSION SUCCESS, MAINTENANCE MANPOWER COST, AND LOGISTIC SUPPORT COST.

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Name	Label	Description
AMC-P-750-2	AMC-P 750-2	AMC PAMPHLET CONCERNING "MAINTENANCE OF SUPPLIES AND EQUIPMENT, GUIDE TO RELIABILITY RELIABILITY-CENTERED MAINTENANCE". THE PAMPHLET COVERS THE METHOD AND PROCEDURES FOR PERFORMING THE RELIABILITY-CENTER MAINTENANCE (RCM), AND MAINTENANCE APPLIES TO ALL U.S. ARMY MATERIEL COMMAND MAJOR SUBORDINATE COMMANDS HAVING RESPONSIBILITY FOR RESEARCH, DEVELOPMENT, ACQUISITION, MANAGEMENT, AND MAINTENANCE OF ARMY MATERIEL THROUGHOUT THE SYSTEM/EQUIPMENT LIFE CYCLE.
MIL-STD 1521	MIL-STD 1521	MIL-STD-1521B (USAF), TECHNICAL REVIEWS AND AUDITS FOR SYSTEMS, TECHNICAL EQUIPMENTS, AND COMPUTER SOFTWARE". REVIEWS AND AUDITS SPECIFICALLY DEFINES REQUIREMENTS FOR: 1. SYSTEM REQUIREMENTS REVIEW (SRR) 2. SYSTEM DESIGN REVIEW (SDR) 3. SOFTWARE SPECIFICATION REVIEW (SSR) 4. PRELIMINARY DESIGN REVIEW (PDR) 5. CRITICAL DESIGN REVIEW (CDR) 6. TEST READINESS REVIEW (TRR) 7. FUNCTIONAL CONFIGURATION AUDIT (FCA) 8. PHYSICAL CONFIGURATION AUDIT (PCA) 9. FORMAL QUALIFICATION REVIEW (FQR) 10. PRODUCTION READINESS REVIEW (PRR)
MIL-STD-1629A	MIL-STD 1629	MIL-STD-1629A, "PROCEDURES FOR PERFORMING A FAILURE MODE, EFFECTS AND CRITICALITY ANALYSIS (FMECA)". THE FMECA CONTAINS FOUR (4) SUBTASKS: 1. FAILURE MODE AND EFFECTS ANALYSIS (FMEA) 2. CRITICALITY ANALYSIS (CA) 3. FMECA-MAINTAINABILITY INFORMATION 4. DAMAGE MODE AND EFFECTS ANALYSIS (DMEA) THIS STANDARD APPLIES TO THE ACQUISITION OF ALL DESIGNATED DOD SYSTEMS AND EQUIPMENT.
OUTPUT/RAM	OUTPUT - RAM ASSESSMENT ON DESIGN INFLUENCE	THE RESULTS OF THE ASSESSMENT OF THE INFLUENCE OF RAM ON THE DESIGN WILL BE A BASIC INPUT TO THE SUMMARY REPORT TO BE PREPARED IN ILS SUBTASK E11.10.
SEL/RAM/AREA	SELECTED REVIEW AREA- RAM	SELECTED RAM AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE RAM ENGINEERING ANALYSIS, RAM GROWTH ANALYSIS, RAM ACCOUNTING ANALYSIS, LIFE CYCLE RAM PLANNING, RAM APPORTIONING, AND MAINTAINABILITY EVALUATION.
SUM/RAM/OUT	SUMMARY O/P FOR RAM ASSESSMENT ON DESIGN INFLUENCE	THE SUMMARY OUTPUT FOR RAM ASSESSMENT ON DESIGN INFLUENCE INCLUDES SUMMARY IMPACTS ON EACH SELECTED RAM AREA FOR WHICH A DESIGN INFLUENCE ASSESSMENT HAS BEEN CONDUCTED. AREAS INCLUDE RAM ENGINEERING, GROWTH, AND ACCOUNTING ANALYSES, LIFE CYCLE RAM PLANNING, RAM APPORTIONING, AND MAINTAINABILITY EVALUATION.

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		30. MIL-STD-1629, "PROCEDURES FOR PERFORMING A FAILURE MODE, EFFECTS & CRITICALITY ANALYSIS"
		31. MIL-HDBK-472, "MAINTAINABILITY PREDICTION"
		32. MIL-M-24100B, "FUNCTIONALLY ORIENTED MAINTENANCE MANUALS (FOMM) FOR EQUIPMENT & SYSTEMS"
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		63. DI-R-7109, MAINTAINABILITY ANALYSIS REPORT
		64. DI-R-7110, MAINTAINABILITY DESIGN CRITERIA PLAN
		65. DI-R-7111, INPUTS TO THE DETAILED MAINTENANCE PLAN AND LOGISTICS SUPPORT ANALYSIS

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		66. DI-R-7112, MAINTAINABILITY DEMONSTRATION TEST PLAN
		67. DI-R-7113, MAINTAINABILITY DEMONSTRATION REPORT
		68. DI-R-35011, CRITICAL ITEM CONTROL PLAN

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Name	Label	Description
E11.7A1	DESIGN INFLUENCE OF INTERFACES	ASSESS THE SUITABILITY AND COMPLIANCE WITH INTERFACE REQUIREMENTS DESCRIBED IN THE LSA PLAN, TASK 102. LIKEWISE ASSESS THE RESULTS OF LSA TASKS 103, 202 AND 203 TO DETERMINE THEIR ADEQUACY IN ADDRESSING DESIGN INFLUENCE.
E11.7A4	ASSESS ILS CONSTRAINT ANALYSIS	AREAS OF CONSIDERATION INCLUDE: 1. PACKAGING, HANDLING, AND STORAGE, INCLUDING PRESERVATION REQUIREMENTS 2. PARTS CONTROL 3. TRAINING DEVICES.
E11.7A5	ASSESS EVALUATION OF INFLUENCE OF TRANSPORTATION MEDIA	ASSESS CONTRACTOR'S EVALUATION OF THE INFLUENCE OF TRANSPORTABILITY ON THE DESIGN OF THE ITEM/EQUIPMENT. CONSIDERATION SHOULD HAVE BEEN DIRECTED TO THE DIMENSIONAL CONSTRAINTS AND GROSS WEIGHT LIMITS OF VARIOUS TRANSPORTATION MEDIA AS THEY MIGHT APPLY TO THE TRANSPORT OF THE ITEM/EQUIPMENT UNDER DEVELOPMENT (REFER TO MIL-STD-1366).
E11.7A6	ASSESS FACILITIES INFLUENCE ON DESIGN	ASSESS CONTRACTOR'S EVALUATION OF THE INFLUENCE ON THE DESIGN OF THE ITEM/EQUIPMENT BASED ON DESCRIPTION OF EXISTING FACILITIES CHARACTERISTICS AND AVAILABILITY AT THE PROJECTED SYSTEM DEPLOYMENT LOCATIONS.
E11.7A3	ASSESS ANALYSIS- CRITICAL SUPPORT CHARACTERS	ASSESS THE ANALYSIS OF OPERATIONS AND MAINTENANCE TASKS CONDUCTED FOR LSA TASK 401 WHICH IDENTIFIES SUPPORT REQUIREMENTS EXCEEDING GOALS, THRESHOLDS, OR CONSTRAINTS AND SUPPORTS DEVELOPMENT OF DESIGN ALTERNATIVES, AND ALSO IDENTIFIES NEW RESOURCES WHICH REQUIRE DEVELOPMENT. A TRANSPORTABILITY ANALYSIS IS ALSO INCLUDED WITH DEVELOPMENT OF DESIGN ALTERNATIVES FOR TRANSPORTABILITY PROBLEM AREAS. IN ADDITION, ALSO ASSESS OUTPUTS FROM LSA TASK 501, SUPPORTABILITY TEST, EVALUATION, AND VERIFICATION WHICH MEASURES ACHIEVEMENT OF SUPPORTABILITY REQUIREMENTS AND IDENTIFIES METHODS OF CORRECTING DEFICIENCIES, INCLUDING MODIFICATIONS TO HARDWARE AND/OR SOFTWARE.
E11.7A2	ASSESS EVALUATION OF PGSE, MHE, & TEST EQ.	ASSESS THE VALIDITY OF CONTRACTORS JUSTIFICATION OF NEED FOR OF PGSE, MVE, AND TEST EQUIPMENT PROJECTED FOR SUPPORT OF THE ITEM: 1. BITE 2. SPECIAL TOOLS 3. SPECIAL EQUIPMENT A. OPERATIONS B. SUPPORT
E11.7A7	SUMMARY - IMPACT OF INTERFACES INFLUENCE ON DESIGN	THE SUMMARY IMPACT OF INTERFACE INFLUENCE ON DESIGN WILL IDENTIFY IMPACT OF MATERIEL AND SUPPORT SYSTEM REQUIREMENTS INCLUDING DESIGN CHARACTERISTICS AND CONSTRAINTS AFFECTING SUPPORTABILITY OF THE NEW OR MODIFIED SYSTEM.

