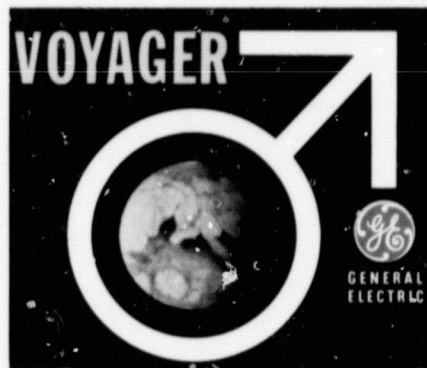
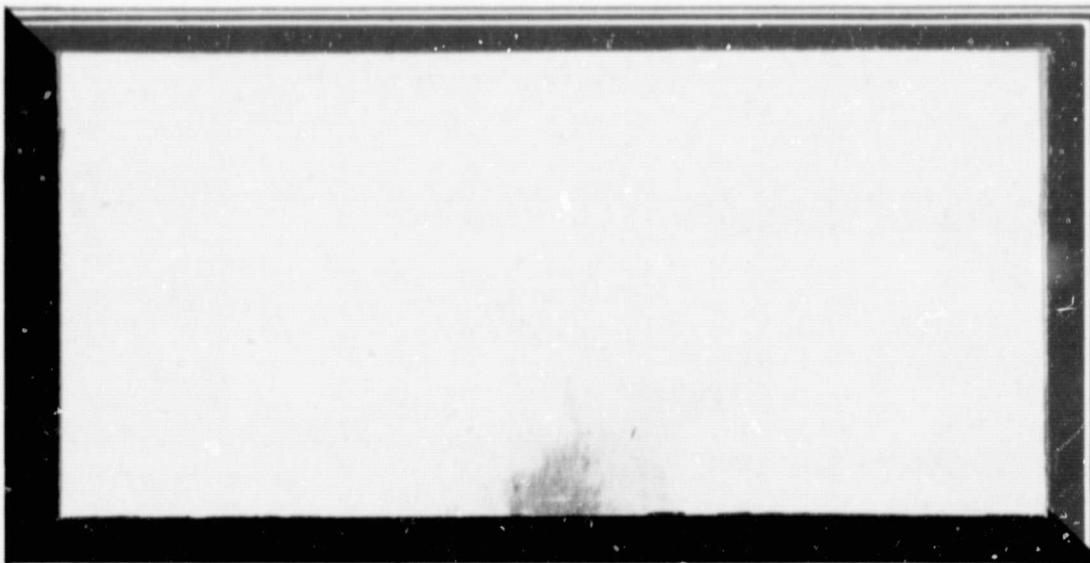


- This document has been reproduced from the best copy furnished by the organizational source. It is being released in the interest of making available as much information as possible.
- This document may contain data, which exceeds the sheet parameters. It was furnished in this condition by the organizational source and is the best copy available.
- This document may contain tone-on-tone or color graphs, charts and/or pictures, which have been reproduced in black and white.
- This document is paginated as submitted by the original source.
- Portions of this document are not fully legible due to the historical nature of some of the material. However, it is the best reproduction available from the original submission.

DM-818-12

MISSILE AND SPACE
DIVISION



GPO PRICE \$ _____

CFSTI PRICE(S) \$ _____

Hard copy (HC) 3.00

Microfiche (MF) .65

ff 653 July 65

FACILITY FORM 602

N67-40532

(ACCESSION NUMBER)

(THRU)

53
(PAGES)

(CODE)

CR-89721
(NASA CR OR TMX OR AD NUMBER)

34
(CATEGORY)

GENERAL  ELECTRIC

DOCUMENT NUMBER VOY-DC-FR
28 JULY 1967

FINAL REPORT
DATA MANAGEMENT STUDY
APPENDIX Q
CONTRACTOR DATA REQUIREMENTS
ADVANCED MISSIONS (AM)

PREPARED BY:

APPROVED BY:

W.J. ROTH
MANAGER, SYSTEMS ENGINEERING
VOYAGER SPACECRAFT SYSTEM PROJECT


A. FRANK, COGNIZANT ENGINEER
DATA MANAGEMENT AND CONTROL TASK
VOYAGER SPACECRAFT SYSTEM PROJECT

J.H. BEHM
PROJECT ENGINEER, DATA MANAGEMENT
VOYAGER SPACECRAFT SYSTEM PROJECT

PREPARED FOR
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
NASA PASADENA OFFICE
PASADENA, CALIFORNIA

UNDER NASA CONTRACT NO. NAS7-584

GENERAL  ELECTRIC
MISSILE AND SPACE DIVISION
Valley Forge Space Technology Center
P. O. Box 8555 • Philadelphia, Penna. 19101

PRECEDING PAGE BLANK NOT FILMED.

TABLE OF CONTENTS

Section	Page
1 INTRODUCTION.	1-1
2 DATA ITEM LIST/USER MATRIX.	2-1
3 USER FLOW DIAGRAMS	3-1
4 DATA REQUIREMENT DESCRIPTIONS (DRD'S)	4-1
5 DOCUMENTATION RELATIONSHIP TREES	5-1
6 DATA ITEM PHASING/FREQUENCY	6-1

INTRODUCTION

1.1 DEFINITION - ADVANCED MISSIONS (AM)

These data relate to advanced missions and potential follow-on programs. They provide information to aid in planning and applying all Voyager - generated data to extended capability programs.

1.2 SCOPE

Data Items include the specifications, plans, and reports required to plan, control, review, and report the advanced mission activities during the design, development, manufacturing, and test of the 1973 spacecraft.

The Contractor-User Flow diagrams show the advanced planning process which begins with the Advanced Mission Definition Phase after broad objectives have been stated based on policy definition. When the Advanced Mission Definition is followed to its completion, the output obtained is the Advanced Mission Plan consisting of selected missions and their requirements. The next phases are the System and System Element Definition cycles, where the system elements are defined by determining their design approaches. The Advanced Development Requirements are then used in the planning procedure for technologies, personnel, and facilities as shown in the Technology Advance Planning Phase.

DATA ITEM NUMBER	DATA ITEM ADVANCED MISSIONS	DESCRIPTION
AM-001	Specification, Advanced Missions System Requirements	Defines advanced system configuration and performance and design requirements to each subsystem constraints, scientific objectives and interfaces, i
AM-002	Report, Advanced Missions Analysis and Trade-Off	Reports on various analyses of subsystem and sys accuracy, environmental effects, etc.
AM-003	Plan, Advanced Mission Definition	Shows plan for most desirable mission for each of type of mission, class of spacecraft, launch vehic objectives.
AM-004	Specification, Advanced Missions, Subsystem Design Requirements	Defines subsystem configuration and allocates per requirements to each component, including OSE.
AM-005	Report, Mission Profile	Report of time sequence of events during nominal
AM-006	Report, Growth Capability for Advanced Missions	Report of advance development requirements in te specific system elements, performance requireme Delineates differences from 1973 and reports on i
AM-007	Report, Advanced Technologies Development Requirements	Report on technology deficiencies that have been i under study and progress made in developing them capability.

* KEY INFORMAL DATA

DATA ITEM LIST/USER MATRIX

	APPLICABILITY TO FUNCTIONAL USERS AT CONTRACTOR LEVEL																
	SE	PQ	MG	CM	QA	TE	RA	LS	MA	SC	PC	MF	MP	DM	FA	S	
nance. Allocates per- tem. Defines systems including OSE.	A	R	-	-	R	U	R	U	-	-	U	-	U	U	-	U	
tem performance,	A	R	-	-	-	-	R	-	-	-	U	-	U	-	-	-	
portunity in terms of le and broad scientific	R	U	-	-	-	U	U	-	PM	-	U	-	U	-	-	-	
formance and design	A	R	-	-	U	U	R	-	-	-	U	-	U	U	U	U	
and alternate missions.	A	R	-	-	U	U	U	-	-	-	U	-	U	-	-	-	
rms of design approaches for nts, and timing of availability. mpact on 1973 design.	A	R	U	-	U	-	-	-	-	-	U	-	U	-	-	-	
identified for system 1 to achieve technological	A	R	-	-	U	U	U	-	-	-	U	-	U	-	-	1	

U - USE R - REVIEW AUTHORITY A - APPROVAL AUTHORITY PM - PROJECT MANAGER APPROVAL

[illegible]

S - PREPARED BY SUBCONTRACTOR/VENDOR/SUPPLIER

() - OPTIONAL APPLICATION

NA - NOT APPLICABLE

2-2-2

USER FLOW DIAGRAMS

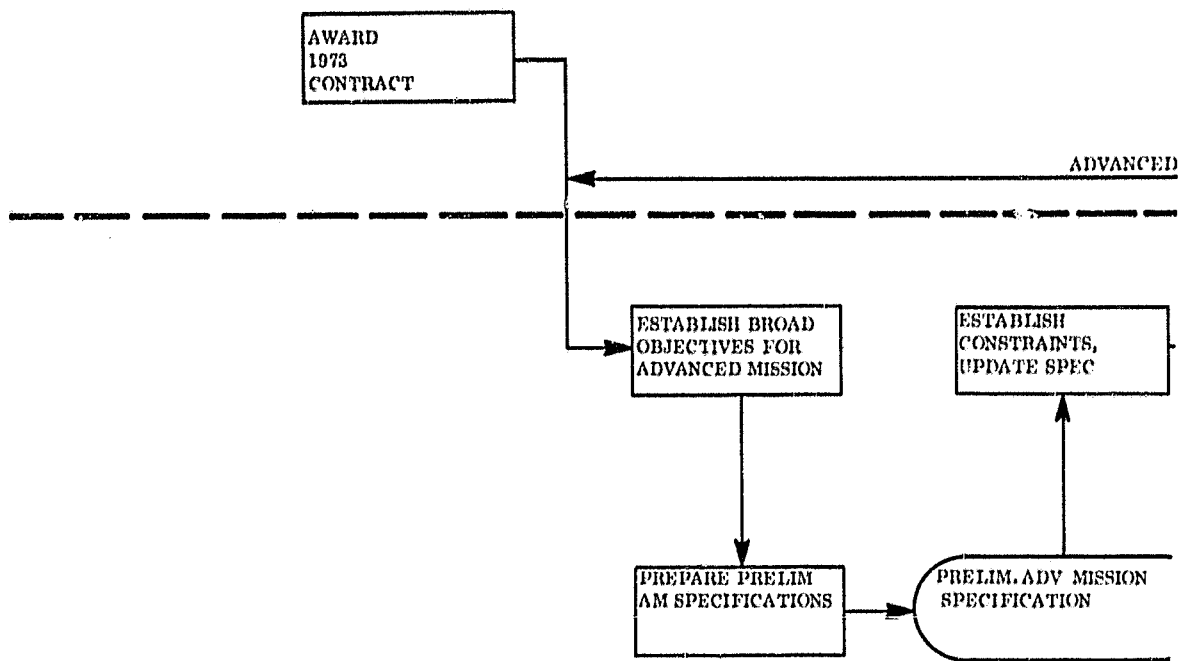
Contractor - user flow diagrams show the relationship between Voyager system documentation and the activities undertaken by the prime spacecraft contractor. The diagrams are intended to be a communication tool which describes the project in terms which emphasize documentation and as a planning tool for the integration of data management activities into the overall project management scheme.

