

AD-A075 971

PERCEPTRONICS INC WOODLAND HILLS CALIF

F/G 15/7

DEVELOPMENT OF A DECISION TAXONOMY FOR THE MARINE COMMAND AND C--ETC(U)

JUN 79 A CROLOTTE , J SALEH

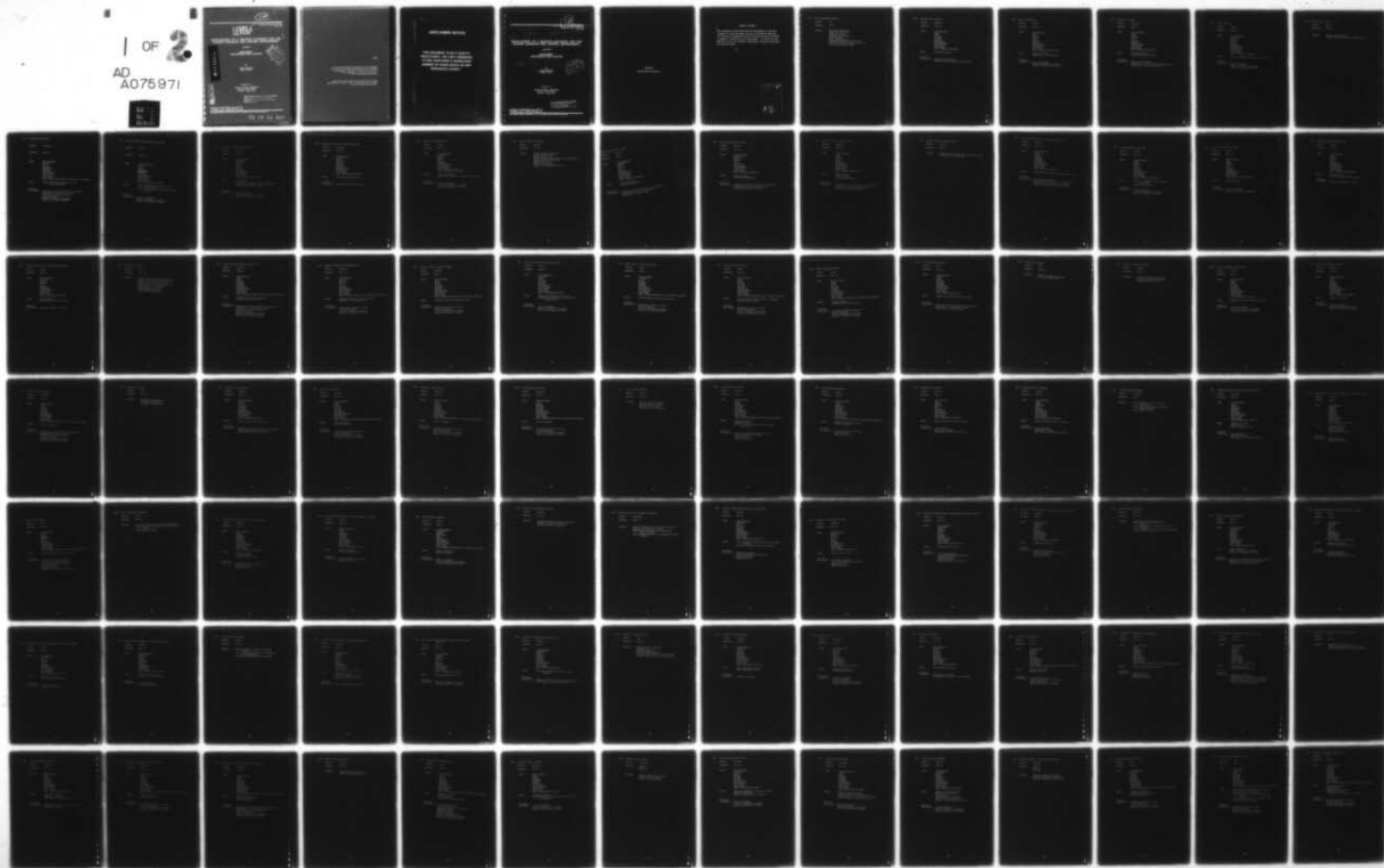
N00014-78-C-0495

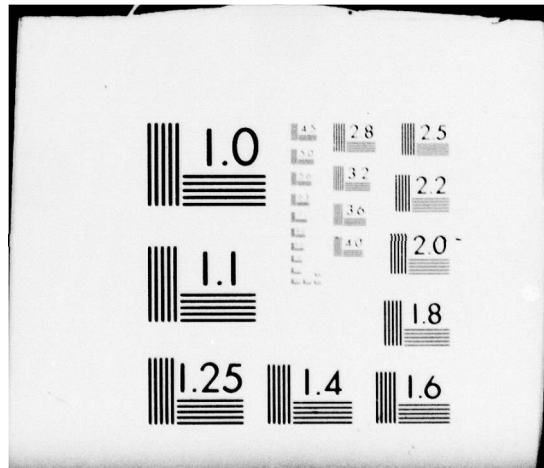
UNCLASSIFIED

PATR-1069-79-6-VOL-2

NL

1 OF 2
AD
A075971





12
Annual Technical Report PATR-1089-79-6
Contract No. N000-14-78-C-0495
June, 1979

LEVEL II

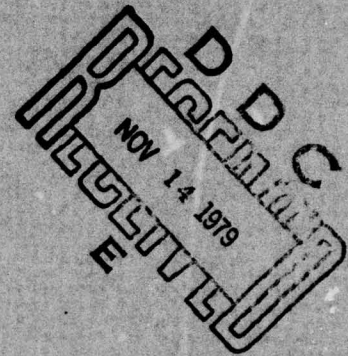
**DEVELOPMENT OF A DECISION TAXONOMY FOR THE
MARINE COMMAND AND CONTROL ENVIRONMENT**

VOLUME II

**SUPPLEMENT
MAB DECISION TASK ANALYSIS**

BY

**ALAIN CROLOTTE
JOSEPH SALEH**



AD A 075971

Prepared For:

**OFFICE OF NAVAL RESEARCH
800 North Quincy Street
Arlington, Virginia 22217**

**THIS DOCUMENT IS BEST QUALITY PRACTICABLE.
THE COPY FURNISHED TO DDC CONTAINED A
SIGNIFICANT NUMBER OF PAGES WHICH DO NOT
REPRODUCE LEGIBLY.**

PERCEPTRONICS

6271 VARIEL AVENUE • WOODLAND HILLS • CALIFORNIA 91367 • PHONE (213) 684-7470

79 14 11 046

