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**AUTOMATED LOGISTICS SUPPORT ANALYSIS TOOL
Version 1.0**

**USER'S MANUAL
Functional Requirements Risk Identification
(LSA Subtask 301.2.3)**

APJ 966-604

APJ



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18. AND SUBTASKS MODULES, WEAPON SYSTEM LIFE CYCLE STAGE INDEPENDENT, LIFE CYCLE PHASES, WEAPON SYSTEM/END ITEM, STAGE, DEFINES, ORGANIZES, TRACKS, MODELS AND REPORTS ON LSA PROCEDURES, COLLATING AND FORMATTING INFORMATION, ANALYSIS PROCESS, WEAPON SYSTEM SUPPORT CONCEPT, STRUCTURED METHODOLOGIES, FUNCTIONAL REQUIREMENTS RISK IDENTIFICATION, LOGISTIC SUPPORT ANALYSIS, LSA, OPTIMAL SOLUTIONS, SYSTEM DESCRIPTION AND ACQUISITION DATA INPUTS, DESIGN IMPACT, COST EFFECTIVENESS, AVAILABILITY OF DATA, ON-LINE HELP, SUPPORTABILITY OBJECTIVES, WEAPON SYSTEM/END ITEM ACQUISITION, SELECTION RATIONALE, ILS ELEMENT SUBELEMENT, FUNCTIONAL REQUIREMENTS IDENTIFICATION.

APJ 966-604

AUTOMATED LOGISTICS SUPPORT ANALYSIS TOOL
Version 1.0

USER'S MANUAL

Functional Requirements Risk Identification
(LSA Subtask 301.2.3)

under

CONTRACT DAAA21-86-D-0025

for

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

by

AMERICAN POWER JET COMPANY

RIDGEFIELD, NJ

ARLINGTON, VA

WILLIAMSBURG, VA

ST. LOUIS, MO

May 1991

PLEASE READ THIS

The Automated Logistics Support Analysis Tool (ALSAT) software consists of an Executive Module and a set of LSA Task/Subtask Modules.

To operate ALSAT, both the Executive Module and the Task/Subtask Modules you wish to use must be installed.

There is a separate User's Manual for each Task/Subtask Module. To effectively utilize ALSAT, obtain both the Executive Module User's Manual and the applicable Task/Subtask User's Manuals.

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FOREWORD

This manual supports the automation of the US Army Logistic Support Analysis (LSA) Tasks and Subtasks. It is the complete user documentation package and is provided for guidance in using Automated Logistics Support Analysis Tools (ALSAT).

ALSAT provides a computer assisted guide to logisticians in the performance of Logistics Support Analysis Tasks and Subtasks as defined in MIL-STD-1388-1A. It helps to identify the optimal solutions to operation and support requirements, addressed in the Logistics Support Analysis process, during the life cycle phases of a Weapon System/End Item. It defines, organizes, tracks, models and reports on procedures that are used to develop the support concept. The objective of ALSAT is to reduce the time spent by logisticians on tedious administrative efforts of organizing, collating and formatting information developed in the analysis process.

The ALSAT is being developed by the American Power Jet (APJ) Company, under contract to HQs AMCCOM. A major goal of the project is to unify the military and contractor approach to the performance of LSA. This approach was validated by AMCCOM, and necessary adjustment made to attain a fully useful and user-friendly program.

Structured methodologies were used to develop the software logic in accordance with MIL-STD-1388-1A "Logistic Support Analysis". This module refers to LSA Task 301 "Functional Requirements Identification". It fulfills the requirements of LSA Subtask 301.2.3, "Functional Requirements Risk Identification". The structured analysis and design for this module was presented in APJ Report 966-242. APJ's task performance has been closely coordinated with AMCCOM. Their experience has been captured in APJ's logic through continued coordination and review at the working level.

The Functional Requirements Risk Identification Module is designed to utilize the output of specific prerequisite LSA tasks. They identify and categorize new system/equipment functional requirements and specify system and supportability drivers. System and supportability drivers that were previously identified as risks are assessed against the system functional requirements. Drivers that are found to pose a risk in meeting the functional requirement are tagged as a functional requirement risk. The outputs from this module are: (1) A list of the complete set of functional requirement where each is followed by its system and supportability risks. (2) The system and supportability risks where each is followed by the functional requirements that are affected by the risk.

These reports document the many to many relationships that exist between the Functional Requirements and the System/Supportability Risks. A Functional Requirement can have many risks and a risk can affect many Functional Requirements.

This manual and its accompanying software is to be used in conjunction with the APJ ALSAT Executive User's Manual (APJ Report 966-600). The accompanying Manual is required to attain the full functionality of the ALSAT software.

The LSA software is available through HQ AMCCOM, AMSMC-LSP to Program/ILS Managers and logistic specialists responsible for doing the LSA Tasks and Subtasks. Its use reduces the time involved in completing the analysis while producing significantly enhanced results.

This work was performed by a task team for APJ: George Chernowitz, Scott Lerman, Siddhartha Chaudhuri, Kayin Tong, James Cargile, David Vaught and Gary Bill. The team was ably supported in production by Denise Montanez.

The support of Messrs. Ned A. Shepherd and Ron Duclos of AMCCOM, AMSMC-LSP is gratefully acknowledged for their assistance in many regards.

All comments on this version are welcome and should be addressed to:

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CHAPTER 1 INTRODUCTION

1.1 GENERAL

USER'S GUIDE

1.1.1 This User's Manual is designed to serve as a guide for logisticians executing computer-assisted US Army Logistic Support Analysis (LSA). This manual supports the accomplishment of a single LSA subtask and demonstrates the integration of prior LSA efforts in a fashion which produces significant management information.

1.2 SCOPE

REGULATORY REQUIRE- MENTS

1.2.1 The US Department of Army is charged with the detailed management of its material development procedures, of which Logistic Support Analysis is a part. MIL-STD-1388-1A is the document supporting Logistic Support Analysis, which in turn implements the LSA guidelines and requirements established by DOD Instructions 5000.2, "Major Systems Acquisition Procedures", and DOD Directive 5000.39, "Acquisition and Management of Integrated Logistic Support for Systems and Equipment".