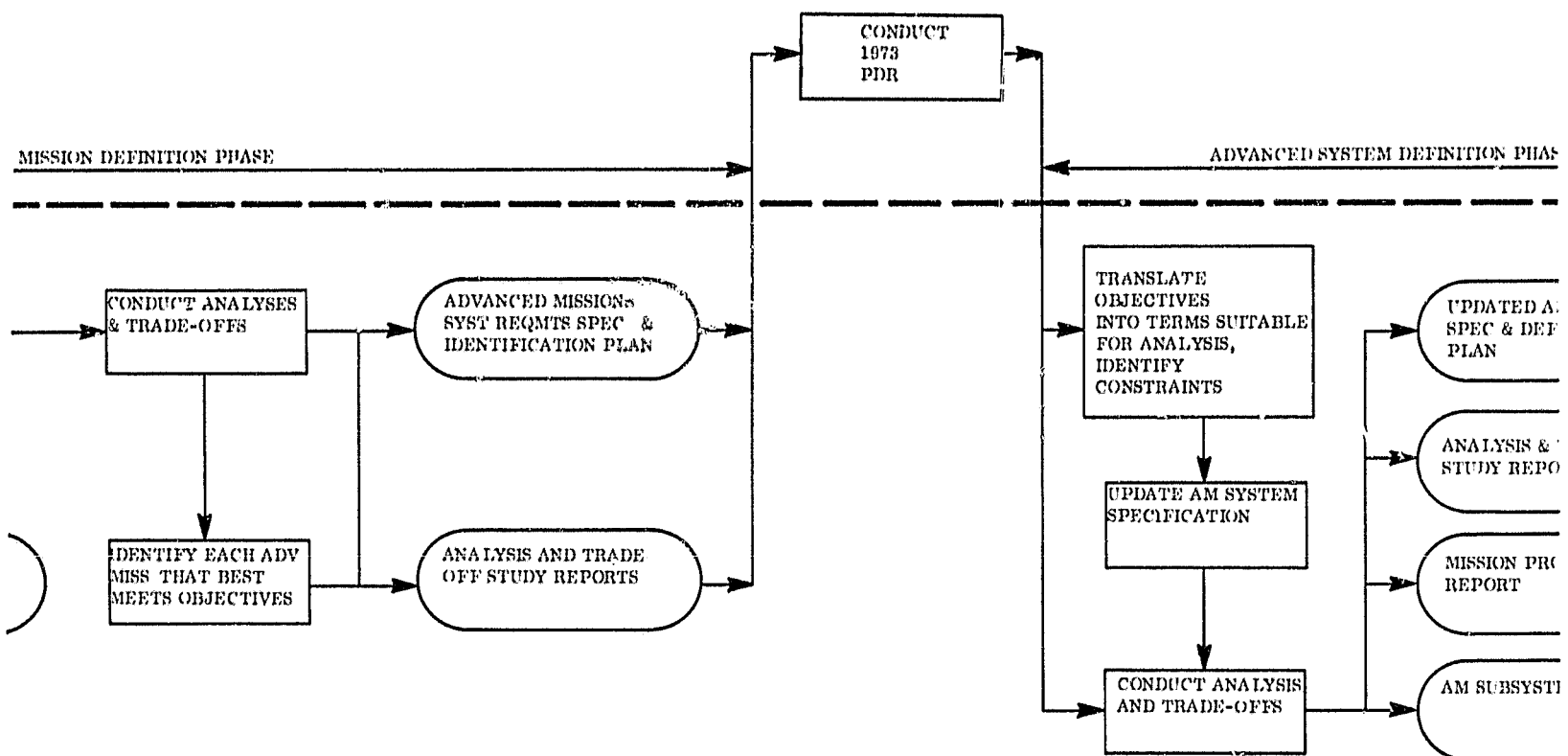
The project is considered in a generalized sense in that subsystems and components are each treated as collective entities; that is, the documentation flows associated with the several separate subsystems are not distinguished. A single representative flow is presented.

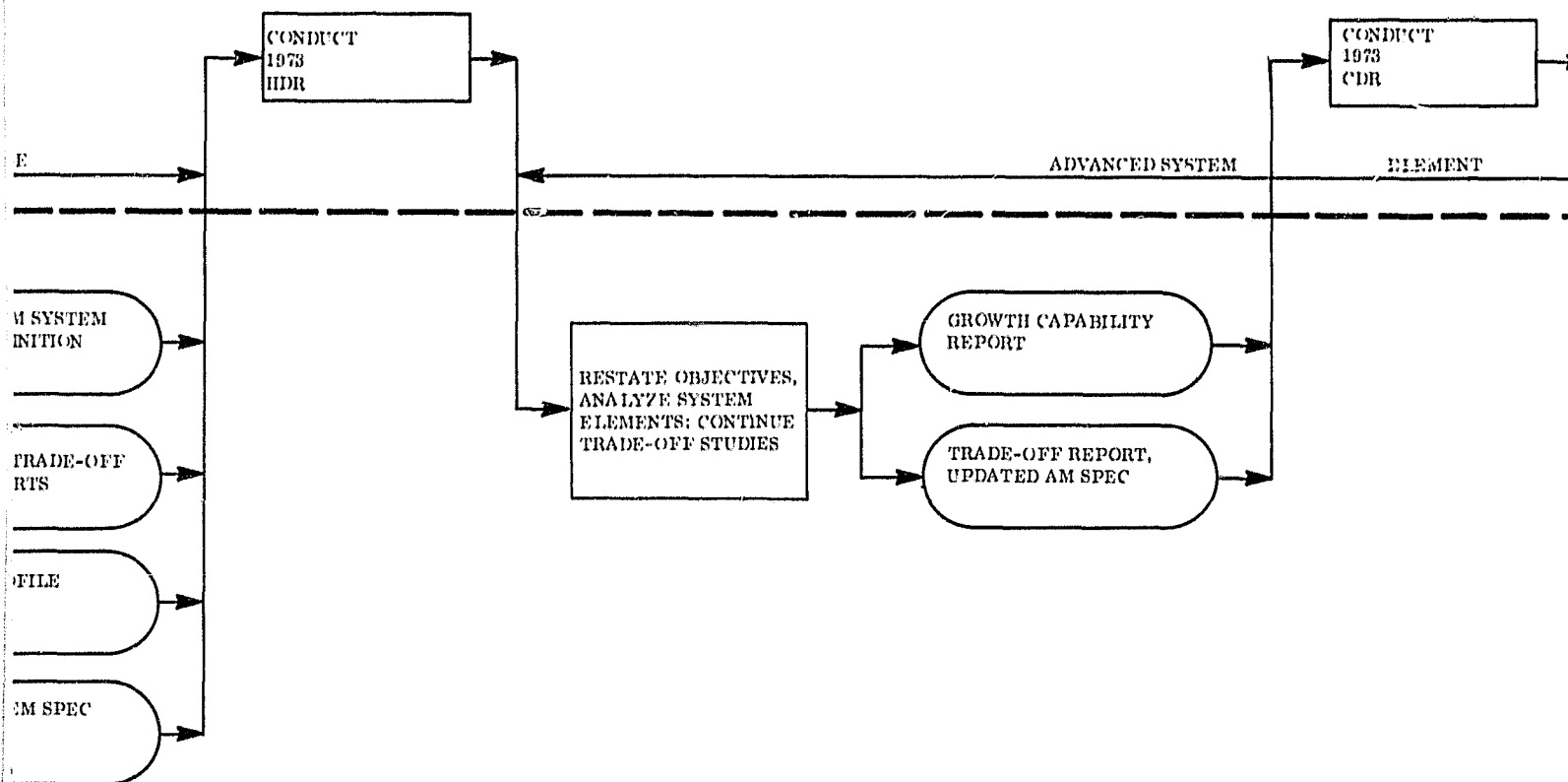
The drawings show the detail activities and are keyed to the formal design and hardware reviews. A generalized summary flow is also included.

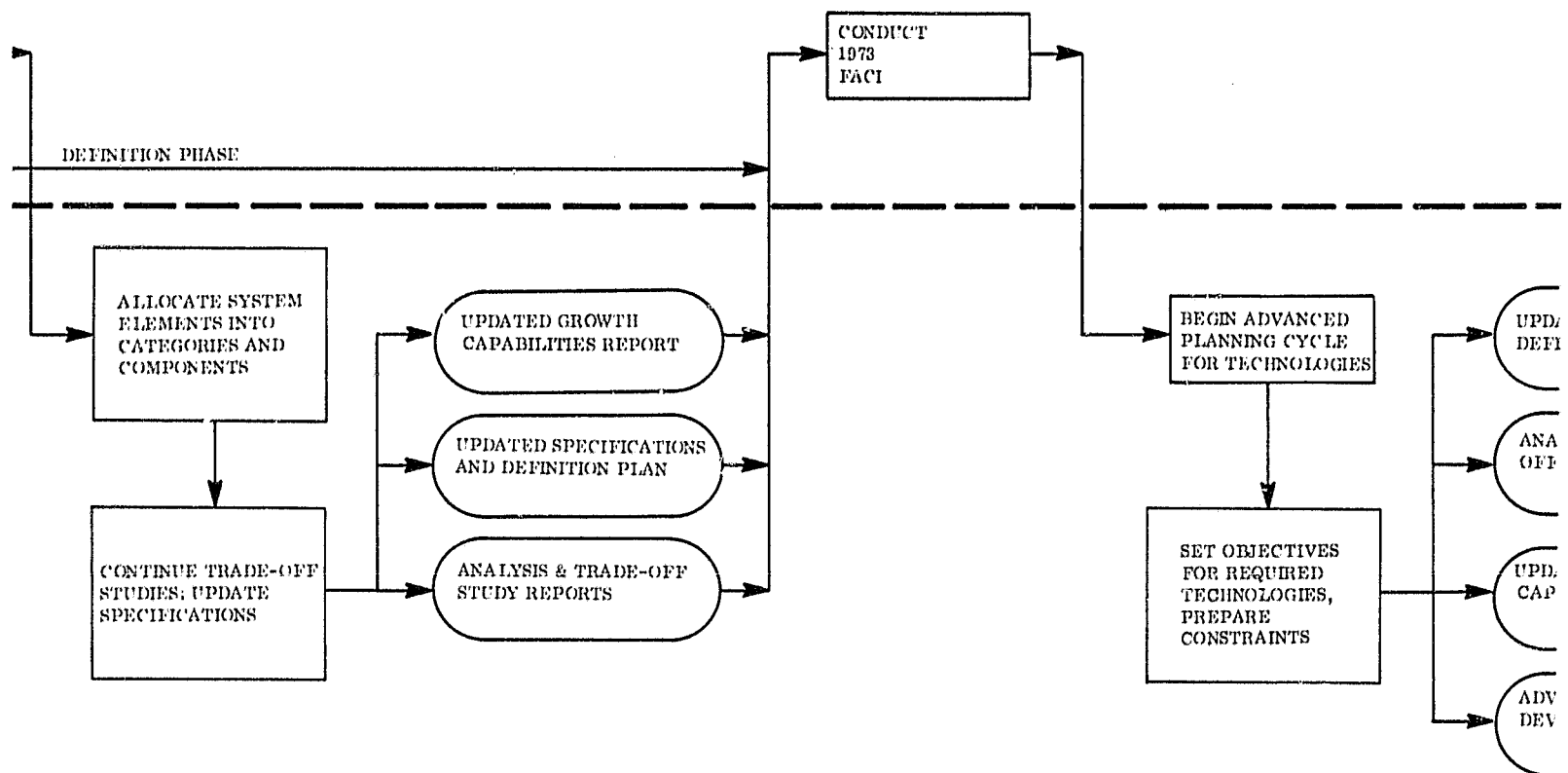
Advanced Missions User Flow Diagrams

<u>Figure Number</u>	<u>Title</u>
Q-1	Advanced Missions User Flow Diagram - Summary
Q-2	Advanced Missions User Flow Diagram - Contract Award Through Hard Design Review
Q-3	Advanced Missions User Flow Diagram - Hard Design Review Through Mission Acceptance Review