DDC FILE COPY

NOTES

The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of any office of the United States Government.

Approved for Public Release; Distribution Unlimited. Reproduction in whole or part is permitted for any purpose of the United States Government.

DISCLAIMER NOTICE

**THIS DOCUMENT IS BEST QUALITY
PRACTICABLE. THE COPY FURNISHED
TO DDC CONTAINED A SIGNIFICANT
NUMBER OF PAGES WHICH DO NOT
REPRODUCE LEGIBLY.**

12 (14)

(11) Jun 79

Annual Technical Report PATR-1069-79-6 -Vol-2
Contract No. N000-14-78-C-0495
June, 1979

(12) 66

(15) N00014-78-C-0495

(6)

DEVELOPMENT OF A DECISION TAXONOMY FOR THE MARINE COMMAND AND CONTROL ENVIRONMENT.

VOLUME II.

**SUPPLEMENT
MAB DECISION TASK ANALYSIS.**

(9) Annual technical reports

BY

(10) **ALAIN CROLOTTE
JOSEPH SALEH**

D D C
RAPID
NOV 14 1979
REGISTERED
E

Prepared For:

**OFFICE OF NAVAL RESEARCH
800 North Quincy Street
Arlington, Virginia 22217**

This document has been approved for public release and sale; its distribution is unlimited.