US ARMY LSA

1.2.2 In response to these requirements, Headquarters, US AMCCOM, acting as US Army agent, has initiated action to develop a computer-assisted program to aid logisticians in the accomplishment of LSA requirements. This program will insure consistency of effort and standardization of results, both during US Army in-house LSA efforts and during contractor conducted LSA. Further, computer-assisted LSA will enable the LSA manager to tie together the efforts of the diverse disciplines involved in this logistic effort.

1.3 CONTRACT REQUIREMENTS

**CONTRACT
REQUIRE-
MENTS**

1.3.1 This software is part of a coordinated HQ, US Army Armament, Munitions and Chemical Command (AMCCOM) and APJ contract effort to provide a uniform and reproducible approach to the logistic tasks addressed by MIL-STD-1388-1A "Logistic Support Analysis," and Army Regulation 700-127, "Integrated Logistic Support."

1.4 LSA REVIEW LOGIC AND ORGANIZATION

**LOGIC AND
ORGANIZA-
TION**

1.4.1 This LSA Subtask 301.2.3 module implements and expands earlier system analysis efforts. A detailed Structured System Analysis and Design, LSA Subtask 301.2.3, Functional Requirements Risk Analysis report was published as APJ 966-242, and served to guide the development effort. Through this earlier effort, the logistic analyst and software programmer were provided a detailed overview of the logic and approach to be taken during development of this module.

**MIL-STD-1388-
1A REQUIRE-
MENTS**

1.4.2 As noted previously, MIL-STD-1388-1A serves as the basis for US Army Logistic Support Analysis efforts. The philosophy of LSA, as outlined in the document, is one of maximum flexibility, avoidance of blanket application of task requirements and the tailoring of task selection to meet new system/equipment LSA requirements. Certain LSA tasks, however, rely upon the results and output of other LSA tasks. LSA Subtask 301.2.3 is such a task, and as the following discussions will indicate, depends upon the completion of prerequisite tasks to provide a basis for Functional Requirements Risk Identification.

1.5 SOFTWARE OVERVIEW AND IMPLEMENTATION

SOFTWARE OVERVIEW

1.5.1 The Functional Requirements Risk Identification module is designed to utilize the output of specific prerequisite LSA tasks, which identified and categorized new system/equipment Functional Requirements, and to capture earlier subtasks results which identified program risks. These two distinct sources of data are then compared to assess Functional Requirement risks potential.

RISK IDENTI- FICATION OVERVIEW

1.5.2 Two paths for identifying Functional Requirement risks are available in the module and thus provide the user flexibility in accomplishment of the LSA subtask. These two paths are schematically described below. The first path (By Functional Risk) is the primary avenue of Functional Requirement risk identification with the alternate path (By Subtask Risk Area) being an equally effective system which provides choices not available in the first path. These two methodologies are explained in detail in Chapter 3.

The primary path is followed by first selecting a Functional Requirement and then specifying the risks for that Functional Requirement in relation to the six LSA Subtask areas. Within each of the LSA Subtask areas, several different risks can be identified. When the risks have been considered in each of the six LSA Subtask areas, the next Functional Requirement is selected and reviewed against the six LSA Subtask areas. This process continues until all Functional Requirements have been considered.