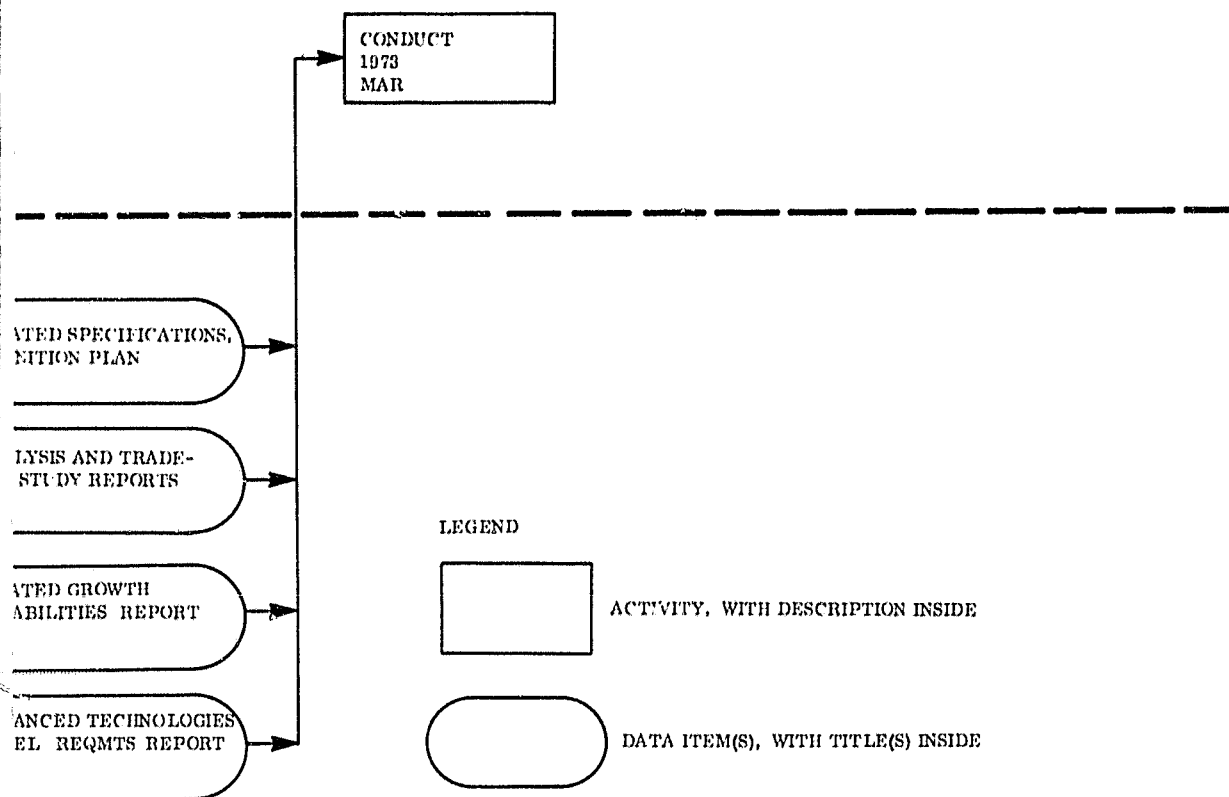


Figure Q-1. Advanced Missions User Flow Diagram (Summary)

3-4-4

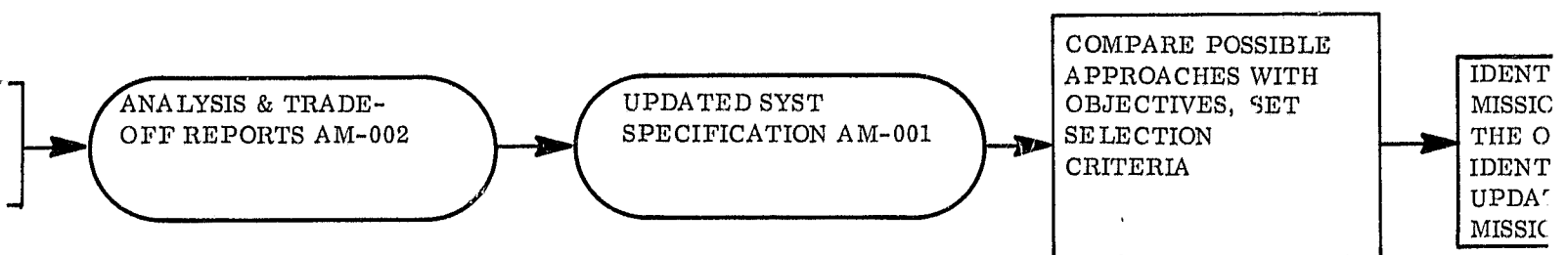
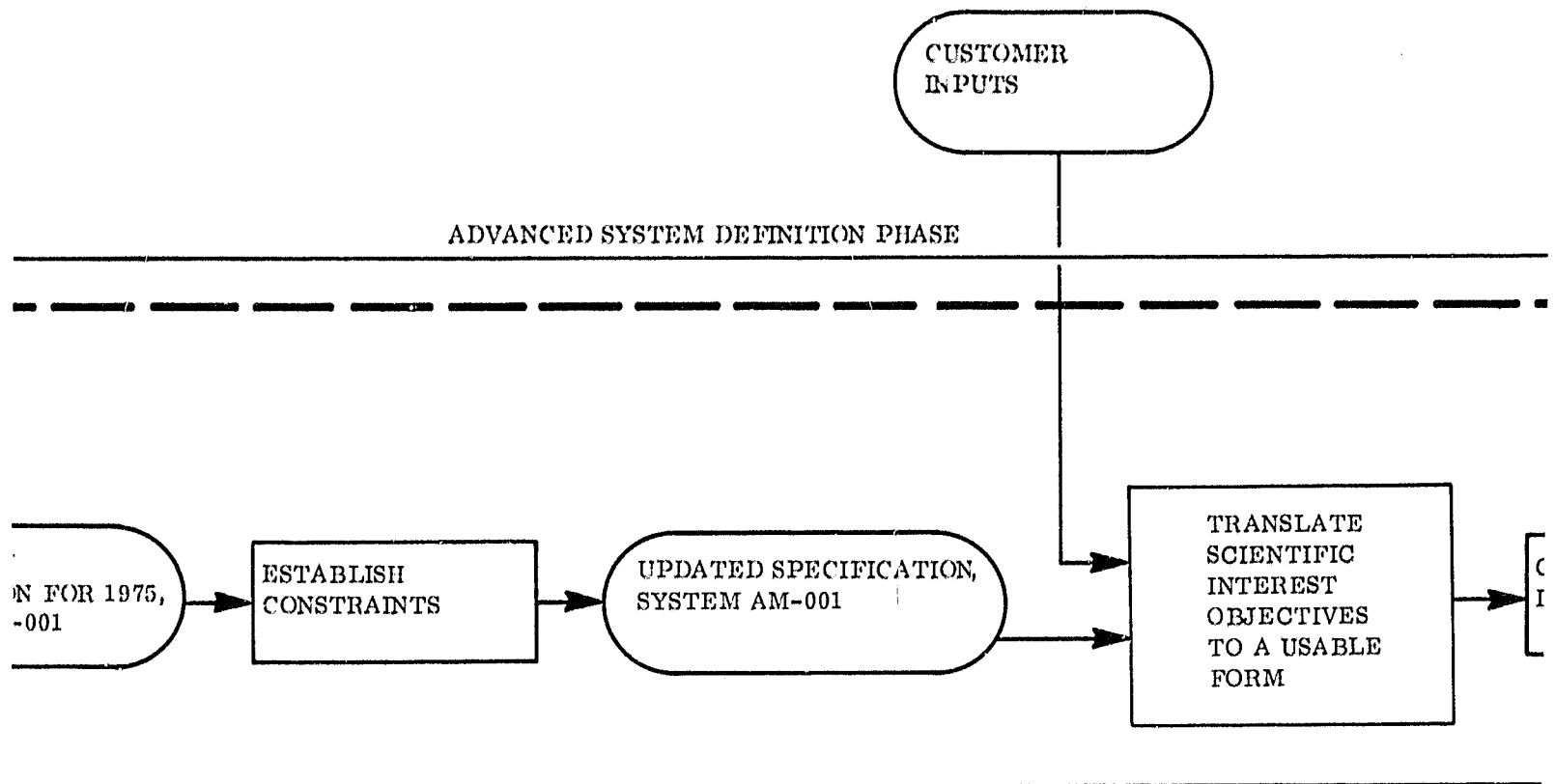
AWARD
CONTRACT

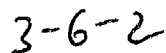
WORK STATEMENT
MISSION SPEC POLICY
DEFINITION