PERCEPTRONICS

6271 VARIEL AVENUE • WOODLAND HILLS • CALIFORNIA 91367 • PHONE (213) 894-7470

390 285

(A)

JOB

SUPPLEMENT
MAB DECISION TASK ANALYSIS

2

PREFACE TO VOLUME II

This supplement to report PATR-1069-79-6 (Development of a Decision Taxonomy for the Marine Command and Control Environment) summarizes the findings of the MAB decision-task classification process performed in support of the decision task taxonomy phase. It provides for each MAB decision task the information requirements, functional requirements and attribute values.

4

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DDC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or special
A	23 CP

©

TASK: ATF/LF PRELIMINARY PLANNING

KEYWORD: Plan

REFERENCE: FMFM 3-1

SUBTASKS: Determine ATF Objectives
Select ATF General C/A
Determine LF Mission
Determine Landing Sites
Select Beachhead
Select Landing Areas
Determine Tentative D-Day and H-Hour
Formulate LF Concept of Operations Ashore
Decide on Other Major Issues

TASK: DETERMINE ATF OBJECTIVES

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Initiating Directive

FUNCTIONAL
REQUIREMENTS: Recognition of Standards
Identification of Dimensions and Parameters

TASK: SELECT ATF GENERAL C/A

KEYWORD: Select

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Initiating Directive
Determination of ATF Objectives

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE LF MISSION

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Initiating Directive
ATF General Courses of Action

FUNCTIONAL
REQUIREMENTS: Recognition of Standards
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains

TASK: SELECT BEACHHEAD

KEYWORD: Select

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Various Alternative Beachheads proposed by CLF

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: SELECT LANDING AREAS

KEYWORD: Select

REFERENCE: FMFM 3-1

SUBTASKS: Designate Landing Areas
Select Primary and Alternative Landing Areas

TASK: DESIGNATE LANDING AREAS

KEYWORD: Designate

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Individual
Static
One Shot
Uncertainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Mission Intelligence Information on the
Area of Operations

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: SELECT PRIMARY AND ALTERNATIVE LANDING AREAS

KEYWORD: Select

REFERENCE: FMEM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Uncertainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Mission Intelligence Information on the
Enemy Situation
Ranked List of Feasible Landing Areas Defined
by CATF

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE TENTATIVE D-DAY AND H-HOUR

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: LF Objectives
Broad Courses of Action under Consideration
Intelligence Information (enemy and terrain)
Requirements for Logistic Support

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: FORMULATE LF CONCEPT OF OPERATIONS ASHORE

KEYWORD: Determine

REFERENCE: FNFM 3-1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: LF Mission and Landing Sites

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action

TASK: DECIDE ON OTHER MAJOR ISSUES

KEYWORD: Decide

REFERENCE: FFM 3-1

CLASS: Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Small Probability High Loss
Type 2 (Alternative Selection)

INPUTS: Initiating Directive
Intelligence Information (strategic and tactical)

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEVELOP OPERATIONS ESTIMATE

KEYWORD: Estimate

REFERENCE: FMFM 3-1

SUBTASKS: Analyze Landing Force Mission
Generate Friendly C/A's
Analyze Friendly C/A's
Analyze Characteristics of the Area of Operations
Analyze Relative Combat Power
Analyze Enemy C/A's
Compare Friendly C/A's
Select C/A for Commander's Briefing

ANALYZE LANDING FORCE MISSION

KEYWORD: Analyze

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Planning Guidance
Intelligence Information

FUNCTIONAL REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action

TASK: ANALYZE LANDING FORCE MISSION

KEYWORD: Analyze

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Planning Guidance
Intelligence Information

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action

TASK: GENERATE FRIENDLY COURSES OF ACTION

KEYWORD: Generate

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Mission Analysis
Planning Guidance
Intelligence Information

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action

TASK: ANALYZE FRIENDLY COURSES OF ACTION

KEYWORD: Analyze

REFERENCE: FNM 3-1

SUBTASKS: Analyze Characteristics of the Area of Operations
Analyze Relative Combat Power

TASK: ANALYZE CHARACTERISTICS OF THE AREA OF OPERATIONS

KEYWORD: Analyze

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Intelligence Information (weather, terrain, etc.)