1.5.3 Schematically, the primary Functional Requirement Risk Identification path is shown below:

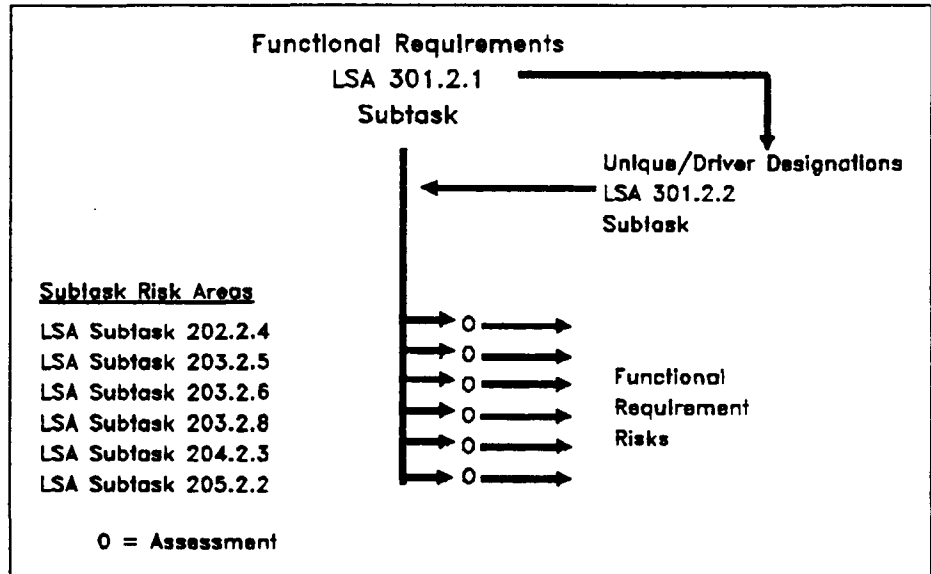


Figure 1-1 Primary Functional Requirement Risk Identification Schematic

1.5.4 Schematically, the alternate Functional Requirement Risk Identification path is shown below:

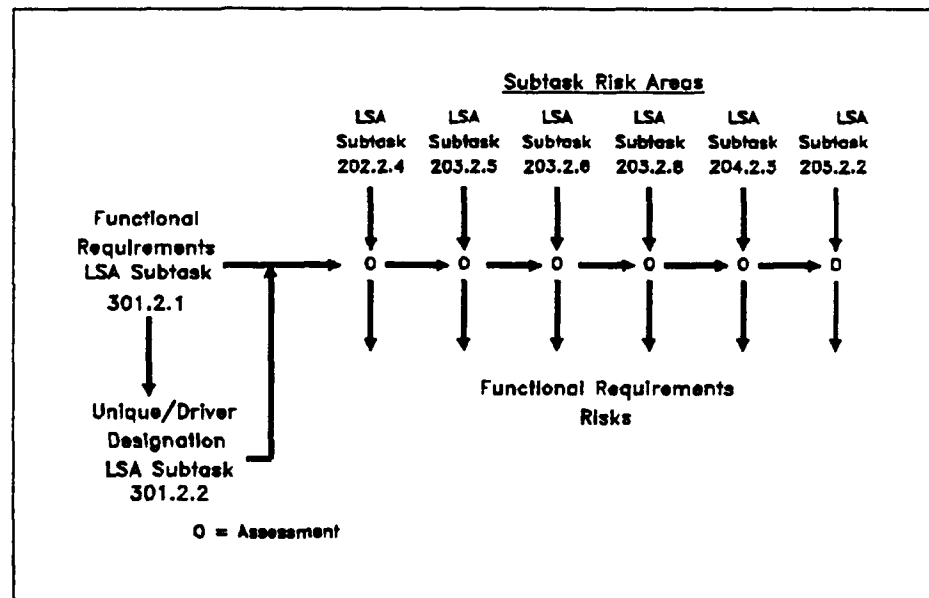


Figure 1-2 Alternate Functional Requirement Risk Identification Schematic

1.5.5 The alternative path is followed by first selecting a subtask area. Within this subtask are a set of risks. Each risk within the subtask area is selected and reviewed against all the Functional Requirements. If a risk is found to be relevant for the Functional Requirement, it is tagged with the risk.

1.5.6 A companion report generation system provides the user maximum flexibility in reporting Subtask results. The four report formats are covered in detail in Chapter 4.

NOTE

Familiarity with the Logistic Support Analysis Plan will help in accomplishing this task. It specifies which LSA subtasks will be done and includes a schedule. The data from LSA Subtask 301.2.1 and 301.2.2 is prerequisite to starting this subtask. Data from the six 200 series Subtasks shown above is also required, however, since all six may not have been scheduled and/or completed, the user must be prepared to proceed with the data available. (A blank screen will be presented if 200 series Subtask data is not available.)

1.6 SOFTWARE PROVIDED**PROGRAM**

1.6.1 The Logistic Support Analysis executive module and Functional Requirement Risk Identification software is loaded on a 360K 5 1/4 inch floppy diskette, which will be provided by the Logistic Support Analysis management office. Chapter 2 of this manual provides Quick Start procedures for ease of user access to the Functional Requirement Risk Identification module.

CHAPTER 2 QUICK START

2.1 GENERAL

2.1.1 This chapter gives the Quick Start procedures to access the Functional Requirement Risk Identification module in the Logistic Support Analysis software program.

NOTE

The manual assumes that the software installation procedures have been completed and that the LSA software is in a subdirectory called LSA which is on the C:\ drive. If the software resides in any other drive or subdirectory, the user must make the appropriate changes.

2.2 START UP PROCEDURES

2.2.1 To enter the LSA software:

**ENTER LSA
SOFTWARE**

After C:>
Type <CD\LSA>
Press <Enter>

After C:\LSA>
Type <LSA>
Press <Enter>

At the welcome screen
Press <Any Key> to Continue

ANALYST ID

Type in your <Analyst ID>
Press <Enter>

Type in your **<Password>**

Review Analyst information screen
Use the ARROW keys to highlight ACCEPT
Press **<Enter>**

If the Analyst information is incorrect
Use the ARROW keys to highlight EDIT
Press **<Enter>**

**EQUIPMENT
SELECTION**

Use the ARROW keys to highlight the desired
equipment
Press **<Enter>**

Review Equipment details
Press **<Any Key>** To Continue

If Equipment details require changes, contact the
system manager. (The changes to the Equipment
details can be made in the **Management Module** by a
user who has a **Manager** access level.)

**PERFORM
ANALYSIS**

2.2.2 To perform an analysis in the Functional
Requirement Risk Identification

Use the ARROW keys to highlight OPERATIONS
Press **<Enter>**

Use the ARROW keys to highlight ANALYSIS
Press **<Enter>**

Use the ARROW keys to highlight 301
Press **<Enter>**

Use the ARROW keys to highlight 301.2.3
Press **<Enter>**

Use the ARROW keys to highlight from the main menu
PERFORM ENTIRE SUBTASK

See Chapter 3 to continue

**GENERATE
REPORTS**

2.2.3 To generate reports in the Functional Requirement Risk Identification module:

Use the ARROW keys to highlight OPERATIONS
Press <Enter>

Use the ARROW keys to highlight REPORTS
Press <Enter>

Use the ARROW keys to highlight 301
Press <Enter>

Use the ARROW keys to highlight 301.2.3
Press <Enter>

On the Reports menu
Use the ARROW keys to highlight the required report
Press <Enter>

TO SCREEN

To view the report on the screen
Select SCREEN
Press <Enter>

TO PRINT

To print the report
Select PRINTER
Press <Enter>

TO DISK

To save report to disk
Select DISK
Press <Enter>
Specify Path--Drive Name, Directory, Sub-Directory,
File Name, and Extension.
Example: C:\LSA\REPORTS\REP1.RPT

See Chapter 4 to continue

CHAPTER 3 ANALYSIS OPTIONS

3.1 GENERAL

3.1.1 This chapter provides the user a walk-through of the ANALYSIS options available in the Functional Requirement Risk Identification module. Step-by-step procedural instructions, which link with Chapter 2 Quick Start procedures, plus numerous screen displays, enhance user understanding.

3.1.2 Function Keys utilized in this ANALYSIS module are as described below:

<u>Key</u>	<u>Function</u>	<u>Description</u>
<F1>	HELP	The use of this key presents the HELP screens. Help is provided in two ways. The first type of help explains the purpose of the screen and the methodology involved in the completion of the screen inputs. The second type of HELP is context sensitive and is available at each input field.
<F2>	DELETE	This key permits the analyst to delete an obsolete, revised, or incorrect Functional Requirements or subtask risks.
<F3>	ADD	This key allows the user to add to existing records.

<F5>	EDIT	This key allows the user to make changes to existing records.
<F7>	MARK/UNMARK	This key permits the user to mark or unmark one, or a series of, Functional Requirement(s) or Subtask risk(s), to indicate determination of, or deletion of, risk(s) assessments. The <Enter> key is used to invoke such marking/unmarkings.
<F9>	NOTES	This key presents a memo screen wherein the analyst may make notes pertaining to the task. The screen may also be used to write details of problems that may arise and hamper the timely completion of the task.
<F10>	CONTINUE	This key permits the user to continue to the next requirement.
<CNTRL- END>	Exit to Functional Requirements Screen	This key combination provides the option of returning to the Functional Requirements screen at anytime when using the "By Functional Requirement" risk identification option.
<↵>	To Select	This key stroke permits the user to select the option highlighted on the screen.