ESTABLISH BROAD
OBJECTIVES FOR AD-
VANCE MISSIONS BASED
ON POLICY
DEFINITION

PRELIMINARY
SPECIFICATIO
1977, 1979 AM

CONDUCT ANALYSIS
AND TRADE-OFFS





R

CUSTOMER
INPUTS

ADVANCED SYSTEM DEFINITION PHASE

DEFINE OBJECT-
TERMS
FOR
IDENTIFY
INTS, DETER-
SELECTION

WORK EXTERNAL
ONMENTS,
BILITY GOALS

UPDATED SYSTEM
SPECIFICATION MISSION
DEFINITION PLAN
AM-001, 008

ANALYSIS & TRADE-
OFF REPORTS AM-002

ESTABLISH TOP
LEVEL FUNCTIONAL
REQMTS WITH
DURATION, EXTERNAL
ENVIRONMENTS, AND
RELIABILITY GOALS

ANALYSIS
APPLY CONSTRA
DETERMINE POS
TAILED FUNCTI
SYSTEM ELEME
IMPLEMENT. FI
REQMTS; PERF.
SYSTEM ELEME

EVALUATE
FUNCTIONAL AND
SYSTEM ELEMENTS
ROUGH TRADE-OFF
DETERMINE HOW
ALL THEY MEET
OBJECTIVES

ANALYSIS AND TRADE-
OFF REPORTS AM-002

ESTABLISH PRELIM
SYSTEM ELEMENTS
AND PERFORMANCE
REQUIREMENTS AND
SELECTION
CRITERIA

UPDATED SY
SPECIFICATI

ADVANCED I
SUBSYSTEM
AM-004

MISSION PRO
REPORT AM-

UPDATED
ADVANCE
DEFINITION
AM-003

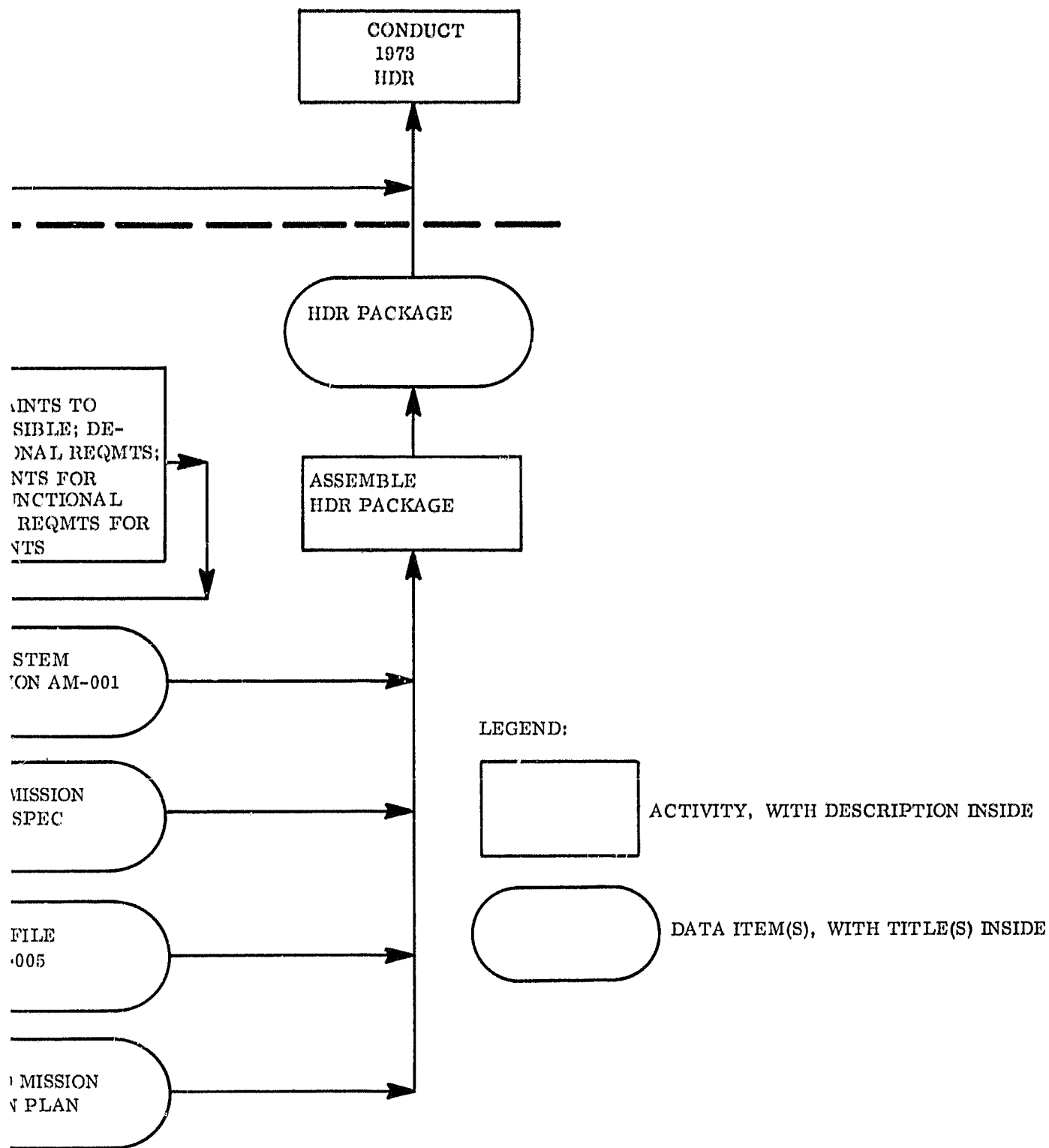
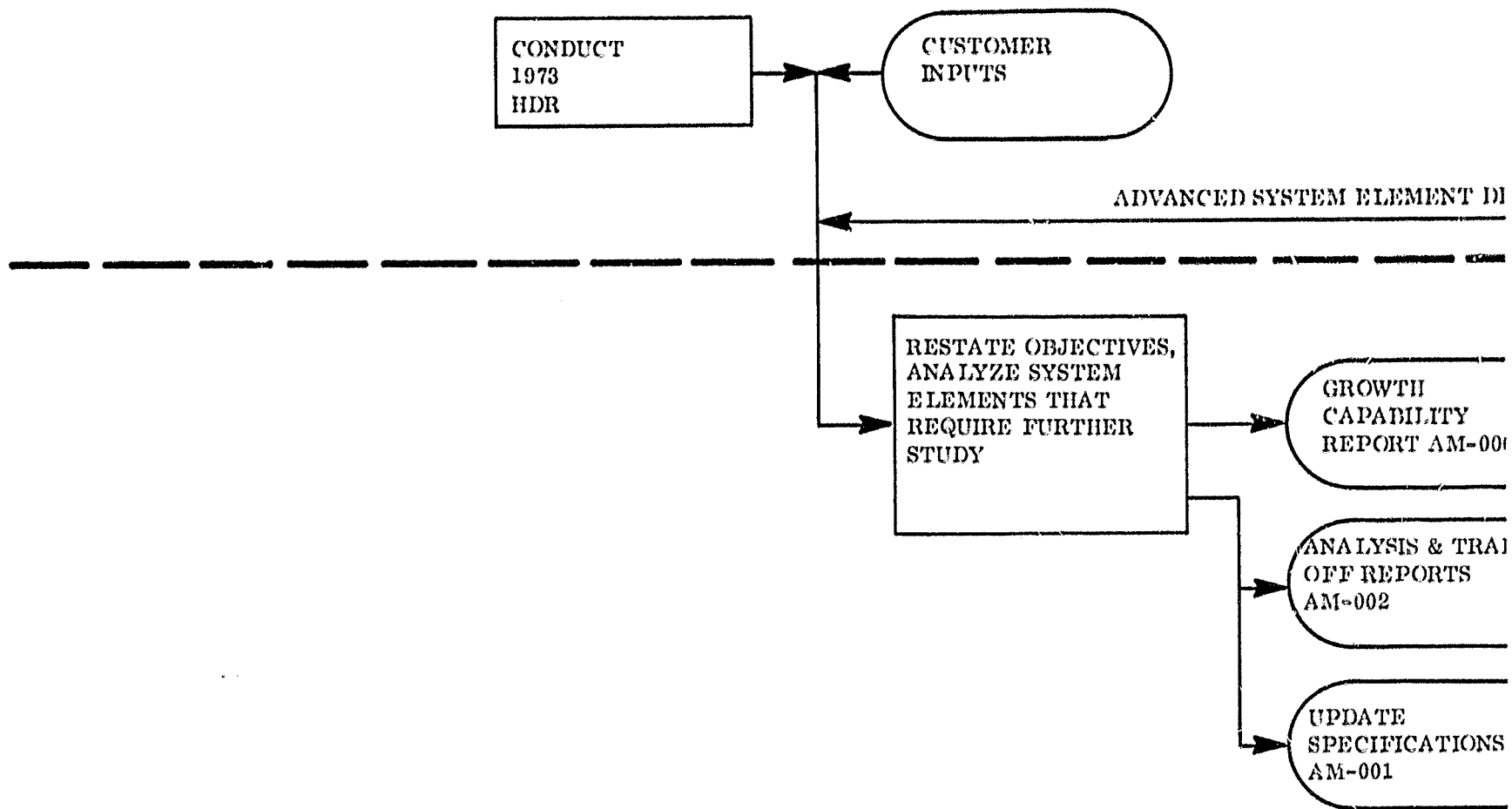
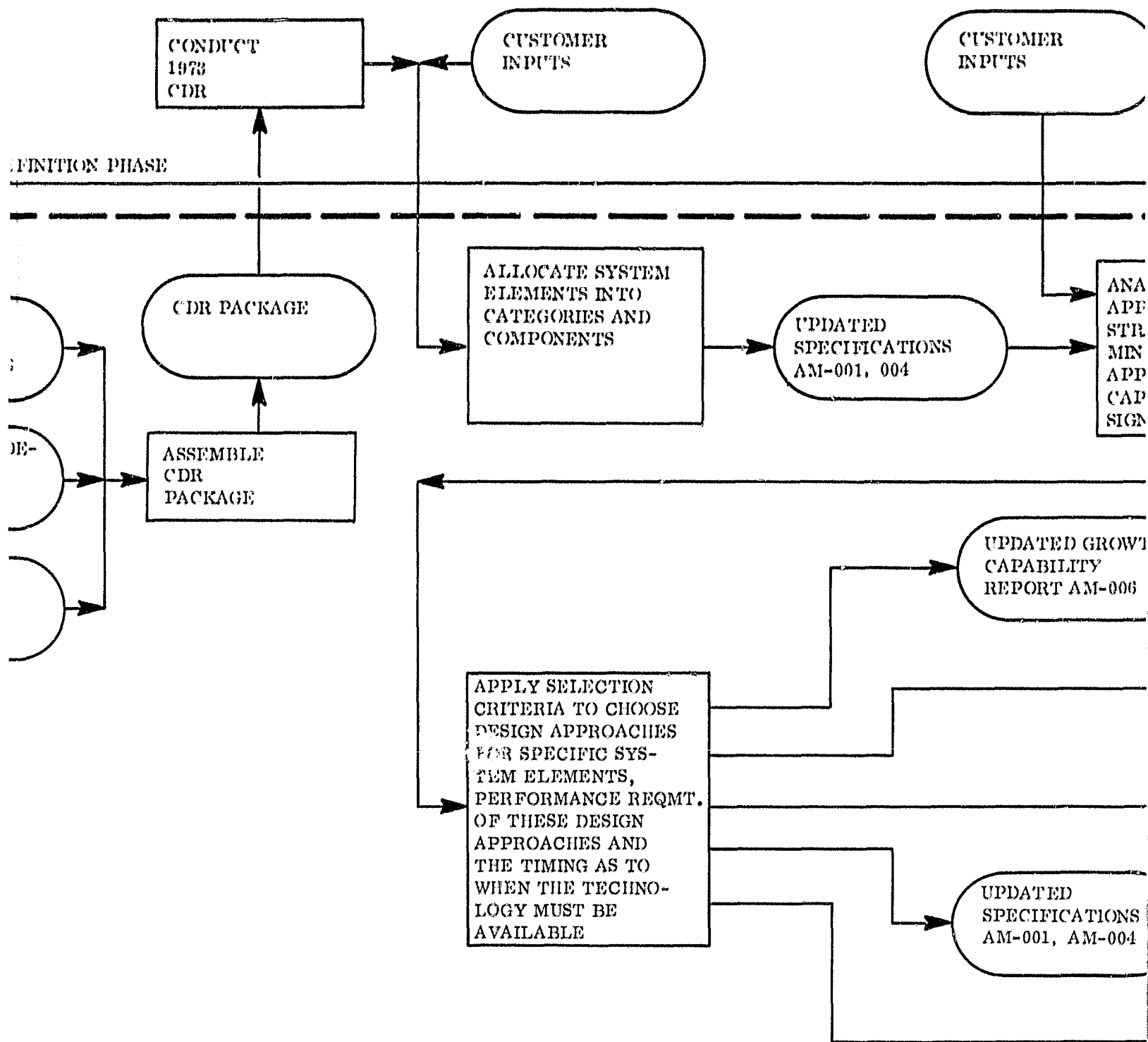


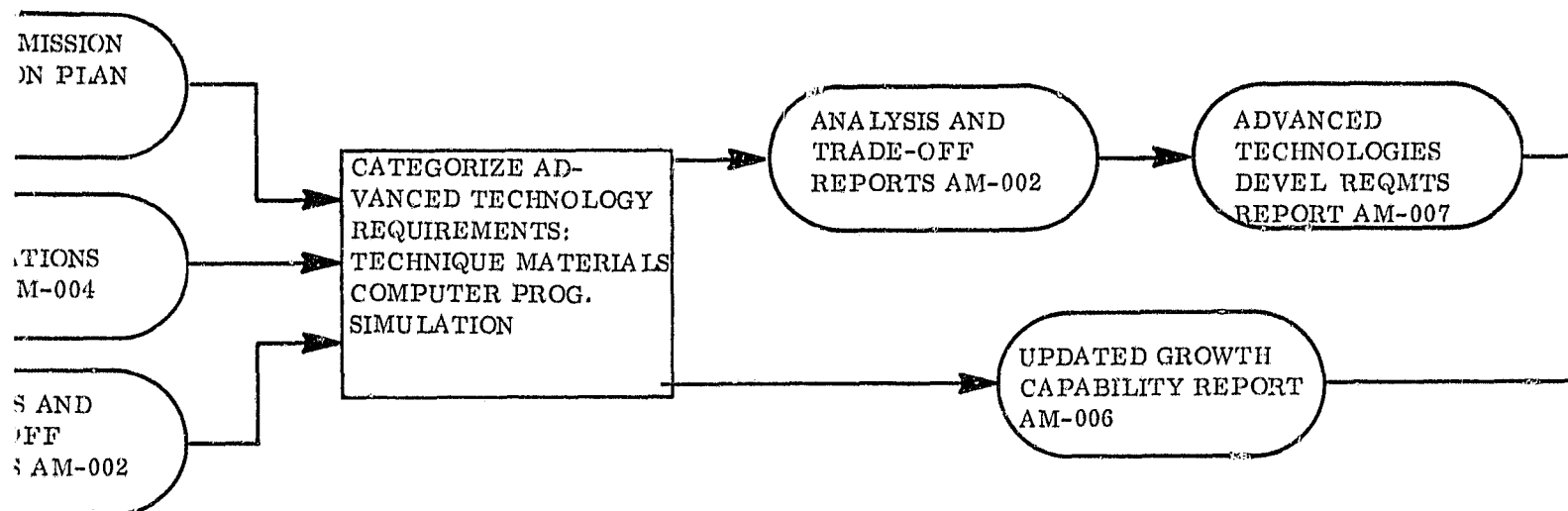
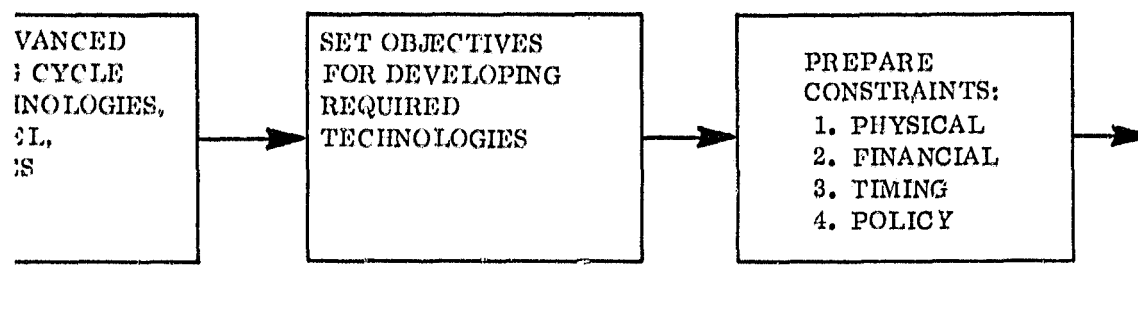
Figure Q-2. Advanced Missions User Flow Diagram - Contract Award Through Hard Design Review