FUNCTIONAL
REQUIREMENTS: Recognition of Standards
Identification of Dimensions and Parameters
Problem Emergency Criteria and Thresholds
Comparison of Actual and Desirable States

TASK: ANALYZE RELATIVE COMBAT POWER

KEYWORD: Analyze

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Initiating Directive (which assigns forces
available)
Intelligence Information

FUNCTIONAL
REQUIREMENTS Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: ANALYZE ENEMY COURSES OF ACTION

KEYWORD: Analyze

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Staff Estimates

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments

TASK: COMPARE FRIENDLY COURSES OF ACTION

KEYWORD: Compare

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Staff Estimates
Analysis of Enemy Courses of Action

FUNCTIONAL
REQUIREMENTS: Analysis of Outcomes and Impacts

TASK: SELECT COURSE OF ACTION FOR COMMANDER'S BRIEFING

KEYWORD: Select

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Staff Estimates
Comparisons of Courses of Action

FUNCTIONAL
REQUIREMENTS: Analysis of Outcomes and Impacts

TASK: PREPARE OUTLINE PLAN

KEYWORD: Plan

REFERENCE: FMFM 3-1

SUBTASKS: Prepare Task Organization and Troop List
Determine Missions for Subordinate Units
Determine Tactical Control Measures
Select Landing Beaches and Landing Zones
Select Date and Time of Landings
Select Formation of Landing
Select Shipping Allocation
Outline Alternative Plans

TASK: PREPARE TASK ORGANIZATION AND TROOP LIST

KEYWORD: Organize

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Determination of Mission Objectives
Concept of Operations Ashore

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE MISSIONS FOR SUBORDINATE UNITS

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Commander's Concept of Operations Ashore
Statement of the Command Mission

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE TACTICAL CONTROL MEASURES

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Commander's Concept of Operations Ashore

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: SELECT LANDING BEACHES AND LANDING ZONES

KEYWORD: Select

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Commander's Statement of the Mission
Requirements of Subordinate Elements of the
Landing Force

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: SELECT DATE AND TIME FOR LANDING(S)

KEYWORD: Select

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Landing Beaches and Zones Selected by CLF

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: SELECT FORMATION FOR LANDING

KEYWORD: Select

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Landing Beaches and Zones Selected by Commander
Date and Time of Landing

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: SELECT SHIPPING ALLOCATION

KEYWORD: Select

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Logistic Estimate
Determination of Landing Beaches

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: OUTLINE ALTERNATIVE PLANS

KEYWORD: Plan

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Commander's Concept of Operations Ashore

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action

TASK: PREPARE PLAN OF ATTACK

KEYWORD: Plan

REFERENCE: FMFM 3-1

SUBTASKS: Prepare the Scheme of Maneuver
Prepare the Landing Plan

TASK: PREPARE THE SCHEME OF MANEUVER

KEYWORD: Prepare

REFERENCE: FMFM 3-1

SUBTASKS: Finalize Objectives for All Units
Finalize Distribution of Forces
Determine Control Measures

TASK: FINALIZE OBJECTIVES FOR ALL UNITS

KEYWORD: Finalize

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Commander's Concept of Operations Ashore

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: FINALIZE DISTRIBUTION OF FORCES

KEYWORD: Finalize

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of Mission

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE CONTROL MEASURES

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Scheme of maneuver

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: PREPARE LANDING PLAN

KEYWORD: Plan

REFERENCE: FMFM 3-1

SUBTASKS: Determine Lift Requirements
Allocate Landing Means
Determine Landing Sequence