<Enter>	To Update TAGS	This key stroke permits the user to invoke <Mark/Unmark> procedures and TAG the appropriate Functional Requirement(s) or Subtask risk(s). A single item TAG is possible without using the <Mark/Unmark> key.
<↑↓>	Scroll	These Keys permit the user to move the light bar in the vertical plain.
<PgUp>	Down One Screen	This key permits the user to scroll the screen presentation down.
<PgDn>	Up One Screen	This key permits the user to scroll the screen presentation up.
<Esc>	Previous Screen	This key permits the user to return to the next preceding screen.

3.2 FUNCTIONAL REQUIREMENT RISK IDENTIFICATION OPTIONS

SUBTASK MAIN MENU

3.2.1 The three options, as shown in Figure 3-1, are presented to the user in the Perform Entire Subtask Main Menu.

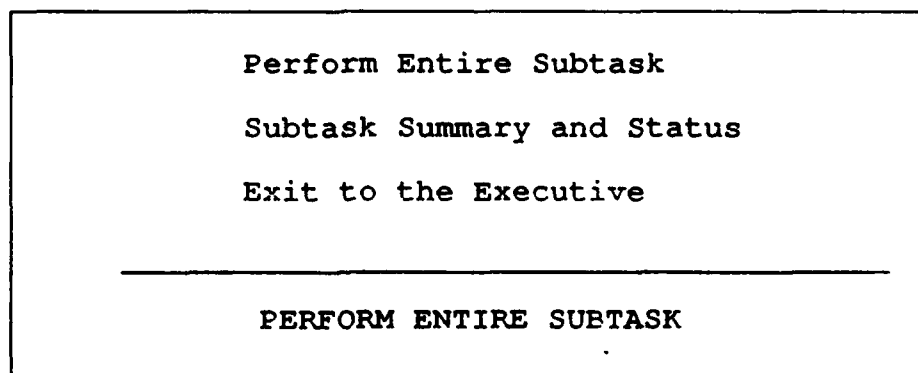


Figure 3-1 Perform Entire Subtask Menu

3.2.2 The PERFORM ENTIRE SUBTASK option accesses the Functional Requirements Risk Identification process.

3.2.3 The SUBTASK SUMMARY AND STATUS option allows a User with a management access level to input an overview of subtask status.

3.2.4 The EXIT TO THE EXECUTIVE option permits the user to leave the subtask and return to the ISA Executive Module.

3.2.5 To select, use the ARROW keys to highlight the option desired and press <Enter>.

3.3 RISK IDENTIFICATION METHODOLOGIES

RISK ID OPTIONS

3.3.1 The IDENTIFY FUNCTIONAL REQUIREMENT RISKS sub-menu provides the user two risk identification options; BY FUNCTIONAL REQUIREMENTS, and BY SUBTASK RISK AREA, as shown in Figure 3-2. It also provides a RETURN TO THE MAIN MENU (e.g., subtask menu) option.

3.3.2 These two Functional Requirement Risk Identification Options are alternatives that provide two points of view for the same data. A risk identified and marked in one option will appear marked in the other. The user may, after reviewing the following paragraphs, select the methodology preferred, or may desire to verify risk assessment using both methodologies.

```
Identify Functional Requirement Risks

By Functional Requirements

By Subtask Risk Area
SCR -- Supportability Constraint Risks
BCS -- Baseline Comparison System Drivers
USD -- Unique System Drivers
CSR -- Comparative System Risks
SDR -- Supportability Design Risks
STR -- Supportability Technical Risks

Return to the Main Menu

-----

ADDRESS BY FUNCTIONAL REQUIREMENTS
```

Figure 3-2 Identify Functional Requirement Risks

3.3.3 To select an option from the Identify Functional Requirement Risks Screen, use the ARROW keys to highlight it and press <Enter>.

NOTE

A <φ> symbol preceding a SUBTASK RISK AREA indicates that Subtask Risk Area assessment has been completed. The option to invoke a marking occurs during the two risk identification methodologies discussed below.

3.3.4 As noted in Chapter 1, LSA Subtasks 301.2.1, Functional Requirement Risk Identification, and Subtask 301.2.2, Unique and Driver Designations, results are prerequisite to starting this Subtask. The six Subtask Risk Areas (see Figure 3-2) results are also required, yet all six may not have been scheduled and/or completed. As a result, the user may find that certain Subtask Risk Areas contain no data. The user must be prepared to proceed with available data or decide to generate the required data.

3.4 BY FUNCTIONAL REQUIREMENTS

**BY FUNC-
TIONAL
REQUIREMENT**

3.4.1 The selection of the BY FUNCTIONAL REQUIREMENTS option in paragraph 3.3 presents the Select A Functional Requirement To Assess Screen (see Figure 3-3). (This listing of Functional Requirements is the product of LSA Subtask 301.2.1, which identified "all new system/equipment Functional Requirements," and LSA Subtask 301.2.2, which identified those Functional Requirements as UNQ (U) "unique" and/or DRV (D) "drivers.")

Select a Functional Requirement to assess

UNQ	DRV	Short Title	Long Description
U	D	Mobility 1	Cross Country
U		Mobility 2	Air Transportability
	D	Mobility 3	Air Droppable
U	D	Mobility 4	Fording
		Mobility 5	Manportability
U		Firepower	Rate of Fire
	D	Sustain 1	MTBF
U	D	Sustain 2	MTTR
		Personnel	2 Man Crew
U	D	Fld Rep 1	Night Sight
U		Fld Rep 2	Thermal Sight
	D	Fld Rep 3	Baseplate
U	D	Fld Rep 4	Tube

Figure 3-3 Select a functional Requirement to Assess

**SELECTING A
FUNCTIONAL
REQUIREMENT**

3.4.2 Use ARROW keys to highlight and select a Functional Requirement for assessment of potential risk and press <Enter>.