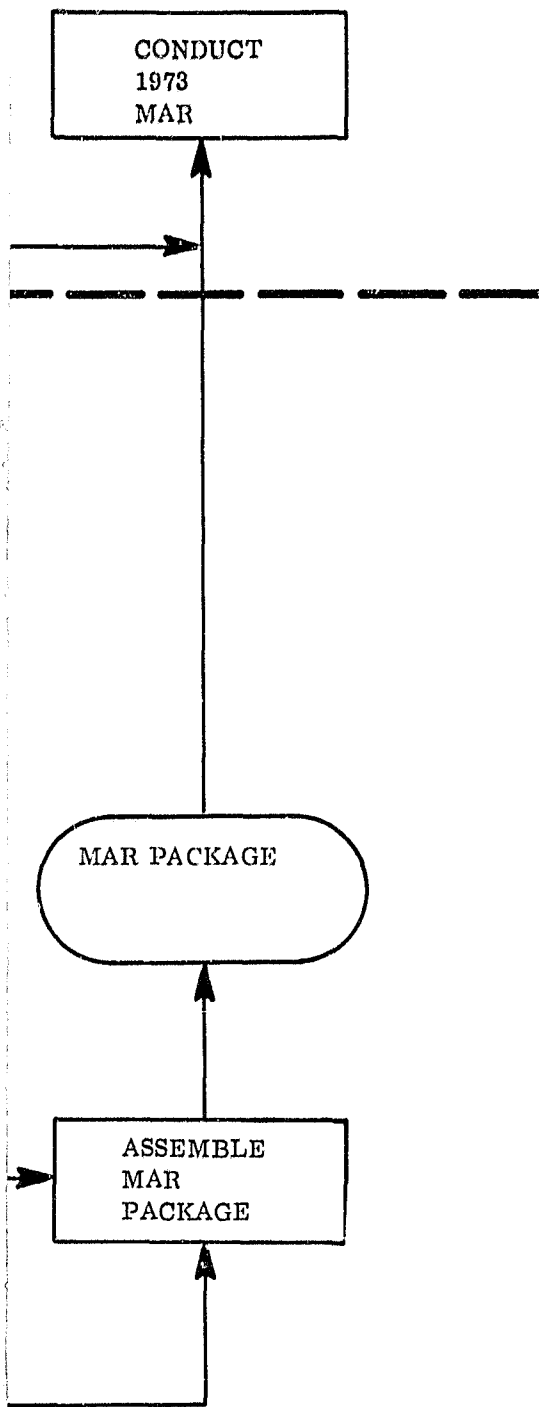




INPUTS
ATION TO
ENG MODEL

ADVANCED PLANNING CYCLE FOR TECHNOLOGIES





LEGEND:



ACTIVITY, WITH DESCRIPTION INSIDE



DATA ITEM(S), WITH TITLE(S) INSIDE

Figure Q-3. Advanced Missions User Flow
Diagram - Hard Design Review Through
Mission Acceptance Review

Advanced Missions Data Requirement Descriptions

<u>DRD Number</u>	<u>Title</u>
AM-001	Specification, Advanced Missions System Requirements
AM-002	Report, Advanced Missions Analysis and Trade-Off
AM-003	Plan, Advanced Mission Definition
AM-004	Specification, Advanced Missions Subsystem Design Requirements
AM-005	Report, Mission Profile
AM-006	Report, Growth Capability for Advanced Missions
AM-007	Report, Advanced Technologies Development Requirements

GE EXHIBIT DRD AM-001

VOYAGER DATA REQUIREMENT DESCRIPTION						DRD APPROVED BY		DATE		DATA CATEGORY	
ORGANIZATION ORIGINATING REQUIREMENT:		CODE: AM	OFFICE RESPONSIBLE FOR DRD:		CODE:	DRD PREPARED BY: R. H. Woodyard		DATE: 7/28/67		CONTRACT NO.:	DRD NO.: AM-001
TITLE OF DOCUMENT: SPECIFICATION, ADVANCED MISSIONS SYSTEM REQUIREMENTS						ORGANIZATION RESPONSIBLE FOR DOCUMENT PREPARATION: System Engineering		TASK OR SUBTASK:		DRL ITEM NO.:	
						ORGANIZATION RESPONSIBLE FOR DOCUMENT REPRODUCTION:		DRL NO.:		LEVEL NO.:	
						ORGANIZATION RESPONSIBLE FOR DOCUMENT DISTRIBUTION:		DDL NO.:		FILE NO.:	
TYPE OF DOCUMENT: ☒ CONTROL ☐ ACTION ☐ REFERENCE ☐ INFORMATION						ORGANIZATION RESPONSIBLE FOR DOCUMENT STOWAGE:		NO. OF COPIES: 75			
USE OF DOCUMENT: To define advanced system configuration and performance. Allocates performance and design requirements to each subsystem, including OSE.						ESTIMATED MANHOURS FOR SINGLE PREPARATION:		INFORMATION CUTOFF DATE OR MILESTONE:			
						ESTIMATED COST (\$) FOR SINGLE PREPARATION:		DATE DATA DUE TO USER:			
INTERRELATIONSHIP WITH OTHER DATA REQUIREMENTS: AM-003, Plan, Advance Mission Definition SE-008, Specification, System Performance/Design Requirements						FREQUENCY OF ISSUE: ☐ ANNUALLY ☐ SEMI-ANNUALLY ☐ QUARTERLY ☐ BI-MONTHLY ☐ MONTHLY ☐ SEMI-MONTHLY ☐ BI-WEEKLY ☐ WEEKLY ☐ DAILY ☒ OTHERWISE, AS SPECIFIED As required		PUBLICATION DATE: SDR			
								UPDATE (FREQUENCY OR MILESTONE): Thru MAR			
								ESTIMATED EXPIRATION DATE:			
CLASSIFICATION: ☐ SECRET ☐ CONFIDENTIAL ☐ SECRET RESTRICTED DATA ☐ CONFIDENTIAL RESTRICTED DATA ☒ UNCLASSIFIED						☐ GROUP 1 ☐ GROUP 2 ☐ GROUP 3 ☐ GROUP 4 ☐ PROPRIETARY ☐ PUBLIC DOMAIN		☐ SPECIAL HANDLING ☐ NASA DISCREET ☐ JPL DISCREET ☐ PROJECT DISCREET ☐ NOFORN			
FORM OF DATA:		KIND OF DATA:				REFERENCE DOCUMENTS:					
☒ PRINTED DOCUMENT ☐ CHART ☐ DIAGRAM ☐ DRAWING ☐ FILM (STATIC OR MOTION) ☐ ILLUSTRATION ☐ MODEL ☐ RECORDING (TAPE OR DISC) ☐ COMPUTER CARD ☐ COMPUTER TAPE ☐ MICROFILM (W/OR W/O CARD) ☐ OTHER		☐ ABSTRACT ☐ BROCHURE ☐ BULLETIN ☐ CATALOG ☐ CONTRACT ☐ DIRECTIVE ☐ DISCLOSURE ☐ ENGINEERING CHANGE ORDER ☐ REQUEST FOR ENGINEERING CHANGE PROPOSAL ☐ ENGINEERING CHANGE PROPOSAL ☐ HANDBOOK ☐ INDEX				☐ INSTRUCTION ☐ LETTER ☐ LIST ☐ LOG ☐ MANUAL ☐ MEMORANDUM ☐ MINUTES ☐ PLAN ☐ PROCEDURE ☐ REGULATION ☐ REPORT ☐ SCHEDULE ☒ SPECIFICATION ☐ STANDARD ☐ VOUCHER					
						APPLICABLE STANDARDS:					
REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL)											
SUBMIT FOR REVIEW TO:				DRAFT		DATE		PREPUBLICATION PROOF		DATE	
BY _____				_____		_____		BY _____		_____	
SUBMIT FOR APPROVAL TO:				BY _____		_____		BY _____		_____	
Manager, System Engineering				_____		_____		_____		_____	

GE EXHIBIT DRD AM-001

VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET

SPECIAL INSTRUCTIONS:

DRD NO.:

AM-001

After Advanced Mission broad objectives have been stated, based on policy definition, and the mission definition is established, the objectives are translated into top level functional requirements needed to implement the spacecraft system for the selected mission. These requirements are stated in this document.

SPECIAL DISTRIBUTION: (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)

OUTLINE OF CONTENTS:

1. Scope
2. Applicable documents
3. Mission objectives
 - a. Constraints
 - b. Selection criteria
4. Spacecraft requirements
 - a. Performance
 - (1) Characteristics
 - (2) Subsystem definition
 - (3) Operability
5. Interface requirements

GE EXHIBIT DRD AM-002

VOYAGER DATA REQUIREMENT DESCRIPTION					DRD APPROVED BY		DATE		DATA CATEGORY								
ORGANIZATION ORIGINATING REQUIREMENT:		CODE: AM	OFFICE RESPONSIBLE FOR DRD:		CODE:	DRD PREPARED BY: R. H. Woodyard		DATE: 7/28/67		CONTRACT NO.:	DRD NO.: AM-002						
TITLE OF DOCUMENT: REPORT, ADVANCED MISSIONS ANALYSIS AND TRADE-OFF						ORGANIZATION RESPONSIBLE FOR DOCUMENT PREPARATION: System Engineering		TASK OR SUBTASK:		DRL ITEM NO.:							
						ORGANIZATION RESPONSIBLE FOR DOCUMENT REPRODUCTION:		DRL NO.:		LEVEL NO.:							
						ORGANIZATION RESPONSIBLE FOR DOCUMENT DISTRIBUTION:		DDL NO.:		FILE NO.:							
						TYPE OF DOCUMENT: ☐ CONTROL ☐ ACTION ☐ REFERENCE ☒ INFORMATION											
USE OF DOCUMENT: To report on various analyses of subsystem and system performance, accuracy, environmental effects, etc.						ORGANIZATION RESPONSIBLE FOR DOCUMENT STOWAGE:		NO. OF COPIES: 75									
						ESTIMATED MANHOURS FOR SINGLE PREPARATION:		INFORMATION CUTOFF DATE OR MILESTONE:									
						ESTIMATED COST (\$) FOR SINGLE PREPARATION:		DATE DATA DUE TO USER:									
INTERRELATIONSHIP WITH OTHER DATA REQUIREMENTS: AM-001, Specification, Advanced Mission System Requirements AM-003, Plan, Advanced Mission Definition SE-008, Specification, System Performance/Design Requirements						FREQUENCY OF ISSUE: ☐ ANNUALLY ☐ SEMI-ANNUALLY ☐ QUARTERLY ☐ BI-MONTHLY ☐ MONTHLY ☐ SEMI-MONTHLY ☐ BI-WEEKLY ☐ WEEKLY ☒ OTHERWISE, AS SPECIFIED As required		PUBLICATION DATE: PDR UPDATE (FREQUENCY OR MILESTONE): Thru MAR									
								ESTIMATED EXPIRATION DATE:									
CLASSIFICATION: ☐ SECRET ☐ CONFIDENTIAL ☐ SECRET RESTRICTED DATA ☐ CONFIDENTIAL RESTRICTED DATA ☒ UNCLASSIFIED						☐ GROUP 1 ☐ GROUP 2 ☐ GROUP 3 ☐ GROUP 4 ☐ PROPRIETARY ☐ PUBLIC DOMAIN		☐ SPECIAL HANDLING ☐ NASA DISCREET ☐ JPL DISCREET ☐ PROJECT DISCREET ☐ NOFORN									
FORM OF DATA: ☒ PRINTED DOCUMENT ☐ CHART ☐ DIAGRAM ☐ DRAWING ☐ FILM (STATIC OR MOTION) ☐ ILLUSTRATION ☐ MODEL ☐ RECORDING (TAPE OR DISC) ☐ COMPUTER CARD ☐ COMPUTER TAPE ☐ MICROFILM (W/OR W/O CARD) ☐ OTHER _____						KIND OF DATA: ☐ ABSTRACT ☐ BROCHURE ☐ BULLETIN ☐ CATALOG ☐ CONTRACT ☐ DIRECTIVE ☐ DISCLOSURE ☐ ENGINEERING CHANGE ORDER ☐ REQUEST FOR ENGINEERING CHANGE PROPOSAL ☐ ENGINEERING CHANGE PROPOSAL ☐ HANDBOOK ☐ INDEX						REFERENCE DOCUMENTS: Mission Specification					
REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL)																	
DRAFT				DATE				PREPUBLICATION PROOF				DATE					
SUBMIT FOR REVIEW TO: _____				_____				_____				_____					
_____ BY _____				_____				_____ BY _____				_____					
_____				_____				_____				_____					
_____				_____				_____				_____					
SUBMIT FOR APPROVAL TO: _____				_____ BY _____				_____ BY _____				_____					
_____				_____				_____				_____					
Manager, System Engineering				_____				_____				_____					