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Name	Label	Description
AR 70-47	AR 70-47 ENGINEERING FOR TRANSPORTA- BILITY	PROVIDES GUIDELINES FOR ARMY APPLICATIONS OF ENGINEERING FOR TRANSPORTABILITY
CA/RSITS	COMPARATIVE ANALYSIS RESULTS	
MIL-HNDB 157	MIL-HNDB 157 TRANSPORTA- BILITY CRITERIA	MILITARY HANDBOOK ON TRANSPORTABILITY CRITERIA.
MIL-STD-1366	MIL-STD-1366 TRANSP DIMEN & WGT CONSTS	MIL-STD 1366 PROVIDES A BASELINE OF ARMY MATERIEL SIZES SUITABLE FOR DEFINITION ESTABLISHING TRANSPORTABILITY FACTORS. THIS MIL-STD INCLUDES MATERIEL OF MATERIEL TRANSPORTATION DIMENSIONS AND WEIGHT CONSTRAINTS.
MIS/SYS/STD	MISSION SYSTEMS STANDARDIZED RESULTS	
OUTPUT/INTERF	OUTPUT - INTERFACES ASSESSMENT ON DESIGN INFLUENCE	THE RESULTS OF THIS ASSESSMENT OF THE INTERFACES ON THE DESIGN INFLUENCE WILL BE A BASIC INPUT TO THE SUMMARY REPORT TO BE PREPARED IN ILS SUBTASK E11.10.
PROG/DSGN	PROGRAM DESIGN REVIEW	
SEL/INTER/AREA	SELECTED INTERFACE AREA FOR DESIGN INFLU ASSESSMENT	SELECTED INTERFACE AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE EVALUATION OF PGSE AND TEST EQUIPMENT, ANALYSIS OF CRITICAL SUPPORT CHARACTERISTICS, ILS CONSTRAINT ANALYSIS, FACILITIES INFLUENCE, AND TRANSPORTABILITY INFLUENCE.
SEL/INTERF/AREA	SELECTED REVIEW AREA- INTERFACES	THE SELECTED AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE MANPRINT, SAFETY TECHNOLOGY, RAM, PROGRAM INTERFACES, ECONOMICS, AND PROGRAM PROCEDURES. IN THE DATA FLOW DIAGRAM, THE ASSESSMENT CONCERNS THE INFLUENCE OF PROGRAM INTERFACES ON DESIGN.

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Name	Label	Description
SUM/INTER/OUT	SUMMARY O/P - INTERFACE ASSESSMENT ON DESIGN INFLUENCE	THE SUMMARY OUTPUT FOR INTERFACE ASSESSMENT ON DESIGN INFLUENCE INCLUDES SUMMARY IMPACTS ON EACH SELECTED INTERFACE AREA FOR WHICH A DESIGN INFLUENCE ASSESSMENT HAS BEEN CONDUCTED. AREAS INCLUDE EVALUATION OF FGSE AND TEST EQUIPMENT, ANALYSIS OF CRITICAL SUPPORT CHARACTERISTICS, ILS CONSTRAINT ANALYSIS, FACILITIES INFLUENCE AND TRANSPORTABILITY INFLUENCE.

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Name	Label	Description
P/F	POLICY FILES	CONTAINS THOSE MILITARY PUBLICATIONS, DECISION PAPERS, MISSIONS & FUNCTIONS, etc, WHICH ARE NEEDED TO ESTABLISH THE LOGISTICAL SUPPORT AND REVIEW REQUIREMENTS OF THE ITEM/EQUIPMENT DEVELOPMENT PROGRAM. THIS DATA STORE INCLUDES: 1. AR 12-16, "MUTUAL LOGISTICS SUPPORT BETWEEN THE U.S. AND OTHER NORTH ATLANTIC TREATY ORGANIZATION FORCES" 1a. AR 70-1, "SYSTEMS ACQUISITION POLICY AND PROCEDURE" 1b. AR 70-2, "RESEARCH, DEVELOPMENT, & ACQUISITION MATERIEL STATUS RECORDING" 1c. AR 70-10, "R&D - TEST & EVALUATION DURING DEVELOPMENT AND ACQUISITION OF MATERIEL" 1d. "AR 570-9, "MANPOWER AND EQUIPMENT CONTROL - HOST NATION SUPPORT" 2. AR 700-9, "POLICIES OF THE ARMY LOGISTIC SYSTEM" 3. AR 700-82, "JOINT REGULATION GOVERNING THE USE AND APPLICATION OF UNIFORM SOURCE MAINTENANCE AND RECOVERABILITY CODES" 4. AR 700-127, "INTEGRATED LOGISTICS SUPPORT" 5. AR 725-50, "REQUISITIONING, RECEIPT AND ISSUE SYSTEM" 6. AR 750-1, "MAINTENANCE OF SUPPLIES & EQUIPMENT - ARMY MATERIEL MAINTENANCE CONCEPTS & POLICIES" 7. AMC-R-700-27, "LEVEL OF REPAIR ANALYSIS (LORA) PROGRAM" 8. AMC-R-750-10, "DEPOT MAINTENANCE INTERSERVICE" 9. DA PAM 700-4 10. DA PAM 700-28, "INTEGRATED LOGISTIC SUPPORT PROGRAM ASSESSMENT ISSUES AND CRITERIA" 11. DA PAM 700-50, "INTEGRATED LOGISTIC SUPPORT - DEVELOPMENTAL SUPPORTABILITY TEST AND EVALUATION GUIDE" 12. DA PAM 700-55, "INSTRUCTIONS FOR PREPARING THE INTEGRATED LOGISTIC SUPPORT PLAN" 12a. DA PAM 738-750, "THE ARMY MAINTENANCE MANAGEMENT SYSTEMS (TAMMS)" 13. DA PAM 750-21, "LOGISTIC SUPPORT MODELLING" 14. AMC PAM 700-4, "LOGISTICS SUPPORT ANALYSIS TECHNIQUES GUIDE (WITH PALMAN)" 14a. AMC PAM 700-11, "LOGISTICS SUPPORT ANALYSIS REVIEW TEAM GUIDE" 15. AMC PAM 750-2, "MAINTENANCE OF SUPPLIES AND EQUIPMENT GUIDE TO RELIABILITY CENTERED MAINTENANCE" 16. MIL-STD-152, "TECH REVIEW GUIDELINES" 17. MIL-STD-210A, "CLIMATIC EXTREMES FOR MILITARY EQUIPMENT" 18. MIL-STD-470, -471, "MAINTAINABILITY STANDARDS" 19. MIL-STD-756, "RELIABILITY MODELLING & PREDICTIONS" 20. MIL-STD-780, "MAINTENANCE ENGINEERING ANALYSIS CONTROL NUMBER (MEACNS) FOR AERONAUTICAL EQUIPMENT, UNIFORM NUMBERING SYSTEM" 21. MIL-STD-781, "RELIABILITY DESIGN QUALIFICATION AND PRODUCTION ACCEPTANCE TESTS: EXPONENTIAL DISTRIBUTION" 22. MIL-STD-785B, "RELIABILITY PROGRAM FOR SYSTEMS AND EQUIPMENT DEVELOPMENT & PRODUCTION" 23. MIL-STD-810, "ENVIRONMENTAL TEST METHODS & ENGINEERING GUIDELINES" 24. MIL-STD-881, "WORK BREAKDOWN STRUCTURES FOR DEFENSE MATERIEL ITEMS" 25. MIL-STD-882, "SYSTEM SAFETY PROGRAM REQUIREMENTS" 26. MIL-STD-963, "PARTS CONTROL PROGRAM" 27. MIL-STD-1369A, "INTEGRATED LOGISTIC SUPPORT PROGRAM REQUIREMENTS"