3.4.3 Selection of a Functional Requirement results in the Currently Assessing the Functional Requirement Screen (see Figure 3-4). Displayed on this screen is the Functional Requirement plus the first of six Subtask Risk Areas (as listed in Figure 3-2). For each Subtask Risk Area, a scrolling list of risks is displayed (if they were previously entered).

NOTE

LSA dynamics may require that Functional Requirement and Subtask Risk Area data be updated periodically. Such changes will be provided by the LSA management office. The user may enter/delete/modify this data using the keys provided. (When changes are accomplished, the system writes user and session ID to the file.)

The field available to the user for Short Title is ten characters long while the Long Description field is 253 characters long. (This field description applies equally to Functional Requirement and Subtask Risk Area data.)

**MARKING
A RISK**

3.4.4 The marks in the Risk column illustrate that the subtask risk has been identified as affecting the displayed Functional Requirement. This marking remains linked to both that Functional Requirement and that Subtask risk throughout the remainder of this analysis effort. The marking is also carried through the By Subtask Risk Area analysis option, and into the reports module, unless canceled. (If the By Subtask Risk Area option was performed first, the same rationale applies when the By Functional Requirement option is performed.)

3.4.5 Use ARROW keys to highlight a Subtask risk to assess against the Functional Requirement displayed.

**IDENTIFYING
A RISK**

3.4.6 Assess the highlighted Subtask risk against the Functional Requirement displayed on the screen. If the user perceives that the highlighted risk affects the attainment of the Functional Requirement, then identify it as a Functional Requirement Risk. Use the **<Mark/Unmark>** key to record that judgement and press **<Enter>** to invoke that marking.

Currently assessing the "Mobility 1" Functional Requirement

Functional Requirement Long Description:
Cross Country

Supportability Constraint Risks

Risk	Number	Description
✓	SCR 1	AAAAAAAAAAA
	SCR 2	BBBBBBBBBBB
✓	SCR 3	CCCCCCCCCC
	SCR 4	DDDDDDDDDD
✓	SCR 5	EEEEEEEEEEE

Figure 3-4 Currently Assessing the Functional Requirement

3.4.7 Use the ARROW keys to highlight another risk within the SUBTASK RISK AREA. Assess the effect of that risk against the Functional Requirement and repeat the process used in paragraph 3.4.6.

**CONTINUING
TO THE NEXT
SUBTASK
RISK AREA**

3.4.8 When all risks within the Subtask Risk Area have been assessed against the displayed Functional Requirements press <Continue>. Another Subtask Risk Area is presented for assessment. Continue the process until all risks within the new Subtask Risk Area have been assessed against the displayed Functional Requirement, as described above.

**COMPLETING
A SUBTASK
RISK AREA**

3.4.9 When exiting a Subtask Risk Area, a window appears asking "Mark this Subtask Risk Area as Completed," YES or NO. press <Y> for YES or <N> for NO. A YES response will cause a mark to be placed next to that Subtask Risk Area listed on the IDENTIFY FUNCTIONAL REQUIREMENT RISKS sub-menu as described in NOTE under paragraph 3.3.3. (A response of YES must be carefully considered as YES will indicate that all Subtask Area risks have been assessed against all Functional Requirements.)

NOTE

The marking of a Functional Requirement as a Functional Requirement Risk insures that a record of that marking is saved and the risk designation will be retrieved during report generation. (Unmarking will cancel a previous risk designation.)

One or more (or no) Functional Requirements may relate to a particular Supportability Constraint Risk; therefore, all perceived risks must be marked and saved to insure retrieval during report generation.

3.4.10 Continue this process until all Subtask Area risks have been assessed against the Functional Requirement displayed and press <Continue>. Upon answering the completion question (see paragraph 3.4.9), the user is returned to the Select a Functional Requirement to Assess screen.

**ASSESSING
THE NEXT
FUNCTIONAL
REQUIREMENT**

3.4.11 Use the ARROW keys to highlight another Functional Requirement. Repeat the process of assessment described above until all Subtask risks have been assessed against all Functional Requirements.

**RETURNING
TO SUBTASK
MENU**

3.4.12 The user may return to the "Select a Functional Requirement to assess" screen (Figure 3-3) at anytime in this risk identification option by pressing <Cntl-End>.

3.5 BY SUBTASK RISK AREA

**BY SUBTASK
RISK AREA**

3.5.1 If the By Subtask Risk Area option is selected in paragraph 3.3.1 (see Figure 3-2), the Supportability Constraint Risks Subtask is highlighted. This Subtask is the first of six Subtask Risk Areas to be assessed against the Function Requirements. The Subtask Risk Areas are shown below.

LSA Subtask 202.2.4 Supportability Constraint Risks (SCR)
LSA Subtask 203.2.4 Baseline Comparison System Drives (BCS)
LSA Subtask 203.2.6 Unique System Drivers (USD)
LSA Subtask 203.2.8 Comparative System Risks (CSR)
LSA Subtask 204.2.3 Supportability Design Risks (SDR)
LSA Subtask 205.2.2 Supportability Technical Risks (STR)

3.5.2 To select the SCR Subtask press **<Enter>** or use the arrow keys to highlight and select another subtask for risk assessment.

SCR Risk Area	
Short Title	Long Description
SCR 1	AAAAAAAAAA
SCR 2	BBBBBBBBBB
SCR 3	CCCCCCCCCC
SCR 4	DDDDDDDDDD
SCR 5	EEEEEEEEEE

Figure 3-5 SCR Risk Area

**STARTING
WITH
SCR**

3.5.3 The Supportability Constraint Risks are displayed (Figure 3-5) for consideration. Use the ARROW keys to highlight a SCR Risk for assessment and press **<Enter>**.

3.5.4 The Supportability Constraint Risk selected for assessment is displayed along with a window containing a scrolling list of new system/equipment Functional Requirements, see Figure 3-6. (Refer to paragraph 3.4.1 for an explanation of Functional Requirement "U" and "D" annotations. Marks under the risk column are explained in paragraph 3.4.2 and indicate previously assessed risks.)

NOTE

LSA dynamics may require that Subtask Risk Area and Functional Requirement data be updated periodically. Such changes will be provided by the LSA management office. The user may enter/delete/modify this data using the keys provided.