GE EXHIBIT DRD AM-002

VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET

SPECIAL INSTRUCTIONS:

DRD NO.:
AM-002

During the Mission Definition Phase, this document will describe the tradeoff studies performed in identifying the missions for each year that best meet the objectives within the identified constraints. Missions are described in terms of target body, type of mission, spacecraft class launch vehicle, and the broad scientific objectives. During the system and subsystem phases, this document will describe the analyses and trade studies involving the application of constraints to determine the possible system definitions in successive stages of increasing detail. These reports will cover the steps used in analyzing top level functional requirements into more detailed requirements, in identifying the system elements needed in the implementation of these functional requirements, and identifying the system element performance requirements necessary to achieve the desired results.

SPECIAL DISTRIBUTION: (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)

OUTLINE OF CONTENTS:

1. Scope
2. Functional and technical design requirements
3. Design approaches and significant design characteristics
4. Comparison matrix of design approaches
5. Recommended design approach
6. Notes
7. Appendix

GE EXHIBIT DRD AM-003

VOYAGER DATA REQUIREMENT DESCRIPTION				DRD APPROVED BY		DATE	DATA CATEGORY
ORGANIZATION ORIGINATING REQUIREMENT	CODE: AM	OFFICE RESPONSIBLE FOR DRD:	CODE	DRD PREPARED BY: R. H. Woodyard	DATE: 7/28/67	CONTRACT NO.:	DRD NO.: AM-003
TITLE OF DOCUMENT: PLAN, ADVANCED MISSION DEFINITION				ORGANIZATION RESPONSIBLE FOR DOCUMENT PREPARATION: System Engineering		TASK OR SUBTASK:	DRL ITEM NO.:
				ORGANIZATION RESPONSIBLE FOR DOCUMENT REPRODUCTION:		DRL NO.:	LEVEL NO.:
				ORGANIZATION RESPONSIBLE FOR DOCUMENT DISTRIBUTION:		DDL NO.:	FILE NO.:
TYPE OF DOCUMENT: ☒ CONTROL ☐ ACTION ☐ REFERENCE ☐ INFORMATION				ORGANIZATION RESPONSIBLE FOR DOCUMENT STOWAGE:		NO OF COPIES: 75	
USE OF DOCUMENT: To show plan for most desirable mission for each opportunity in terms of type of mission, class of spacecraft, launch vehicle and broad scientific objectives.				ESTIMATED MANHOURS FOR SINGLE PREPARATION:		INFORMATION CUTOFF DATE OR MILESTONE:	
				ESTIMATED COST (\$) FOR SINGLE PREPARATION:		DATE DATA DUE TO USER:	
				FREQUENCY OF ISSUE: ☐ ANNUALLY ☐ SEMI-ANNUALLY ☐ QUARTERLY ☐ BI-MONTHLY ☐ MONTHLY ☐ SEMI-MONTHLY ☐ BI-WEEKLY ☐ WEEKLY ☐ DAILY ☒ OTHERWISE, AS SPECIFIED As required		PUBLICATION DATE: PDR UPDATE (FREQUENCY OR MILESTONE): Thru MAR	
INTERRELATIONSHIP WITH OTHER DATA REQUIREMENTS: AM-001, Specification, Advanced Mission System Requirements AM-003, Plan, Advanced Mission Definition SE-008, Specification, System Performance /Design Requirements				ESTIMATED EXPIRATION DATE:			
CLASSIFICATION: ☐ SECRET ☐ GROUP 1 ☐ CONFIDENTIAL ☐ GROUP 2 ☐ SECRET RESTRICTED DATA ☐ GROUP 3 ☐ CONFIDENTIAL RESTRICTED DATA ☐ GROUP 4 ☒ UNCLASSIFIED ☐ PROPRIETARY ☐ PUBLIC DOMAIN				☐ SPECIAL HANDLING ☐ NASA DISCREET ☐ JPL DISCREET ☐ PROJECT DISCREET ☐ NOFORN			
FORM OF DATA: KIND OF DATA: ☒ PRINTED DOCUMENT ☐ CHART ☐ DIAGRAM ☐ DRAWING ☐ FILM (STATIC OR MOTION) ☐ ILLUSTRATION ☐ MODEL ☐ RECORDING (TAPE OR DISC) ☐ COMPUTER CARD ☐ COMPUTER TAPE ☐ MICROFILM (W/OR W/O CARD) ☐ OTHER ☐ ABSTRACT ☐ BROCHURE ☐ BULLETIN ☐ CATALOG ☐ CONTRACT ☐ DIRECTIVE ☐ DISCLOSURE ☐ ENGINEERING CHANGE ORDER ☐ REQUEST FOR ENGINEERING CHANGE PROPOSAL ☐ ENGINEERING CHANGE PROPOSAL ☐ HANDBOOK ☐ INDEX ☐ INSTRUCTION ☐ LETTER ☐ LIST ☐ LOG ☐ MANUAL ☐ MEMORANDUM ☐ MINUTES ☒ PLAN ☐ PROCEDURE ☐ REGULATION ☐ REPORT ☐ SCHEDULE ☐ SPECIFICATION ☐ STANDARD ☐ VOUCHER				REFERENCE DOCUMENTS: Mission Specification			
APPLICABLE STANDARDS:							
REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL)							
DRAFT		DATE		PREPUBLICATION PROOF		DATE	
SUBMIT FOR REVIEW TO: _____ _____ _____ BY _____ _____ _____ _____		_____ _____ _____ _____ _____ _____		_____ _____ _____ _____ _____ _____		_____ _____ _____ _____ _____ _____	
SUBMIT FOR APPROVAL TO: _____ _____ _____ BY _____ _____ _____ _____		_____ _____ _____ _____ _____ _____		_____ _____ _____ _____ _____ _____		_____ _____ _____ _____ _____ _____	
Project Manager							

GE EXHIBIT DRD AM-003

VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET

DRD NO.:

AM-003

SPECIAL INSTRUCTIONS:

This document will be prepared at the end of the Advanced Mission Definition Phase and will identify the most desirable planetary missions for each opportunity that best meet the objectives within the identified constraints. The missions are described in terms of target body, type of mission, spacecraft class, launch vehicle, and the broad scientific objectives.

SPECIAL DISTRIBUTION: (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)

OUTLINE OF CONTENTS:

1. Scope
2. Broad scientific objectives
3. Constraints
4. Translation of detailed objectives into usable form
5. Analyses conducted
6. Selection criteria
 - a. Performance
 - b. Cost effectiveness
 - c. Timing
 - d. Risk
 - e. Policy
7. Recommendations of the most desirable planetary mission for each year
8. Appendix

GE EXHIBIT DRD AM-004

VOYAGER DATA REQUIREMENT DESCRIPTION				DRD APPROVED BY		DATE	DATA CATEGORY
ORGANIZATION ORIGINATING REQUIREMENT	CODE AM	OFFICE RESPONSIBLE FOR DRD	CODE	DRD PREPARED BY. R. H. Woodyard	DATE 7/28/67	CONTRACT NO.	DRD NO. AM-004
TITLE OF DOCUMENT: SPECIFICATION, ADVANCED MISSIONS, SUBSYSTEM DESIGN REQUIREMENTS				ORGANIZATION RESPONSIBLE FOR DOCUMENT PREPARATION System Engineering		TASK OR SUBTASK	DRL ITEM NO.
				ORGANIZATION RESPONSIBLE FOR DOCUMENT REPRODUCTION		DRL NO.	LEVEL NO.
				ORGANIZATION RESPONSIBLE FOR DOCUMENT DISTRIBUTION		DDL NO.	FILE NO.
TYPE OF DOCUMENT: ☒ CONTROL ☐ ACTION ☐ REFERENCE ☐ INFORMATION				ORGANIZATION RESPONSIBLE FOR DOCUMENT STOWAGE		NO OF COPIES 75	
USE OF DOCUMENT: To define subsystem configuration and to allocate performance and design requirements to each component, including OSE.				ESTIMATED MANHOURS FOR SINGLE PREPARATION:		INFORMATION CUTOFF DATE OR MILESTONE:	
				ESTIMATED COST (\$) FOR SINGLE PREPARATION:		DATE DATA DUE TO USER:	
INTERRELATIONSHIP WITH OTHER DATA REQUIREMENTS: AM-001, Specification, Advanced Mission System Requirements AM-003, Plan, Advanced Mission Definition SE-008, Specification, System Performance/Design Requirements				FREQUENCY OF ISSUE: ☐ ANNUALLY ☐ SEMI-ANNUALLY ☐ QUARTERLY ☐ BI-MONTHLY ☐ MONTHLY ☐ SEMI-MONTHLY ☐ BI-WEEKLY ☐ WEEKLY ☐ DAILY ☒ OTHERWISE, AS SPECIFIED As required		PUBLICATION DATE: HDR	
						UPDATE (FREQUENCY OR MILESTONE): Thru MAR	
						ESTIMATED EXPIRATION DATE:	
CLASSIFICATION: ☐ SECRET ☐ CONFIDENTIAL ☐ SECRET RESTRICTED DATA ☐ CONFIDENTIAL RESTRICTED DATA ☒ UNCLASSIFIED				☐ GROUP 1 ☐ GROUP 2 ☐ GROUP 3 ☐ GROUP 4 ☐ PROPRIETARY ☐ PUBLIC DOMAIN			
FORM OF DATA: ☒ PRINTED DOCUMENT ☐ CHART ☐ DIAGRAM ☐ DRAWING ☐ FILM (STATIC OR MOTION) ☐ ILLUSTRATION ☐ MODEL ☐ RECORDING (TAPE OR DISC) ☐ COMPUTER CARD ☐ COMPUTER TAPE ☐ MICROFILM (W/OR W/O CARD) ☐ OTHER				KIND OF DATA: ☐ ABSTRACT ☐ BROCHURE ☐ BULLETIN ☐ CATALOG ☐ CONTRACT ☐ DIRECTIVE ☐ DISCLOSURE ☐ ENGINEERING CHANGE ORDER ☐ REQUEST FOR ENGINEERING CHANGE PROPOSAL ☐ ENGINEERING CHANGE PROPOSAL ☐ HANDBOOK ☐ INDEX			
				REFERENCE DOCUMENTS: Mission Specification			
				APPLICABLE STANDARDS:			
REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL)							
		DRAFT		DATE		PREPUBLICATION PROOF	
		DATE		DATE		DATE	
SUBMIT FOR REVIEW TO:		BY		BY		BY	
SUBMIT FOR APPROVAL TO:		BY		BY		BY	
Manager, System Engineering							

GE EXHIBIT DRD AM-004

VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET

SPECIAL INSTRUCTIONS

DRD NO.:

AM-004

This document will be prepared at the end of the Advanced System Definition Phase to identify the advanced development requirements, list all of the system elements required to implement the system and the performance requirements for the system elements.