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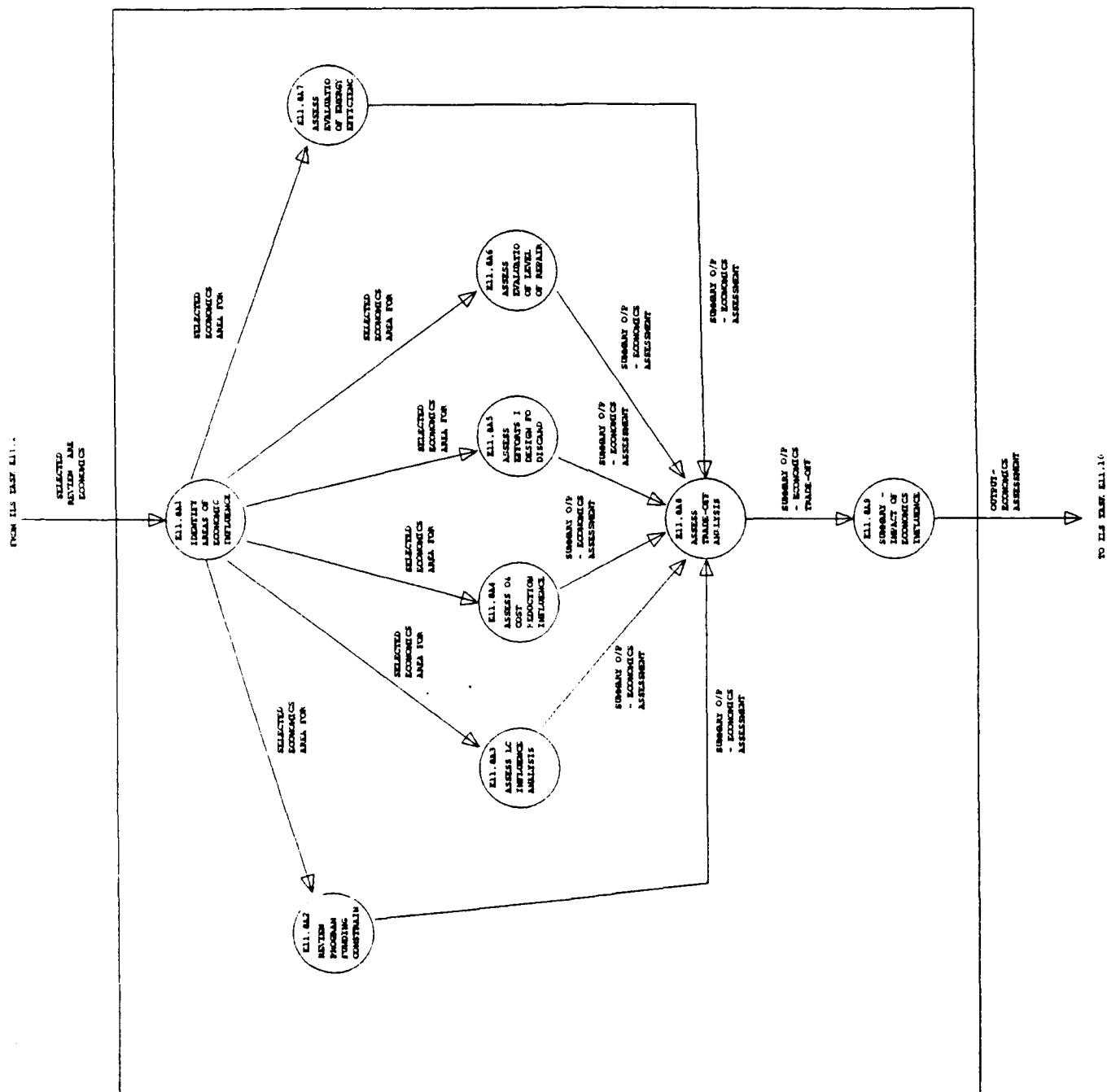
Name	Label	Description
		28. MIL-STD-1388-1A, "LOGISTICS SUPPORT ANALYSIS"
		29. MIL-STD-1388-2A, "LOGISTICS SUPPORT ANALYSIS RECORD"
		30. MIL-STD-1629, "PROCEDURES FOR PERFORMING A FAILURE MODE, EFFECTS & CRITICALITY ANALYSIS"
		31. MIL-HDBK-472, "MAINTAINABILITY PREDICTION"
		32. MIL-M-24100B, "FUNCTIONALLY ORIENTED MAINTENANCE MANUALS (FOMM) FOR EQUIPMENT & SYSTEMS"
P/F (2)	POLICY FILES (2) SUPPLEMENT	33. AR 70-38, "RESEARCH, DEVELOPMENT, TEST & EVALUATION OF MATERIEL FOR EXTREME CLIMATIC CONDITIONS"
		34. AR 602-1, "PERSONNEL-MATERIEL SYSTEMS - HUMAN FACTORS ENGINEERING PROGRAM"
		35. AR 602-2, "MANPOWER AND PERSONNEL INTEGRATION (MANPRINT) IN MATERIEL ACQUISITION PROCESS"
		36. AR 700-47, "LOGISTICS - DEFENSE STANDARDIZATION AND SPECIFICATION PROGRAM"
		37. AR 700-60, "LOGISTICS - DEPARTMENT OF DEFENSE PARTS CONTROL PROGRAM"
		38. AR 700-129, "MANAGEMENT AND EXECUTION OF INTEGRATED LOGISTIC SUPPORT (ILS) PROGRAMS FOR MULTISERVICE ACQUISITIONS"
		39. DA PAM 700-55, "INSTRUCTIONS FOR PREPARING THE INTEGRATED LOGISTIC SUPPORT PLAN."
		40. MIL-STD 210G "CLIMATIC INFORMATION TO DETERMINE DESIGN AND TEST REQUIREMENTS FOR MILITARY SYSTEMS AND EQUIPMENT."
DID#	DATA ITEM DESCRIPTIONS	41. DI-R-1734, FAILURE MODES, EFFECTS, AND CRITICALITY REPORT
		42. DI-R-2114, RELIABILITY ALLOCATION REPORT
		43. DI-R-2115A, FAILURE MODE AND EFFECT ANALYSIS REPORT
		44. DI-R-2129, MAINTAINABILITY DEMONSTRATION PLAN
		45. DI-R-2130A, MAINTAINABILITY DEMONSTRATION REPORT
		46. DI-S-3604, FUNTIONAL FLOW DIAGRAM
		47. DI-R-7033, RELIABILITY TEST PLAN
		48. DI-R-7034, RELIABILITY TEST AND DEMONSTRATION REPORTS
		49. DI-R-7035, RELIABILITY TEST AND DEMONSTRATION PROCEDURES
		50. DI-R-7040, BURN-IN TEST REPORT
		51. DI-R-7041, FAILURE SUMMARY AND ANALYSIS REPORT
		52. DI-R-7079, RELIABILITY PROGRAM PLAN
		53. DI-R-7080, RELIABILITY STATUS REPORT
		54. DI-R-7081, RELIABILITY MATHEMATICAL MODEL(S)
		55. DI-R-7082, RELIABILITY PREDICTIONS REPORT
		56. DI-R-7083, SNEAK CIRCUIT ANALYSIS REPORT
		57. DI-R-7084, ELECTRONIC PARTS/CIRCUITS TOLERANCE ANALYSIS REPORT
		58. DI-R-7085, FAILURE MODE, EFFECTS, AND CRITICALITY ANALYSIS REPORT
		59. DI-R-7105, DATA COLLECTION, ANALYSIS AND CORRECTIVE ACTION SYSTEM REPORT
		60. DI-R-7106, MAINTAINABILITY MODELLING REPORT
		61. DI-R-7107, MAINTAINABILITY ALLOCATIONS REPORT
		62. DI-R-7108, MAINTAINABILITY PREDICTIONS REPORT
		63. DI-R-7109, MAINTAINABILITY ANALYSIS REPORT
		64. DI-R-7110, MAINTAINABILITY DESIGN CRITERIA PLAN
		65. DI-R-7111, INPUTS TO THE DETAILED MAINTENANCE PLAN AND LOGISTICS SUPPORT ANALYSIS