The field available to the user for Short Title is ten characters long while the Long Description field is 253 characters long. (This field description applies equally to LSA Subtask Risk Area and Functional Requirements data.)

3.5.5 Use the ARROW keys to highlight a Functional Requirement for assessment again: the Supportability Constraint Risk displayed.

3.5.6 Assess the selected Functional Requirement against the Supportability Constraint Risk displayed. If the user perceives that the displayed Supportability Constraint Risk will keep the system designer from achieving the Functional Requirement, then a Functional Requirement Risk must be identified. Use the <Mark/Unmark> key to record that judgment and press <Enter> to invoke the mark.

**MARKING A
FUNCTIONAL
REQUIREMENT
RISK**

Supportability Constraint Risks
 Assess SCR Risk: SCR 1
 AAAAAAAAAA

FUNCTIONAL REQUIREMENTS

Risk	Unq	Drv	Short Title	Long Description
✓	U	D	Mobility 1	Cross Country
✓	U		Mobility 2	Air Transportability
		D	Mobility 3	Air Droppable
✓	U	D	Mobility 4	Fording
			Mobility 5	Manportability
	U		Firepower	Rate of Fire
		D	Sustain 1	MBTF
	U	D	Sustain 2	MTRR

Figure 3-6 Supportability Constraint Risks and Functional Requirements

NOTE

The marking of a Functional Requirement as a Functional Requirement Risk insures that a record of that marking is saved and that risk designation will be retrieved during report generation. (Unmarking will cancel a previous risk designation).

One or more (or no) Functional Requirements may relate to a particular Supportability Constraint Risk; therefore, all perceived risks must be marked and saved to insure retrieval during report generation.

3.5.7 Use the ARROW keys to highlight another Functional Requirement. Assess the Functional Requirement against the displayed supportability constraint risk.

SELECTING
ANOTHER
SUBTASK
RISK

3.5.8 When all Functional Requirements have been assessed against the displayed Supportability Constraint Risk, press <Continue> to return to the SCR RISK AREA screen (see Figure 3-5) to select another SCR for assessment against the Functional Requirements.

COMPLETING
A SUBTASK
RISK AREA

3.5.9 When exiting to the SCR RISK AREA screen, a window appears asking "Mark this SUBTASK RISK AREA as Completed," YES or NO. press <Y> for YES or <N> for NO. A YES response will cause a mark to be placed next that Subtask Risk Area listing on the IDENTIFY FUNCTIONAL REQUIREMENT RISKS menu as described in NOTE under paragraph 3.3.3. (A response of YES must be carefully considered as YES will indicate that all of the Functional Requirements have been assessed against all SCR RISK AREA risks.)

3.5.10 Continue the process by selecting another Supportability Constraint Risk (see Figure 3-5); use the ARROW keys to highlight the risk and press <Enter>.

3.5.11 Repeat the process of assessing all Functional Requirements against the newly selected Supportability Constraint Risk as outlined in the preceding paragraphs.

3.5.12 Continue this process until all Supportability Constraint Risks have been selected and all Functional Requirements assessed. press <Continue>. Determine if the subtask risk area is complete as in paragraph 3.5.6. The user is returned to Supportability Constraint Risk screen, Figure 3-5. Press <Esc> to return to the Identify Functional Requirement Risks screen, Figure 3-2.

SELECTING
ANOTHER
SUBTASK RISK
AREA

3.5.13 Use the ARROW keys to highlight another Subtask Risk Area. Continue the processes discussed above until all Functional Requirements have been assessed against all Subtask Risk Areas risks.

CHAPTER 4 REPORT GENERATION

4.1 GENERAL

4.1.1 This chapter provides the user with information needed to generate reports in support of this Functional Requirement Risk Identification subtask. Step-by-step procedural instructions, linked to Chapter 2, Quick Start information, insures accurate and flexible reporting of subtask results.

4.1.2 Function Keys for this chapter are as described in paragraph 3.1.2.

4.2 REPORT OPTIONS

**REPORT
CHOICES**

4.2.1 Four report options are presented to the user in the REPORT MENU FOR LSA SUBTASK 301.2.3 (see Figure 4-1).

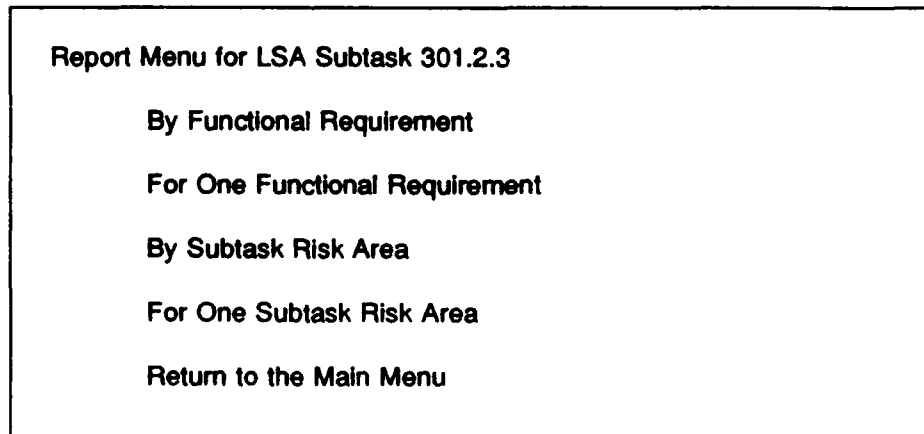


Figure 4-1 Report Menu for LSA Subtask 301.2.3

4.2.2 Appendix D provides samples of each of the four report options available. Both "Short Title" and "Long Description" report presentations are purposely limited to 20 characters to avoid duplicating possibly voluminous data readily available in the LSA data base. Additionally, full descriptions of both Functional Requirements and Subtask risks are available from the LSA management office.

**BY
FUNCTIONAL
REQUIREMENT**

4.2.3 The BY FUNCTIONAL REQUIREMENT report option lists each Functional Requirement assessed as at risk, together with the identified Subtask risk(s) responsible for the Functional Requirement Risk designation. See sample report page D-2, Appendix D.