SPECIAL DISTRIBUTION: (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)

OUTLINE OF CONTENTS:

1. Scope
2. Applicable documents
3. System elements
 - a. Function vs. elements required
 - b. Performance requirements
 - c. Reliability
 - d. Life
 - e. Environment
4. Appendix

(CONTINUE ON THIRD SHEET, IF NECESSARY, AND AFFIX TO THIS DRD.)

GE EXHIBIT DRD AM-005

VOYAGER DATA REQUIREMENT DESCRIPTION					DRD APPROVED BY		DATE	DATA CATEGORY			
ORGANIZATION ORIGINATING REQUIREMENT		CODE AM	OFFICE RESPONSIBLE FOR DRD		CODE	DRD PREPARED BY R. H. Woodyard		DATE 7/28/67	CONTRACT NO	DRD NO. AM-005	
TITLE OF DOCUMENT: REPORT, MISSION PROFILE						ORGANIZATION RESPONSIBLE FOR DOCUMENT PREPARATION System Engineering		TASK OR SUBTASK	DRL ITEM NO		
						ORGANIZATION RESPONSIBLE FOR DOCUMENT REPRODUCTION		DRL NO	LEVEL NO		
						ORGANIZATION RESPONSIBLE FOR DOCUMENT DISTRIBUTION		DDL NO.	FILE NO		
						ORGANIZATION RESPONSIBLE FOR DOCUMENT STOWAGE		NO OF COPIES 75			
TYPE OF DOCUMENT: ☐ CONTROL ☐ ACTION ☐ REFERENCE ☒ INFORMATION						ESTIMATED MANHOURS FOR SINGLE PREPARATION		INFORMATION CUTOFF DATE OR MILESTONE			
USE OF DOCUMENT: To report time of sequence of events during recommended nominal and alternate missions.						ESTIMATED COST (\$) FOR SINGLE PREPARATION		DATE DATA DUE TO USER			
						FREQUENCY OF ISSUE: ☐ ANNUALLY ☐ SEMI-ANNUALLY ☐ QUARTERLY ☐ BI-MONTHLY ☐ MONTHLY ☐ SEMI-MONTHLY ☐ BI-WEEKLY ☐ WEEKLY ☒ OTHERWISE, AS SPECIFIED As required		PUBLICATION DATE: HDR UPDATE (FREQUENCY OR MILESTONE): Thru MAR ESTIMATED EXPIRATION DATE:			
INTERRELATIONSHIP WITH OTHER DATA REQUIREMENTS: AM-001, Specification, Advanced Mission System Rqmts. AM-003, Plan, Advanced Mission Definition AM-004, Specification, Advanced Missions, Subsystem Design Requirements SE-008, Specification, System Performance/Design Requirements						CLASSIFICATION: ☐ SECRET ☐ CONFIDENTIAL ☐ SECRET RESTRICTED DATA ☐ CONFIDENTIAL RESTRICTED DATA ☒ UNCLASSIFIED		☐ GROUP 1 ☐ GROUP 2 ☐ GROUP 3 ☐ GROUP 4 ☐ PROPRIETARY ☐ PUBLIC DOMAIN		☐ SPECIAL HANDLING ☐ NASA DISCREET ☐ JPL DISCREET ☐ PROJECT DISCREET ☐ NOFORN	
FORM OF DATA: ☒ PRINTED DOCUMENT ☐ CHART ☐ DIAGRAM ☐ DRAWING ☐ FILM (STATIC OR MOTION) ☐ ILLUSTRATION ☐ MODEL ☐ RECORDING (TAPE OR DISC) ☒ COMPUTER CARD ☐ COMPUTER TAPE ☐ MICROFILM (W/OR W/O CARD) ☐ OTHER _____ _____ _____						KIND OF DATA: ☐ ABSTRACT ☐ BROCHURE ☐ BULLETIN ☐ CATALOG ☐ CONTRACT ☐ DIRECTIVE ☐ DISCLOSURE ☐ ENGINEERING CHANGE ORDER ☐ REQUEST FOR ENGINEERING CHANGE PROPOSAL ☐ ENGINEERING CHANGE PROPOSAL ☐ HANDBOOK ☐ INDEX ☐ INSTRUCTION ☐ LETTER ☐ LIST ☐ LOG ☐ MANUAL ☐ MEMORANDUM ☐ MINUTES ☐ PLAN ☐ PROCEDURE ☐ REGULATION ☒ REPORT ☐ SCHEDULE ☐ SPECIFICATION ☐ STANDARD ☐ VOUCHER					
						REFERENCE DOCUMENTS: Mission Specification					
APPLICABLE STANDARDS:											
REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL)											
DRAFT DATE PREPUBLICATION PROOF DATE											
SUBMIT FOR REVIEW TO: _____											
_____ BY _____											
_____ BY _____											
SUBMIT FOR APPROVAL TO: _____											
_____ BY _____											
Manager, System Engineering											

GE EXHIBIT DRD AM-005

VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET

SPECIAL INSTRUCTIONS

DRD NO.:

AM-005

This mission profile report which is a time history of all events and functions is first prepared at the end of the Advanced Missions Definition Phase as soon as the required subsystems are defined.

SPECIAL DISTRIBUTION: (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)

OUTLINE OF CONTENTS:

1. Scope
2. Applicable documents
3. Description and explanation of notation used on tabulated sequence
4. Tabulated sequence of events
 - a. Nominal advanced predicted mission
 - b. Alternate or degraded missions
5. Notes
6. Appendix

(CONTINUE ON THIRD SHEET, IF NECESSARY, AND AFFIX TO THIS DRD.)

GE EXHIBIT DRD AM-006

VOYAGER DATA REQUIREMENT DESCRIPTION						DRD APPROVED BY		DATE		DATA CATEGORY	
ORGANIZATION ORIGINATING REQUIREMENT:		CODE: AM	OFFICE RESPONSIBLE FOR DRD:		CODE:	DRD PREPARED BY: R. H. Woodyard		DATE: 7/28/67		CONTRACT NO.:	DRD NO. AM-006
TITLE OF DOCUMENT: REPORT, GROWTH CAPABILITY FOR ADVANCED MISSIONS						ORGANIZATION RESPONSIBLE FOR DOCUMENT PREPARATION: System Engineering		TASK OR SUBTASK:		DRL ITEM NO.	
						ORGANIZATION RESPONSIBLE FOR DOCUMENT REPRODUCTION:		DRL NO.:		LEVEL NO.:	
						ORGANIZATION RESPONSIBLE FOR DOCUMENT DISTRIBUTION:		DDL NO.:		FILE NO.:	
TYPE OF DOCUMENT: ☐ CONTROL ☐ ACTION ☐ REFERENCE ☒ INFORMATION											
USE OF DOCUMENT: To report advanced development requirements in terms of design approaches for specific elements, performance requirements, and timing of availability.						ORGANIZATION RESPONSIBLE FOR DOCUMENT STOWAGE:		NO. OF COPIES: 75			
						ESTIMATED MANHOURS FOR SINGLE PREPARATION:		INFORMATION CUTOFF DATE OR MILESTONE:			
						ESTIMATED COST (\$) FOR SINGLE PREPARATION:		DATE DATA DUE TO USER:			
INTERRELATIONSHIP WITH OTHER DATA REQUIREMENTS: AM-001, Specification, Advanced Missions System Requirements AM-002, Report, Advanced Missions Analysis and Trade-Off AM-004, Specification, Advanced Missions, Subsystem Design Requirements						FREQUENCY OF ISSUE: ☐ ANNUALLY ☐ SEMI-ANNUALLY ☐ QUARTERLY ☐ BI-MONTHLY ☐ MONTHLY ☐ SEMI-MONTHLY ☐ BI-WEEKLY ☐ WEEKLY ☐ DAILY ☒ OTHERWISE, AS SPECIFIED As required		PUBLICATION DATE: CDR			
								UPDATE (FREQUENCY OR MILESTONE): Thru MAR			
								ESTIMATED EXPIRATION DATE:			
CLASSIFICATION: ☐ SECRET ☐ GROUP 1 ☐ CONFIDENTIAL ☐ GROUP 2 ☐ SPECIAL HANDLING ☐ SECRET RESTRICTED DATA ☐ GROUP 3 ☐ NASA DISCREET ☐ CONFIDENTIAL RESTRICTED DATA ☐ GROUP 4 ☐ JPL DISCREET ☒ UNCLASSIFIED ☐ PROPRIETARY ☐ PROJECT DISCREET ☐ PUBLIC DOMAIN ☐ NOFORN											
FORM OF DATA: KIND OF DATA: ☒ PRINTED DOCUMENT ☐ ABSTRACT ☐ INSTRUCTION ☐ CHART ☐ BROCHURE ☐ LETTER ☐ DIAGRAM ☐ BULLETIN ☐ LIST ☐ DRAWING ☐ CATALOG ☐ LOG ☐ FILM (STATIC OR MOTION) ☐ CONTRACT ☐ MANUAL ☐ ILLUSTRATION ☐ DIRECTIVE ☐ MEMORANDUM ☐ MODEL ☐ DISCLOSURE ☐ MINUTES ☐ RECORDING (TAPE OR DISC) ☐ ENGINEERING CHANGE ORDER ☐ PLAN ☐ COMPUTER CARD ☐ REQUEST FOR ENGINEERING CHANGE PROPOSAL ☐ PROCEDURE ☐ COMPUTER TAPE ☐ REGULATION ☐ MICROFILM (W/OR W/O CARD) ☒ REPORT ☐ OTHER ☐ SCHEDULE _____ _____ _____ ☐ SPECIFICATION ☐ STANDARD ☐ INDEX ☐ VOUCHER											
REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL)											
SUBMIT FOR REVIEW TO: _____				BY _____		PREPUBLICATION PROOF _____		DATE _____			
SUBMIT FOR APPROVAL TO: _____				BY _____							
Manager, System Engineering											

GE EXHIBIT DRD AM-006

VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET

SPECIAL INSTRUCTIONS:

DRD NO.:
AM-006

This document is prepared during the Advanced Mission System element definition cycle and reports on the system elements that require further study. Typical constraints are identified such as weight and size limitations as well as possible policy constraints concerning the use of only flight-proven elements. This report will delineate the differences from the 1973 spacecraft and reports on the impact on the 1973 design.

SPECIAL DISTRIBUTION: (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)

OUTLINE OF CONTENTS:

1. Scope
2. Applicable documents
3. Summary of trade-off studies
4. Advance development requirements
 - a. Design approaches for specific system elements
 - b. Performance requirements of these design approaches
 - c. Timing as to when the technology will be available
5. Differences from 1973 design
6. Impact upon 1973 design

(CONTINUE ON THIRD SHEET, IF NECESSARY, AND AFFIX TO THIS DRD.)