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Name	Label	Description
		66. DI-R-7112, MAINTAINABILITY DEMONSTRATION TEST PLAN
		67. DI-R-7113, MAINTAINABILITY DEMONSTRATION REPORT
		68. DI-R-35011, CRITICAL ITEM CONTROL PLAN



ECONOMICS

E1.1.1.1
Created by: JMC
Revised by: JMC
Date changed: 01-24-98

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Name	Label	Description
E11.8A1	IDENTIFY AREAS OF ECONOMIC INFLUENCE ON DESIGN	ACRONYM: O&S - OPERATIONS & SUPPORT RAM - RELIABILITY, AVAILABILITY AND MAINTAINABILITY IDENTIFY THOSE AREAS OF ECONOMIC INFLUENCE ON DESIGN COST AND PERFORMANCE FACTORS NEEDED TO CALCULATE O&S LIFE CYCLE COSTS, COST FACTORS PERTAINING TO INVENTORIES, SUPPORT AND TEST EQUIPMENT, SPACE REQUIREMENTS, LABOR TRAINING, SPARE PARTS AND DOCUMENTATION SUCH AS TECHNICAL MANUALS. PERFORMANCE FACTORS PERTAIN TO QUANTITATIVE RAM PARAMETERS.
E11.8A2	REVIEW PROGRAM FUNDING CONSTRAINT	REVIEW OF PROGRAM FUNDING MUST CONSIDER THE TRADEOFFS AND OPTIONS IN SYSTEM DESIGNS FOR OPTIMUM TOTAL SYSTEM PERFORMANCE AND ACHIEVING THE BEST BALANCE BETWEEN COST, SCHEDULE, PERFORMANCE AND SUPPORTABILITY. COST OF ACQUISITION MUST BE ONLY A PORTION OF LIFE CYCLE COSTING, WHICH ALSO INCLUDES OPERATING AND SUPPORT COSTS. EFFECTS OF REDUCED FUNDS ON ACHIEVING SYSTEM READINESS AND ON OVERALL ILS AND MANPRINT PROGRAM EXECUTION MUST BE IDENTIFIED. NOTE THAT COST EFFECTIVENESS OF IDENTIFIED LSA TASKS IS INCLUDED IN LSA TASK 101, LSA STRATEGY.
E11.8A3	ASSESS LCC INFLUENCE ANALYSIS	ASSESS THE ANALYSIS OF LIFE CYCLE COST AS THE TOTAL COST OF OWNERSHIP AND ITS VALUE RELATIVE TO ACQUISITION COST, INCLUDING ADDITIONAL COST FOR DESIGN CHANGES AND THE RESULTANT EFFECT ON O&S COST REDUCTION.
E11.8A4	ASSESS O&S COST REDUCTION INFLUENCE ANALYSIS	ASSESS ANALYSIS OF O&S COST REDUCTION WHICH INCLUDES DESIGN REQUIREMENTS TO IMPROVE PERFORMANCE BY ELIMINATING HIGH DRIVERS OR REDUCES SUPPORT DEMANDS BY REDUCING MANPOWER, PERSONNEL OR TRAINING REQUIREMENTS.
E11.8A5	ASSESS DESIGN FOR DISCARD	ASSESSMENT OR REPAIR VS DISCARD ANALYSIS IS AN INTEGRAL PART OF THE EFFORTS IN LEVEL OF REPAIR ANALYSIS, LSA SUBTASK 303.2.7.
E11.8A6	ASSESS EVALUATION OF LEVEL OF REPAIR ANALYSIS	ASSESS THE EVALUATION OF THE LEVEL OF REPAIR ANALYSIS TO ASSURE THAT EQUIPMENT AND COMPONENT REPAIR LEVEL OR DISCARD DECISIONS ARE ESTABLISHED ON AN ECONOMICAL AND EFFECTIVE BASIS ON ALL FAILED ITEMS OF REPAIR HARDWARE FOR EACH MAINTENANCE ACTION ON THE ITEMS. THE LORA PROGRAM PLAN FOR ACCOMPLISHING THE LORA PROGRAM SHOULD BE EVALUATED TO ASSESS THE SPECIFIC LORA METHODOLOGY/MODEL UTILIZED FOR DETERMINING THE DISCARD AND REPAIR LEVEL ASSIGNMENTS AND THAT THE DESIGN OF ITEMS REFLECT THE DECISIONS FOR DISCARD OR REPAIR.