4.2.4 The FOR ONE FUNCTIONAL REQUIREMENT report option lists risk(s) assessed against a specific Functional Requirement selected by the user. See page D-3, Appendix D.

**BY SUBTASK
RISK AREA**

4.2.5 The BY SUBTASK RISK AREA report option lists all Functional Requirements identified as at risk against all Subtask Risk Areas. See page D-4, Appendix D.

4.2.6 The FOR ONE SUBTASK RISK AREA option lists the Functional requirement(s) identified as at risk, against a Subtask Risk Area selected by the user. See page D-6, Appendix D.

4.3 SELECTING A REPORT FORMAT

**SELECT A
REPORT**

4.3.1 Follow the procedures outlined in Chapter 2, Quick Start, to select the desired report from the Report Menu (refer to Figure 4-1). Use ARROW keys to highlight the desired report and press <Enter>.

4.3.2 Options FOR ONE FUNCTIONAL REQUIREMENT and FOR ONE SUBTASK RISK AREA require the user to select either a Functional Requirement or Subtask Risk Area. See Figures 4-2 and 4-3 respectively. Use the ARROW keys to highlight the desired choice in both options and press <Enter>.

Select a Functional Requirement to Report**Functional Requirement**

Mobility 1	Cross Country
Mobility 2	Air Transportability
Mobility 3	Air Droppable
Mobility 4	Fording
Fld Rep 4	Tube

Figure 4-2 Select a Functional Requirement to Report options

NOTE

Only those Functional Requirements against which risks have been identified appear in Figure 4-2. (All non-risk Functional Requirements are excluded.) However, if a Subtask selected from Figure 4-3 below results in a blank report, this will indicate that Subtask did not precipitate a Functional Requirement Risk.

SCR -- Supportability Constraint Risks
BCS -- Baseline Comparison System Drivers
USD -- Unique System Drivers
CSR -- Comparative System Risks
SDR -- Supportability Design Risks
STR -- Supportability Technical Risks

Return to Previous Menu

Figure 4-3 Subtask Risk Areas to Report Options

4.3.3 Select one of the three output device options--SCREEN, PRINTER, DISK or EXIT. Use the ARROW keys to highlight the desired option (see Figure 4-4) and press <Enter>.

Report Menu for LSA Subtask 301.2.3			
SCREEN	PRINTER	DISK	EXIT
<hr/>			
REPORT FOR ALL FUNCTIONAL REQUIREMENTS			

Figure 4-4 Report Presentation Options

NOTE

When selecting the DISK option you must specify Path--Drive Name, Directory, Sub-Directory, File Name, and Extension.

For example:

C:\LSA\REPORTS\FR1.RPT

EXIT returns user to the Report Menu, Figure 4-1.

APPENDIX A

SYSTEM REQUIREMENTS

SYSTEM REQUIREMENTS

PC with 640 KB RAM
20 MB HARD DISK
ONE 360 KB FLOPPY DRIVE
EGA CARD
MONOCHROME OR COLOR MONITORS

DOS VERSION 3.3

PRINTERS

-- EPSON
-- IBM PROPRINTER
-- HP LASER JET
-- TI LASER PRINTER
-- PANASONIC

APPENDIX B

LIST OF REFERENCE DOCUMENTS

LIST OF REFERENCE DOCUMENTS

MIL-STD-1388-1A	Logistic Support Analysis
DOD 5000.2	Major Systems Acquisition Procedures
DOD 5000.39	Acquisition and Management of Integrated Logistic Support for Systems and Equipment
AR 700-27	Integrated Logistic Systems
AMC-P 700-4	LSA Techniques Guide
AMC-P 700-11	LSA/LSAR Review Team Guide
AMC-P 700-22	LSA Primer
APJ 966-242	Structured Analysis/Design--LSA Task 301 Functional Requirements Identification (Subtask 301.2.3 Functional Requirements Risk Analysis)
APJ 966-600	LSA Executive Manual

APPENDIX C

LIST OF REFERENCE FILES

LIST OF REFERENCE FILES

<u>List</u>	<u>Page</u>
Executive Files	C-2
LSA 301.2.3 Files	C-3

LIST OF REFERENCE FILES

EXECUTIVE FILES

LSA EXE
LSAOVL OVL
RCANLYHS DBF
RCANLYHS NTX
RCANLYST DBF
RCCXHLP NTX
RCCXHLP DBT
RCCXHLP DBF
RCEQHS NTX
RCEQHS DBF
RCEQUIP NTX
RCEQUIP DBF
RCLSATSK DBF
RCLSATSK NTX
RCMENU DBF
RCMENU NTX
RCPRHLP DBF
RCPRHLP DBT
RCPRHLP NTX
RCPRNCOD CTL
RCWELCOM MEM
RCSCR31 TXT
RCPRNCTL DBF
RCPRNLST NTX
RCSESSN DBF
RCSESSN NTX
RCSTATUS DBF
RMTSKTAG NTX
RMTSKTAG DBF
RSF9HLP DBT
RSF9HLP DBF
RSF9HLP NTX
RSUMSTAT DBT
RSUMSTAT NTX
RSUMSTAT DBF
RSUMSTHS NTX
RSUMSTHS DBF
RSUMSTHS DBT

LIST OF REFERENCE FILES**LSA 301.2.3 FILES**

W2NOTE	DBF
W2NOTE	DBT
WFRLIST	DBF
WRSV	MEM
WRSKFR	NTX
WRSKXREF	DBF
WRSKXREF	NTX
WRSKXUN	NTX
W_RKSUB	DBF
W_RKSUB	NTX
W_SUBTSK	DBF
W_SUBTSK	NTX
HELFILE	DBF
HELFILE	DBT
HELFILE	NTX

APPENDIX D

SAMPLE OUTPUT REPORT FORMATS

SAMPLE OUTPUT REPORT FORMATS

<u>Report</u>	<u>Page</u>
By Functional Requirement	D-2
For One Functional Requirement	D-3
By Subtask Risk Area	D-4
For One Subtask Risk Area	D-6

Page No.: 1

Report Date: 04/15/91

**FUNCTIONAL REQUIREMENT RISK IDENTIFICATION
LSA SUBTASK 301.2.3**

FUNCTIONAL REQUIREMENT RISKS

Analyst: CANDY K. TONG	Equipment: 81 MM MORTAR
Office:	Common Name:
	NSN: to be assigned