GE EXHIBIT DRD AM-007

VOYAGER DATA REQUIREMENT DESCRIPTION				DRD APPROVED BY		DATE	DATA CATEGORY
ORGANIZATION ORIGINATING REQUIREMENT:	CODE: AM	OFFICE RESPONSIBLE FOR DRD:	CODE:	DRD PREPARED BY: R. H. Woodyard	DATE: 7/28/67	CONTRACT NO.:	DRD NO.: AM-007
TITLE OF DOCUMENT: REPORT, ADVANCED TECHNOLOGIES DEVELOPMENT REQUIREMENTS				ORGANIZATION RESPONSIBLE FOR DOCUMENT PREPARATION: System Engineering		TASK OR SUBTASK:	DRD ITEM NO.:
				ORGANIZATION RESPONSIBLE FOR DOCUMENT REPRODUCTION:		DRD NO.:	LEVEL NO.:
				ORGANIZATION RESPONSIBLE FOR DOCUMENT DISTRIBUTION:		DD NO.:	FILE NO.:
				ORGANIZATION RESPONSIBLE FOR DOCUMENT STOWAGE:		NO. OF COPIES: 75	
TYPE OF DOCUMENT: ☐ CONTROL ☐ ACTION ☐ REFERENCE ☒ INFORMATION				ESTIMATED MANHOURS FOR SINGLE PREPARATION:		INFORMATION CUTOFF DATE OR MILESTONE:	
USE OF DOCUMENT: To report on technology deficiencies that have been identified for system under study and progress made in developing them to achieve technological capability.				ESTIMATED COST (\$) FOR SINGLE PREPARATION:		DATE DATA DUE TO USER:	
				FREQUENCY OF ISSUE: ☐ ANNUALLY ☐ SEMI-ANNUALLY ☐ QUARTERLY ☐ BI-MONTHLY ☐ MONTHLY ☐ SEMI-MONTHLY ☐ BI-WEEKLY ☐ WEEKLY ☒ DAILY ☒ OTHERWISE, AS SPECIFIED One time		PUBLICATION DATE: MAR	
INTERRELATIONSHIP WITH OTHER DATA REQUIREMENTS: AM-001, Specification, Advanced Missions System Requirements AM-006, Report, Growth Capability for Advanced Missions				ESTIMATED COST (\$) FOR SINGLE PREPARATION:		UPDATE (FREQUENCY OR MILESTONE): Not Applicable	
						ESTIMATED EXPIRATION DATE:	
CLASSIFICATION:				REFERENCE DOCUMENTS: Mission Specification		APPLICABLE STANDARDS:	
☐ SECRET ☐ CONFIDENTIAL ☐ SECRET RESTRICTED DATA ☐ CONFIDENTIAL RESTRICTED DATA ☒ UNCLASSIFIED ☐ GROUP 1 ☐ GROUP 2 ☐ GROUP 3 ☐ GROUP 4 ☐ PROPRIETARY ☐ PUBLIC DOMAIN ☐ SPECIAL HANDLING ☐ NASA DISCREET ☐ JPL DISCREET ☐ PROJECT DISCREET ☐ NOFORN							
FORM OF DATA: ☒ PRINTED DOCUMENT ☐ CHART ☐ DIAGRAM ☐ DRAWING ☐ FILM (STATIC OR MOTION) ☐ ILLUSTRATION ☐ MODEL ☐ RECORDING (TAPE OR DISC) ☐ COMPUTER CARD ☐ COMPUTER TAPE ☐ MICROFILM (W/OR W/O CARD) ☐ OTHER KIND OF DATA: ☐ ABSTRACT ☐ BROCHURE ☐ BULLETIN ☐ CATALOG ☐ CONTRACT ☐ DIRECTIVE ☐ DISCLOSURE ☐ ENGINEERING CHANGE ORDER ☐ REQUEST FOR ENGINEERING CHANGE PROPOSAL ☐ ENGINEERING CHANGE PROPOSAL ☐ HANDBOOK ☐ INDEX ☐ INSTRUCTION ☐ LETTER ☐ LIST ☐ LOG ☐ MANUAL ☐ MEMORANDUM ☐ MINUTES ☐ PLAN ☐ PROCEDURE ☐ REGULATION ☒ REPORT ☐ SCHEDULE ☐ SPECIFICATION ☐ STANDARD ☐ VOUCHER				REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL)			
SUBMIT FOR REVIEW TO: _____ _____ BY _____ _____ BY _____ SUBMIT FOR APPROVAL TO: _____ _____ BY _____ <u>Manager, System Engineering</u> DATE _____ DATE _____ DATE _____ DATE _____ DATE _____ DATE _____				PREPUBLICATION PROOF _____ _____ BY _____ _____ BY _____ PREPUBLICATION PROOF _____ _____ BY _____ PREPUBLICATION PROOF _____ DATE _____ DATE _____ DATE _____ DATE _____ DATE _____ DATE _____			

GE EXHIBIT DRD AM-007

VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET

SPECIAL INSTRUCTIONS:

DRD NO.:

AM-007

This document will report on the technology deficiencies that have been identified for the system under study and will develop the plans to achieve technological capability. The document will actually be the final report covering the advanced planning cycle for technologies, which will have the objective of developing the required technologies.

SPECIAL DISTRIBUTION: (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)

OUTLINE OF CONTENTS:

1. Scope
2. Applicable documents
3. Objectives
4. Constraints
 - a. Physical
 - b. Financial
 - c. Timing
 - d. Policy
5. Translation
(Categorize advanced technology requirements, technique, materials, computer programs, and simulation)
6. Analysis
 - a. Tasks
 - b. Schedules
 - c. Decision points
 - d. Funding approaches
7. Selection criteria
 - a. Performance
 - b. Cost effectiveness

(CONTINUE ON THIRD SHEET, IF NECESSARY, AND AFFIX TO THIS DRD.)

GE EXHIBIT DRD AM-007

- c. Timing
- d. Risk
- e. Policy
- 8. Trade-off and synthesis
- 9. Conclusions
 - a. Advanced technologies development plan to achieve technological capability
 - (1) Tasks
 - (2) Schedule
 - (3) Decision points
 - (4) Funding approach

DOCUMENTATION RELATIONSHIP TREES

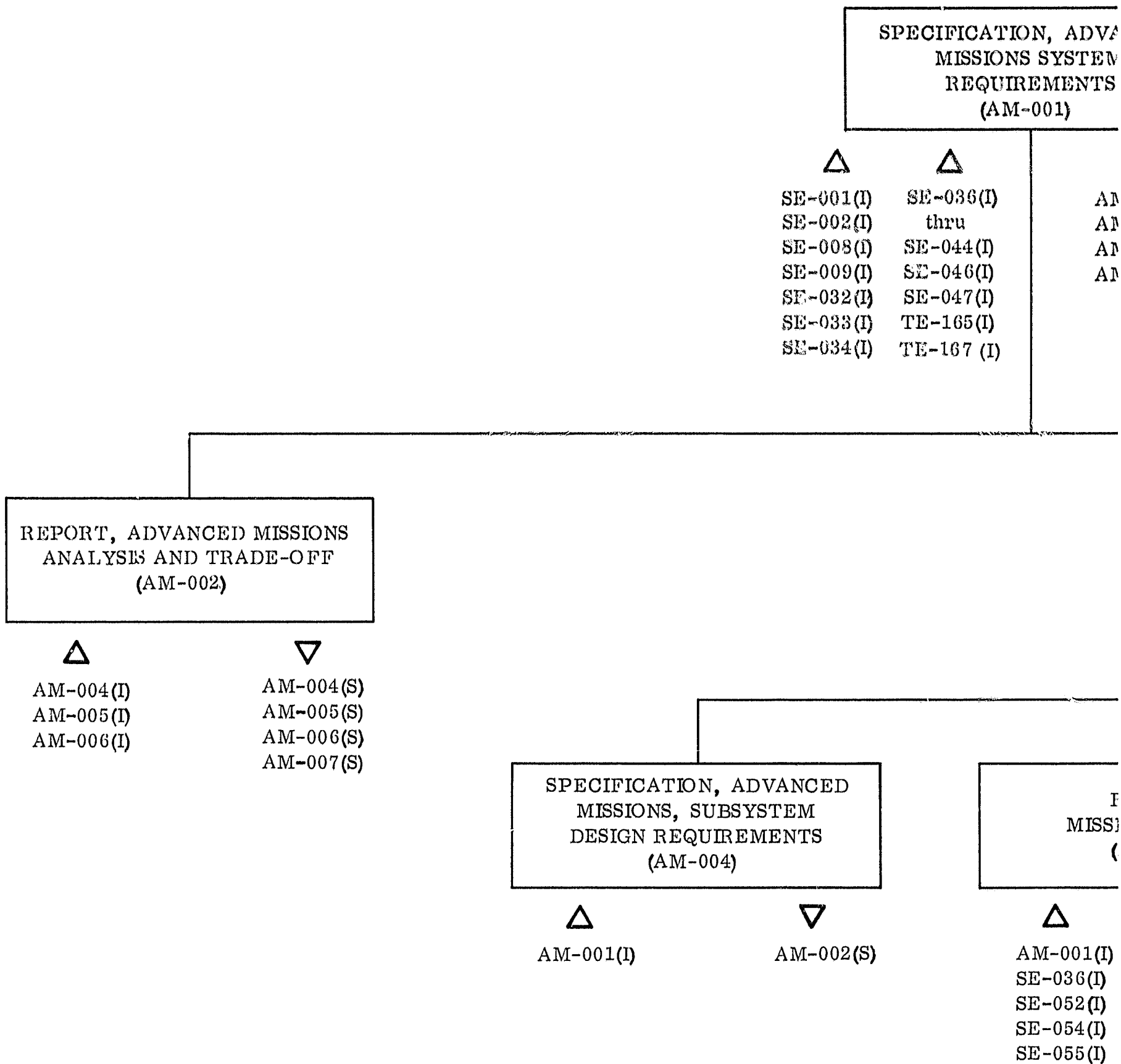
A documentation relationship tree has been prepared to further develop the data base interrelationships by identifying and presenting pictorially the relationships of all Voyager contractor data items within each functional category and by showing their relationships across categories.

Relationships within the functional category are shown by constructing a tier pattern beginning with the top level (or governing) data item and relating, in descending order, all data items within the category to this top level data item. (The location of a data item at a given level on the diagram does not necessarily indicate the importance of that specific item but identifies and defines its relation to all other data items in that category.)

Relationships between data items in one category and data items in other functional categories are shown by (1) arrows to indicate the direction of the relationship, and (2) an alphabetic code to indicate the nature of the interrelationship as follows:

- a. Data items needed for preparation and/or support of the referenced item. (I)
- b. Data items supported or needed by this data item. (S)
- c. Data items that relate "to" and provide information of a general nature but are not required in an input or support role. (G)

Each data item appearing on the Data Item List (DIL) was examined and evaluated with respect to its contribution to, or dependence on, data items appearing in other categories, and is included in the diagrams.



ANCED

[



AM-004(S)

AM-005(S)

AM-006(S)

AM-007(S)

PLAN, ADVANCED
MISSION DEFINITION
(AM-003)

REPORT,
ON PROFILE
(AM-005)

AM-002(S)

REPORT, GROWTH CAPABILITY
FOR ADVANCED MISSIONS
(AM-006)

AM-001(I)

REPORT, ADVANCED
TECHNOLOGIES DEVELOPMENT
REQUIREMENTS
(AM-007)

AM-001(I)
AM-002(I)

Figure Q-4. Advanced Missions
Documentation Relationship Tree (AM)

DATA ITEM PHASING/FREQUENCY

The Data Item Frequency and Phasing chart shows the requirements for contractor data item preparation by major project review periods. It is concerned with the phasing and frequency of preparation of each individual data item and not the total number of copies required for reproduction and distribution.

The following legend and/or abbreviations have been used:

A	Annual	Q	Quarterly
S/A	Semiannual	I	Initial
WK	Weekly	F	Final
MO	Monthly	N/R	New and revised
B/W	Biweekly	SDR	System design review
B/M	Bimonthly	PDR	Preliminary design review
O/T	One time	HDR	Hard design review
A/R	As required	CDR	Critical design review
U	Update	FACI	First article configuration inspection
I/U	One update	MAR	Mission acceptance review
DA	Daily	J FACT	Joint flight acceptance composite testing

DATA ITEM TITLE		QUAN
ADVANCED MISSIONS		
PLANS		
AM-003 Plan, Advanced Mission Definition		
REPORTS		
AM-002 Report, Advanced Missions Analysis and Trade-Off		
AM-005 Report, Mission Profile		
AM-006 Report, Growth Capability for Advanced Missions		
AM-007 Report, Advanced Technologies Development Requirements		
SPECIFICATIONS		
AM-001 Specification, Advanced Missions System Requirements		1
AM-004 Specification, Advanced Missions, Subsystem Design Requirements		
TOTAL		

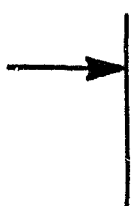


Figure Q-5. Advanced Mission Data Item
Phasing and Frequency Matrix