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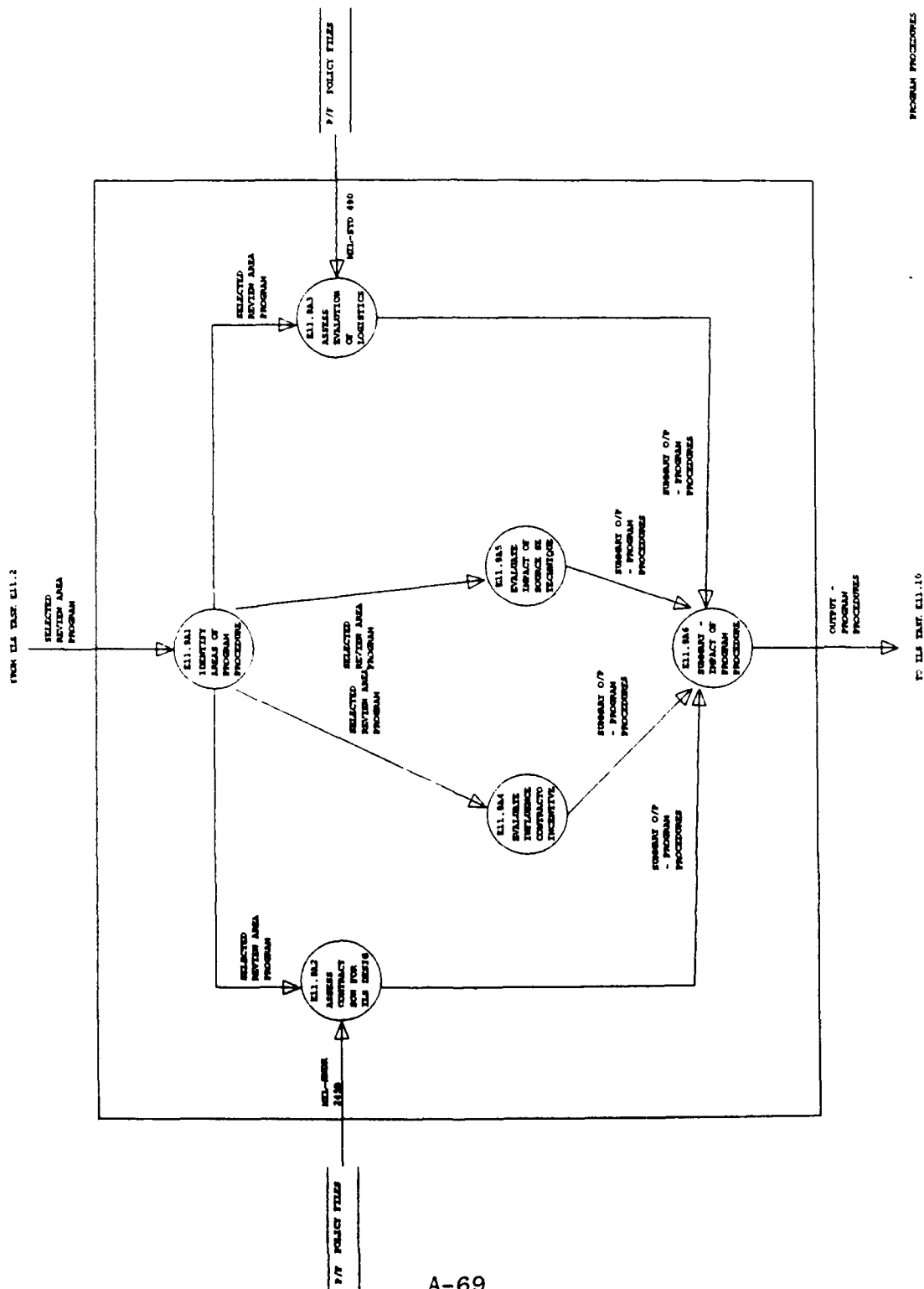
Name	Label	Description
E11.8A7	ASSESS EVALUATION OF ENERGY EFFICIENCY	ACRONYM: LSA - LOGISTIC SUPPORT ANALYSIS ASSESS CONTRACTOR'S EVALUATION OF THE MAJOR DESIGN PARAMETERS AND CONSTRAINTS THEIR INFLUENCE ON THE ENERGY EFFICIENCY OF THE DEVELOPMENT ITEM/EQUIPMENT AND ANY PROGRAM CONSTRAINTS WHICH MAY BE INCLUDED IN THE PRODUCT SPECIFICATIONS OF PROGRAM OBJECTIVES. ALSO, ASSESS TRADE-OFF RESULTS BETWEEN SYSTEM/EQUIPMENT AND ENERGY REQUIREMENTS FROM LSA SUBTASK 303.2.10.
E11.8A8	ASSESS TRADE-OFF ANALYSIS	ASSESS THE TRADE-OFF ANALYSIS WHICH DETERMINES THE BEST DESIGN TO SATISFY THE NEED WITH THE BEST BALANCE BETWEEN COST, SCHEDULE, PERFORMANCE, READINESS AND SUPPORTABILITY. THE TRADE-OFF ANALYSIS SHOULD ADDRESS LSA SUBTASKS UNDER TASK 303 AS IDENTIFIED IN THE LSA PLAN (TASK 102) AND INCLUDE SUPPORT SYSTEM ALTERNATIVES ESTABLISHED BY LSA TASK 302.
E11.8A9	SUMMARY - IMPACT OF ECONOMICS INFLUENCE ON DESIGN	THE SUMMARY IMPACT OF ECONOMICS INFLUENCE ON DESIGN WILL RESULT IN AN OPTIMIZED SYSTEM DESIGN INCORPORATING THE BEST BALANCE IN TERMS OF SYSTEM PERFORMANCE AND RESOURCES BY CONSIDERING THE IDENTIFIED ECONOMICAL ASPECTS AFFECTING DESIGN DECISIONS.

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Name	Label	Description
SEL/ECON/AREA	SELECTED ECONOMICS AREA FOR DESIGN INFLU ANALYSIS, AND ENERGY EFFICIENCY AND CONSTRAINTS. ASSESSMENT	SELECTED ECONOMICS AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE PROGRAM FUNDING CONSTRAINTS, ANALYSIS OF LIFE CYCLE COST, OPERATIONS AND SUPPORT COST REDUCTION, DESIGN FOR DISCARD EFFORTS, LEVEL OF REPAIR
SUM/ECON/OUT	SUMMARY O/P - ECONOMICS ASSESSMENT ON DESIGN INFLUENCE	THE SUMMARY OUTPUT FOR ECONOMICS ASSESSMENT ON DESIGN INFLUENCE INCLUDES SUMMARY IMPACTS ON EACH SELECTED ECONOMIC AREA FOR WHICH A DESIGN INFLUENCE ASSESSMENT HAS BEEN CONDUCTED, AND WHICH ARE USED AS INPUTS TO ILS TASK E11.8A8 FOR TRADE-OFF ANALYSES TO RESULT IN THE SUMMARY IMPACT OF ECONOMICS INFLUENCE ON DESIGN. AREAS FOR TRADE-OFF ANALYSIS INCLUDE PROGRAM FUNDING CONSTRAINTS, LIFE CYCLE COST ANALYSIS, OPERATION AND SUPPORT COST REDUCTION, DESIGN FOR DISCARD EFFORTS, LEVEL OF REPAIR ANALYSIS, AND ENERGY EFFICIENCY AND CONSTRAINTS.
SUM/OUT/ECON	SUMMARY O/P - ECONOMICS TRADE-OFF ANALYSIS	A SUMMARY OF THE ECONOMICS TRADE-OFF ANALYSIS RESULTS THAT MAY BE USED IN THE PREPARATION OF A SUMMARY OR FINAL REPORT ON THE IMPACT OF ECONOMICS ON DESIGN INFLUENCE.
SEL/ECONO/AREA	SELECTED REVIEW AREA ECONOMICS	SELECTED AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE MANPRINT, SAFETY, TECHNOLOGY, RAM, PROGRAM INTERFACES, ECONOMICS, AND PROGRAM PROCEDURES. IN THIS DATA FLOW DIAGRAM, ECONOMICS IS THE SELECTED AREA FOR ANALYSIS.
OUTPUT/ECONO	OUTPUT-ECONOMICS ASSESSMENT ON DESIGN INFLUENCE	THE RESULTS OF THE ASSESSMENT OF ECONOMICS ON DESIGN INFLUENCE WILL BE A BASIC INPUT TO THE SUMMARY REPORT IN SUBTASK E11.10.