**FUNCTIONAL REQUIREMENTS RISKS
BY FUNCTIONAL REQUIREMENTS**

Functional Requirement	Identified Risk
Mobility 1 Cross Country	BCS 1 FFFFFFFF
	SCR 1 AAAAAAAAAA
	SCR 3 CCCCCCCCCC
	SCR 5 EEEEEEEEEE
	SDR 5 YYYYYYYYYY
	USD 3 HHHHHHHH
Mobility 2 Air Transportability	BCS 2 GGGGGGGGGG
	BCS 4 IIIIIIIIII
	BCS 5 JJJJJJJJJJ
	CSR 1 PPPPPPPPPP
	CSR 3 RRRRRRRRRR
	SCR 1 AAAAAAAAAA
	SDR 1 UUUUUUUUUU
	STR 3 ACACACACAC
	STR 4 ADADADADAD
	USD 3 HHHHHHHH
Mobility 3 Air Droppable	BCS 4 IIIIIIIIII
	BCS 5 JJJJJJJJJJ
	CSR 4 SSSSSSSSSS
	CSR 5 TTTTTTTTTT
	SDR 1 UUUUUUUUUU
	SDR 2 VVVVVVVVVV
	SDR 3 WWWWVVVV
	USD 3 HHHHHHHH
USD 1 KKKKKKKKKK	
Mobility 4 Fording	USD 1 KKKKKKKKKK
	SCR 1 AAAAAAAAAA

***** END OF REPORT *****

Page No.: 1

Report Date: 04/15/91

**FUNCTIONAL REQUIREMENT RISK IDENTIFICATION
LSA SUBTASK 301.2.3**

FUNCTIONAL REQUIREMENT RISKS

Analyst: CANDY K. TONG	Equipment: 81 MM MORTAR
Office:	Common Name:
	NSN: to be assigned

**FUNCTIONAL REQUIREMENTS RISKS
BY FUNCTIONAL REQUIREMENTS**

Functional Requirement	Identified Risk
Mobility 2 Air Transportability	BCS 2 GGGGGGGGG
	BCS 4 IIIIIIIII
	BCS 5 JJJJJJJJJ
	CSR 1 PPPPPPPPP
	CSR 3 RRRRRRRRR
	SCR 1 AAAAAAAAA
	SDR 1 UUUUUUUUU
	STR 3 ACACACACAC
	STR 4 ADADADADAD
	USD 3 HHHHHHHHH

***** END OF REPORT *****

Page No.: 1

Report Date: 04/26/91

**FUNCTIONAL REQUIREMENT RISK IDENTIFICATION
LSA SUBTASK 301.2.3**

FUNCTIONAL REQUIREMENT RISKS

Analyst: CANDY K. TONG	Equipment: 81 MM MORTAR
Office:	Common Name:
	NSN: to be assigned

**FUNCTIONAL REQUIREMENTS RISKS
BY RISK SOURCE**

Identified Risk	Functional Requirement
SCR 1 AAAAAAAAAA	Fld Rep 4 Tube Mobility 1 Cross Country Mobility 2 Air Transportability Mobility 4 Fording
SCR 3 CCCCCCCCCC	Mobility 1 Cross Country
SCR 5 EEEEEEEEEE	Mobility 1 Cross Country
BCS 1 FFFFFFFFFF	Mobility 1 Cross Country
BCS 2 GGGGGGGGGG	Fld Rep 4 Tube Mobility 2 Air Transportability
BCS 4 IIIIIIIIII	Mobility 2 Air Transportability Mobility 3 Air Droppable
BCS 5 JJJJJJJJJJ	Mobility 2 Air Transportability Mobility 3 Air Droppable
USD 1 KKKKKKKKKK	Mobility 3 Air Droppable Mobility 4 Fording
USD 3 MMMMMMMMMM	Mobility 1 Cross Country Mobility 2 Air Transportability Mobility 3 Air Droppable
CSR 1 PPPPPPPPPP	Fld Rep 4 Tube Mobility 2 Air Transportability
CSR 2 QQQQQQQQQQ	Fld Rep 4 Tube
CSR 3 RRRRRRRRRR	Fld Rep 4 Tube Mobility 2 Air Transportability

Page No.: 2

Report Date: 04/26/91

**FUNCTIONAL REQUIREMENT RISK IDENTIFICATION
LSA SUBTASK 301.2.3**

FUNCTIONAL REQUIREMENT RISKS

Equipment: 81 MM MORTAR

**FUNCTIONAL REQUIREMENTS RISKS
BY RISK SOURCE**

Identified Risk	Functional Requirement
CSR 4 SSSSSSSSS	Mobility 3 Air Droppable
CSR 5 TTTTTTTTT	Mobility 3 Air Droppable
SDR 1 UUUUUUUUU	Mobility 2 Air Transportability Mobility 3 Air Droppable
SDR 2 VVVVVVVVV	Mobility 3 Air Droppable
SDR 3 WWWWWWW	Mobility 3 Air Droppable
SDR 5 YYYYYYYYY	Mobility 1 Cross Country
STR 3 ACACACACAC	Mobility 2 Air Transportability
STR 4 ADADADADAD	Mobility 2 Air Transportability

***** END OF REPORT *****

Page No.: 1

Report Date: 04/26/91

**FUNCTIONAL REQUIREMENT RISK IDENTIFICATION
LSA SUBTASK 301.2.3**

FUNCTIONAL REQUIREMENT RISKS

Analyst: CANDY K. TONG	Equipment: 81 MM MORTAR
Office:	Common Name:
	NSN: to be assigned

**FUNCTIONAL REQUIREMENTS RISKS
BY RISK SOURCE**

Identified Risk	Functional Requirement
SDR 1 UUUUUUUUU	Mobility 2 Air Transportability Mobility 3 Air Droppable
SDR 2 VVVVVVVVV	Mobility 3 Air Droppable
SDR 3 WWWWWWWW	Mobility 3 Air Droppable
SDR 5 YYYYYYYYY	Mobility 1 Cross Country

***** END OF REPORT *****

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