LIA-82
 Created by: JAC
 Revised by: LIAJH
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Name	Label	Description
E11.9A1	IDENTIFY AREAS OF PROGRAM PROCEDURES INFLUENCE	IDENTIFY THOSE AREAS OF PROGRAM PROCEDURES WHICH MAY HAVE OR HAVE HAD AN INFLUENCE ON THE DESIGN. AS A MINIMUM, CONSIDERATION IS GIVEN TO THE FOLLOWING AREAS: 1. CONTRACTOR INCENTIVE PROVISIONS 2. SOURCE SELECTION EVALUATION METHODS AND CRITERIA, SUCH AS WEIGHTING FACTORS ASSIGNED TO VARIOUS PORTION OF THE CONTRACT PROPOSALS. THESE SPECIFIC AREAS MAY AND SHOULD BE EXPANDED TO COVER OTHER AREAS THAT COME TO LIGHT AS THE REVIEW PROGRESSES.
E11.9A4	EVALUATE INFLUENCE- CONTRACTOR INCENTIVES PROGRAM	DESCRIPTION: EVALUATION OF CONTRACTORS INCENTIVE PROGRAM SHOULD INCLUDE THE FOLLOWING: CONTRACTOR INCENTIVES CAN ONLY BE EFFECTIVE IF PROPERLY INSERTED INTO THE REQUEST FOR PROPOSAL AND SUBSEQUENT CONTRACT. THE APPROPRIATE INCENTIVES MUST BE DEFINITELY STATED IN THE STATEMENT OF WORK (SOW) AND SUCCESSFUL ACCOMPLISHMENT MUST BE MEASURABLE DURING CONTRACT PERFORMANCE. REFER TO MIL-HDBK-245B, "PREPARATION OF SOW", WHICH DEFINES ALL NON-SPECIFICATION REQUIREMENTS, IN ADDITION, SYSTEM SPECIFICATION IN ACCORDANCE WITH MIL-STD-490, "SPECIFICATION PRACTICES", MUST INCLUDE PERFORMANCE REQUIREMENTS RELATED TO MANNING, OPERATING, MAINTAINING AND LOGISTICALLY SUPPORTING THAT SYSTEM, TO THE EXTENT THAT THESE REQUIREMENTS DEFINE OR CONSTRAIN DESIGN OF THAT SYSTEM/EQUIPMENT. ALSO, WITHIN THE TWO BASIC TYPES OF CONTRACTS - FIXED PRICE OR COST REIMBURSEMENT - THERE IS FIXED PRICE INCENTIVE (FPI) AND COST PLUS INCENTIVE FEE (CPIF). NOTE THAT A SOW, SPECIFICATION, TAILORED DATA ITEM DESCRIPTION (DID) AND CONTRACT DATA REQUIREMENTS LIST (CDRL) PREPARED IN EXPLICIT TERMS, WILL SOLICIT MORE CONCLUSIVE PROPOSALS, IMPROVE PROPOSAL EVALUATION CRITERIA, AND ULTIMATELY WILL ALLOW EASIER CONTRACTOR EVALUATION AFTER CONTRACT AWARD.
E11.9A5	EVALUATE IMPACT OF SOURCE SEL TECHNIQUE & WEIGHTING	EVALUATION OF IMPACT OF SOURCE SELECTION TECHNIQUE INCLUDES REVIEW OF SELECTION EVALUATION FACTORS WHICH MUST BE LINKED TO APPROPRIATE SOW REQUIREMENTS. THE CRITERIA SELECTED MUST BE DEFINABLE IN QUALITATIVE OR QUANTITATIVE TERMS. THEY MUST BE MEASURABLE AND WHEN THE PROPOSAL IS OBJECTIVELY COMPARED WITH THE CRITERIA, THE BASIC ACT OF EVALUATION HAS BEEN ACCOMPLISHED. THE WEIGHT ASSESSMENT IS A GAUGE OF THE RELATIVE IMPORTANCE OF ALL THE AREAS, ELEMENTS, AND FACTORS USED IN EVALUATING THE PROPOSAL. IF NUMERIC WEIGHTING IS USED, EACH SCORE SHOULD BE ACCOMPANIED BY A SUPPORTING NARRATIVE DISCUSSING THE STRONG AND WEAK POINTS CONSIDERED IN THE SCORING.
E11.9A6	SUMMARY - IMPACT OF PROGRAM PROCEDURES ON DESIGN	THE SUMMARY IMPACT OF PROGRAM PROCEDURES WILL ASSURE THAT TERMS OF THE CONTRACT WILL INFLUENCE THE DESIGN TO SATISFY ARMY REQUIREMENTS AND THAT ILS AND MANPRINT REQUIREMENTS ARE PROPERLY INSERTED INTO THE RFP PROCEDURES AND CONTRACT WITH TASKS DEFINITELY STATED AND CONTROLLED TO ASSURE SUCCESSFUL ACCOMPLISHMENT.

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Name	Label	Description
E11.9A2	ASSESS	ACRONYM:
	CONTRACT	ILS - INTEGRATED LOGISTIC SUPPORT
	SOW FOR	LSA - LOGISTIC SUPPORT ANALYSIS
	ILS DESIGN	LSAR - LOGISTIC SUPPORT ANALYSIS REPORT
	INFLUENCE	SOW - STATEMENT OF WORK
		EVALUATION OF THE DEVELOPMENTAL CONTRACT STATEMENT OF WORK MUST ASSURE THAT THE DESIRED CONTRACTOR'S ILS EFFORTS ARE CLEARLY COMMUNICATED TO LOGISTICALLY INFLUENCE MATERIEL DESIGN AND DEFINE THE SUPPORT CRITERIA AND SUPPORT SYSTEM REQUIREMENTS. SINCE ILS/LSA/LSAR PRODUCTS AND SERVICES CANNOT BE SPECIFICALLY DEFINED IN TERMS OF SPECIFICATIONS, THE CONTRACT SOW WILL ORDINARILY SERVE AS ITS MEDIUM FOR DESCRIPTION. THE SOW MUST DESCRIBE THE WORK TO BE ACCOMPLISHED, IDENTIFY THE METHODS BY WHICH THE GOVERNMENT DETERMINES ITS REQUIREMENTS HAVE BEEN MET, AND IDENTIFY BOTH THE TECHNICAL AND MANAGEMENT DATA TO BE GENERATED OR PRODUCED AS PART OF THE WORK EFFORT.
E11.9A3	ASSESS	EVALUATION OF SYSTEM AND/OR DEVELOPMENT SPECIFICATIONS TO ADDRESS
	EVALUATION	LOGISTIC INFLUENCE ON SYSTEM AND/OR PRIME ITEM DESIGN.
	OF	EVALUATION OF THE LOGISTICS CONTENT OF SPECIFICATIONS MUST ENSURE
	LOGISTICS	THAT SUFFICIENT REQUIREMENTS ARE INCLUDED TO CONTROL THE DESIGN AND
	SPECS	INDICATE PERFORMANCE OF THE EQUIPMENT. MIL-STD-490, "SPECIFICATION PRACTICES" SHOULD BE FOLLOWED FOR CONTENT DEFINITION, PERFORMANCE REQUIREMENTS RELATED TO MANNING, OPERATING, MAINTAINING, AND LOGISTICALLY SUPPORTING THE SYSTEM/EQUIPMENT MUST BE INCLUDED TO THE EXTENT THEY DEFINE OR CONSTRAIN EQUIPMENT DESIGN. ALSO INCLUDED ARE DESIGN CONSTRAINTS AND STANDARDS NECESSARY TO ASSURE COMPATABILITY OF SYSTEM HARDWARE AND ITEM COMPONENTS, AND THE SPECIFIC DESIGN CONSTRAINTS PECULIAR TO EACH IDENTIFIED FUNCTIONAL AREA OR MAJOR COMPONENT.

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TIME: 10:28

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Name	Label	Description
SEL/PROC/AREA	SELECTED REVIEW AREA- PROGRAM PROCEDURES	SELECTED PROGRAM PROCEDURES AREAS FOR DESIGN INFLUENCE ASSESSMENT INCLUDE EVALUATION OF THE ILS STATEMENT OF WORK, LOGISTICS SPECIFICATIONS, CONTRACTOR INCENTIVES PROGRAM, AND SOURCE SELECTION TECHNIQUES AND WEIGHTING.
SUM/PROC/OUT	SUMMARY O/P - PROGRAM PROCEDURES ASSESSMENT -	THE SUMMARY OUTPUT FOR PROGRAM PROCEDURES ASSESSMENT ON DESIGN INFLUENCE INCLUDES SUMMARY IMPACTS ON EACH SELECTED PROGRAM PROCEDURE AREA FOR WHICH A DESIGN INFLUENCE ASSESSMENT HAS BEEN CONDUCTED. AREAS INCLUDE EVALUATION OF ILS STATEMENT OF WORK, LOGISTICS SPECIFICATION, DESIGN INFLU CONTRACTOR INCENTIVE PROGRAMS, AND SOURCE SELECTION TECHNIQUES AND WEIGHTING.
OUTPUT/PROG/PROC	OUTPUT - PROGRAM PROCEDURES ASSESSMENT ON DESIGN	THE RESULTS OF THE ASSESSMENT OF PROGRAM PROCEDURES ON DESIGN INFLUENCE WILL BE A BASIC INPUT TO THE SUMMARY REPORT IN ILS TASK E11.10.
MIL-HDBK-245B	MIL-HNDK 245B	PREPARATION OF STATEMENT OF WORK (SOW)
MIL-STD-490	MIL-STD 490	SPECIFICATION PRACTICES

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Name	Label	Description
P/F	POLICY FILES	CONTAINS THOSE MILITARY PUBLICATIONS, DECISION PAPERS, MISSIONS & FUNCTIONS, etc, WHICH ARE NEEDED TO ESTABLISH THE LOGISTICAL SUPPORT AND REVIEW REQUIREMENTS OF THE ITEM/EQUIPMENT DEVELOPMENT PROGRAM. THIS DATA STORE INCLUDES: 1. AR 12-16, "MUTUAL LOGISTICS SUPPORT BETWEEN THE U.S. AND OTHER NORTH ATLANTIC TREATY ORGANIZATION FORCES" 1a. AR 70-1, "SYSTEMS ACQUISITION POLICY AND PROCEDURES" 1b. AR 70-2, "RESEARCH, DEVELOPMENT, & ACQUISITION MATERIEL STATUS RECORDING" 1c. AR 70-10, "R&D - TEST & EVALUATION DURING DEVELOPMENT AND ACQUISITION OF MATERIEL" 1d. "AR 570-9, "MANPOWER AND EQUIPMENT CONTROL - HOST NATION SUPPORT" 2. AR 700-9, "POLICIES OF THE ARMY LOGISTIC SYSTEM" 3. AR 700-82, "JOINT REGULATION GOVERNING THE USE AND APPLICATION OF UNIFORM SOURCE MAINTENANCE AND RECOVERABILITY CODES" 4. AR 700-127, "INTEGRATED LOGISTICS SUPPPORT" 5. AR 725-50, "REQUISITIONING, RECEIPT AND ISSUE SYSTEM" 6. AR 750-1, "MAINTENANCE OF SUPPLIES & EQUIPMENT - ARMY MATERIEL MAINTENANCE CONCEPTS & POLICIES" 7. AMC-R-700-27, "LEVEL OF REPAIR ANALYSIS (LORA) PROGRAM" 8. AMC-R-750-10, "DEPOT MAINTENANCE INTERSERVICE" 9. DA PAM 700-4 10. DA PAM 700-28, "INTEGRATED LOGISTIC SUPPORT PROGRAM ASSESSMENT ISSUES AND CRITERIA" 11. DA PAM 700-50, "INTEGRATED LOGISTIC SUPPORT - DEVELOPMENTAL SUPPORTABILITY TEST AND EVALUATION GUIDE" 12. DA PAM 700-55, "INSTRUCTIONS FOR PREPARING THE INTEGRATED LOGISTIC SUPPORT PLAN" 12a. DA PAM 738-750, "THE ARMY MAINTENANCE MANAGEMENT SYSTEMS (TAMMS)" 13. DA PAM 750-21, "LOGISTIC SUPPORT MODELLING" 14. AMC PAM 700-4, "LOGISTICS SUPPORT ANALYSIS TECHNIQUES GUIDE (WITH PALMAN)" 14a. AMC PAM 700-11, "LOGISTICS SUPPORT ANALYSIS REVIEW TEAM GUIDE" 15. AMC PAM 750-2, "MAINTENANCE OF SUPPLIES AND EQUIPMENT GUIDE TO RELIABILITY CENTERED MAINTENANCE" 16. MIL-STD-152, "TECH REVIEW GUIDELINES" 17. MIL-STD-210A, "CLIMATIC EXTREMES FOR MILITARY EQUIPMENT" 18. MIL-STD-470, -471, "MAINTAINABILITY STANDARDS" 19. MIL-STD-756, "RELIABILITY MODELLING & PREDICTIONS" 20. MIL-STD-780, "MAINTENANCE ENGINEERING ANALYSIS CONTROL NUMBER (MEACNS) FOR AERONAUTICAL EQUIPMENT, UNIFORM NUMBERING SYSTEM" 21. MIL-STD-781, "RELIABILITY DESIGN QUALIFICATION AND PRODUCTION ACCEPTANCE TESTS: EXPONENTIAL DISTRIBUTION" 22. MIL-STD-785B, "RELIABILITY PROGRAM FOR SYSTEMS AND EQUIPMENT DEVELOPMENT & PRODUCTION" 23. MIL-STD-810, "ENVIRONMENTAL TEST METHODS & ENGINEERING GUIDELINES" 24. MIL-STD-881, "WORK BREAKDOWN STRUCTURES FOR DEFENSE MATERIEL ITEMS" 25. MIL-STD-882, "SYSTEM SAFETY PROGRAM REQUIREMENTS" 26. MIL-STD-965, "PARTS CONTROL PROGRAM" 27. MIL-STD-1369A, "INTEGRATED LOGISTIC SUPPORT PROGRAM REQUIREMENTS"

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Name	Label	Description
		28. MIL-STD-1388-1A, "LOGISTICS SUPPORT ANALYSIS"
		29. MIL-STD-1388-2A, "LOGISTICS SUPPORT ANALYSIS RECORD"
		30. MIL-STD-1629, "PROCEDURES FOR PERFORMING A FAILURE MODE, EFFECTS & CRITICALITY ANALYSIS"
		31. MIL-HDBK-472, "MAINTAINABILITY PREDICTION"
		32. MIL-M-24100B, "FUNCTIONALLY ORIENTED MAINTENANCE MANUALS (FOMM) FOR EQUIPMENT & SYSTEMS"
F/F(2)	POLICY FILES(2) SUPPLEMENT	33. AR 70-38, "RESEARCH, DEVELOPMENT, TEST & EVALUATION OF MATERIEL FOR EXTREME CLIMATIC CONDITIONS"
		34. AR 602-1, "PERSONNEL-MATERIEL SYSTEMS - HUMAN FACTORS ENGINEERING PROGRAM"
		35. AR 602-2, "MANPOWER AND PERSONNEL INTEGRATION (MANPRINT) IN MATERIEL ACQUISITION PROCESS"
		36. AR 700-47, "LOGISTICS - DEFENSE STANDARDIZATION AND SPECIFICATION PROGRAM"
		37. AR 700-60, "LOGISTICS - DEPARTMENT OF DEFENSE PARTS CONTROL PROGRAM"
		38. AR 700-129, "MANAGEMENT AND EXECUTION OF INTEGRATED LOGISTIC SUPPORT (ILS) PROGRAMS FOR MULTISERVICE ACQUISITIONS"
		39. DA PAM 700-55, "INSTRUCTIONS FOR PREPARING THE INTEGRATED LOGISTIC SUPPORT PLAN."
		40. MIL-STD 210G "CLIMATIC INFORMATION TO DETERMINE DESIGN AND TEST REQUIREMENTS FOR MILITARY SYSTEMS AND EQUIPMENT."
DID#	DATA ITEM DESCRIPTIONS	41. DI-R-1734, FAILURE MODES, EFFECTS, AND CRITICALITY REPORT
		42. DI-R-2114, RELIABILITY ALLOCATION REPORT
		43. DI-R-2115A, FAILURE MODE AND EFFECT ANALYSIS REPORT
		44. DI-R-2129, MAINTAINABILITY DEMONSTRATION PLAN
		45. DI-R-2130A, MAINTAINABILITY DEMONSTRATION REPORT
		46. DI-S-3604, FUNCTIONAL FLOW DIAGRAM
		47. DI-R-7033, RELIABILITY TEST PLAN
		48. DI-R-7034, RELIABILITY TEST AND DEMONSTRATION REPORTS
		49. DI-R-7035, RELIABILITY TEST AND DEMONSTRATION PROCEDURES
		50. DI-R-7040, BURN-IN TEST REPORT
		51. DI-R-7041, FAILURE SUMMARY AND ANALYSIS REPORT
		52. DI-R-7079, RELIABILITY PROGRAM PLAN
		53. DI-R-7080, RELIABILITY STATUS REPORT
		54. DI-R-7081, RELIABILITY MATHEMATICAL MODEL(S)
		55. DI-R-7082, RELIABILITY PREDICTIONS REPORT
		56. DI-R-7083, SNEAK CIRCUIT ANALYSIS REPORT
		57. DI-R-7084, ELECTRONIC PARTS/CIRCUITS TOLERANCE ANALYSIS REPORT
		58. DI-R-7085, FAILURE MODE, EFFECTS, AND CRITICALITY ANALYSIS REPORT
		59. DI-R-7105, DATA COLLECTION, ANALYSIS AND CORRECTIVE ACTION SYSTEM REPORT
		60. DI-R-7106, MAINTAINABILITY MODELLING REPORT
		61. DI-R-7107, MAINTAINABILITY ALLOCATIONS REPORT
		62. DI-R-7108, MAINTAINABILITY PREDICTIONS REPORT
		63. DI-R-7109, MAINTAINABILITY ANALYSIS REPORT
		64. DI-R-7110, MAINTAINABILITY DESIGN CRITERIA PLAN
		65. DI-R-7111, INPUTS TO THE DETAILED MAINTENANCE PLAN AND LOGISTICS SUPPORT ANALYSIS

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Name	Label	Description
		66. DI-R-7112, MAINTAINABILITY DEMONSTRATION TEST PLAN
		67. DI-R-7113, MAINTAINABILITY DEMONSTRATION REPORT
		68. DI-R-35011, CRITICAL ITEM CONTROL PLAN

ANNEX B

STRUCTURED SYSTEMS ANALYSIS

Fundamentals

ANNEX B
STRUCTURED SYSTEMS ANALYSIS

Fundamentals

Structured Systems Analysis (SSA) has recently become an industry standard for generating Data Flow Diagrams (replacing "logic diagrams" or "flow charts") to aid in coordinating the functions to be performed by a computer program and its associated Inputs/Outputs (I/O). During the SSA, each set of "flow charts" can be checked by the potential user to assure that there is complete agreement on what is to be done by the program, and how it is to be accomplished. It also provides considerable flexibility for updating or changing the program.

Six basic elements are used in SSA:

1. Process (PRC)
2. Data Flow (DAF)
3. Data Store (DAS)
4. External Entity (EXT)
5. Data Flow Diagram (DFD)
6. Data Dictionary (DCT)

PROCESS (Represented by a Circle):

A function or operation to be performed which can be explained by a set of instructions representing a single task, e.g., "calculate interest on a loan", "prepare a draft report". If the Process description is too complex to describe in a few steps, it may be necessary to develop a lower level description (see below).

DATA FLOW (Lines interconnecting Processes or I/Os):

Each function or Process cannot be a stand-alone in a complex network. To have any meaning in a program, each process must be initiated by a previous action and/or provided information on which to act. Furthermore, a Process must result in an output which is the input to the next logical Process. These inputs, outputs, or initiating actions are identified as Data Flows, and are represented by the Data Flow lines indicating its point of origin and the process to which it provides data.

DATA STORE (Represented by two parallel lines):

Although some Processes generate data used as input to a succeeding Process, there is often a need to "gather or collect" information from files in which it is stored. This information may come from an external source (such as a MIL-STD, Army regulation, historical experience files, etc.), or an internal source or file in which data is temporarily stored for use by succeeding processes. These Data Stores can be visualized as a "file cabinet", in which the data are stored for later retrieval).

EXTERNAL ENTITY (Represented by a Rectangle):

Each program or logical process must have an initiating action, a "point" of disposition of the results, and possibly input guidance or instructions. Each of these have authorities, functions, or applications which are independent of the program Process (although required by the program Process). Thus, these activities, agencies, or facilities are considered "External Entities" to the program.

DATA FLOW DIAGRAM:

The general arrangement of the above can be readily seen. First, the circle or Process describes what has to be done; the interconnecting lines represent the Data Flows, together with the specific description of all I/Os. The Data Stores identify the source and/or file designation of a data base, and the External Entities represent those activities remote from the Process, which are the source of guidance or the recipients of the program. This combination of Processes, Data Flows, Data Stores, and External Entities constitutes a "Data Flow Diagram". The unique feature of the Data Flow Diagram (DFD) is that each process can be considered independently, permitting a change to be made in one Process without a major change in the overall program.

DATA DICTIONARY:

The Data Dictionary consists of a complete description of each of the basic elements. For the Process, it contains a step-by-step description of what has to be performed. The description of the Data Flow identifies the nomenclature of the data, a detailed description of its content, and its source. The Data Stores and External Entities are described, including possible location.

The Data Dictionary (a living document) begins with a description of the first Process and is continually built-up as the Data Flow Diagrams are expanded, detailed, and eventually completed.

APPROACH TO PERFORMING STRUCTURED SYSTEM ANALYSIS:

The best approach to Structured Systems Analysis is to assume that the program consists of a series of processes, each of which are to be assigned to an inexperienced analyst. Each analyst is to be walked through the assigned process of the Program, explaining step-by-step what functions have to be performed or what actions have to be taken to accomplish the process. The analyst is also informed where the information is coming from (input Data Flow), what is to be generated by each process (output Data Flow), where the data base may to be found (Data Stores), and who to contact for guidance (External Entities).

The best way to initiate a SSA is to set down the point of origin of a program, its final goal(s), and the intermediate functions or actions needed to get from beginning to goal. Each step should be considered as a Process - some may be sequential and others parallel. Then, the steps needed to accomplish the Process should be described. If the description is complex and needs intermediate steps, the Process is then a candidate for an "explosion". That is, the top (or upper) level Process is considered as a "project" and its own Data Flow Diagram is prepared.

When writing the step-by-step procedures in the Process, certain elements of data (or information) must be made available for the procedure. Each element of data is considered as an input Data Flow, which is identified and described. The product (or result) of a Process is an output Data Flow element.

Each Data Flow to the Process must originate from:

1. an earlier Process
2. a Data Store (or file)
3. an External Entity.

These sources are also identified, described and put into the Data Dictionary. As soon as the last portion of the Data Flow Diagram has been described, the SSA is complete.

GLOSSARY

GLOSSARY

AMSDL	Acquisition Management Systems and Data Requirements Control List
APJ	American Power Jet Company
AR	Army Regulation
DFD	Data Flow Diagram
DID	Data Item Description
ILS	Integrated Logistic Support
LCC	Life Cycle Cost
LSA	Logistic Support Analysis
LSAR	Logistic Support Analysis Report
PAM	Pamphlet
PGSE	Peculiar Ground Support Equipment
O&S	Operations and Support
RAM	Reliability, Availability and Maintainability
SSAD	Structured Systems Analysis and Design