TASK: DETERMINE LIFT REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Initial Scheme of Maneuver Ashore

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action

TASK: ALLOCATE LANDING MEANS

KEYWORD: Allocate

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Lift Requirements
Availability Tables

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE LANDING SEQUENCE

KEYWORD: Determine

REFERENCE: FFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Scheme of Maneuver

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE ASSAULT SEQUENCE

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Scheme of Maneuver

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEVELOP THE INTELLIGENCE ESTIMATE

TASK: CONTROL GROUND OPERATIONS

KEYWORD: Control

REFERENCE: FMFM 3-1

SUBTASKS: Analyze Tactical Situation
Analyze Available Resources
Appraise Need for Action
Appraise Need for Information

TASK: ANALYZE TACTICAL SITUATION

KEYWORD: Analyze

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Statement of Mission
ATF/LF Objectives
Current Tactical Situation (graphic displays,
maps, etc.)

FUNCTIONAL
REQUIREMENTS: Comparison of Actual and Desirable States
Situation Monitoring Parameters
Impact Evaluation
Recognition of Change

TASK: ANALYZE AVAILABLE RESOURCES

KEYWORD: Analyze

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Reports from Subordinate Units
Logistic Situation

FUNCTIONAL
REQUIREMENTS: Situation Monitoring Parameters
Impact Evaluation
Recognition of Change

TASK: APPRAISE NEED FOR ACTION

KEYWORD: Appraise

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS: Analysis of Current Tactical Situation

FUNCTIONAL
REQUIREMENTS: Impact Evaluation
Recognition of Change
Short Range and Long Range Evaluation

TASK: APPRAISE NEED FOR INFORMATION

KEYWORD: Appraise

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS: Analysis of Current Tactical Situation

FUNCTIONAL
REQUIREMENTS: Impact Evaluation
Recognition of Change
Short Range and Long Range Evaluation

TASK: INTEGRATE FIRE AND MANEUVER

KEYWORD: Integrate

REFERENCE: FMFM 3-1

SUBTASKS: Correlate Current Status and Mission
Requirements
Evaluate Rate and Direction of Planned and
In-Progress Fires
Update Control Measures

TASK: CORRELATE CURRENT STATUS AND MISSION REQUIREMENTS

KEYWORD: Correlate

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision Execution
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of Mission
ATF/LF Objectives
Current Tactical Situation

FUNCTIONAL
REQUIREMENTS: Impact Evaluation
Recognition of Change
Short Range and Long Range Evaluation

TASK: EVALUATE RATE AND DIRECTION OF PLANNED AND IN-PROGRESS FIRES

KEYWORD: Evaluate

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Individual
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of Mission
ATF/LF Objectives
Fire Support Plans
Current Tactical Situation

FUNCTIONAL
REQUIREMENTS: Impact Evaluation
Recognition of Change

TASK: UPDATE CONTROL MEASURES

KEYWORD: Update

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Current Status and Mission Requirements

FUNCTIONAL
REQUIREMENTS: Situation Monitoring Parameters
Formulation of Courses of Action
Risks and Probability Assignments
Impact Evaluation
Recognition of Change
Short Range and Long Range Evaluation

TASK: MODIFY THE SCHEME OF MANEUVER

KEYWORD: Modify

REFERENCE: FMFM 3-1

SUBTASKS: Correlate Current Status and Mission Requirements
Evaluate Rate and Direction of Present Scheme of
Maneuver
Update Scheme of Maneuver

TASK: CORRELATE CURRENT STATUS AND MISSION REQUIREMENTS

KEYWORD: Correlate

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision Execution
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS: ATF/LF Objectives
Scheme of Maneuver
Current Tactical Situation

FUNCTIONAL
REQUIREMENTS: Situation Monitoring Parameters
Impact Evaluation
Recognition of Change

TASK: EVALUATE RATE AND DIRECTION OF PRESENT SCHEME OF MANEUVER

KEYWORD: Evaluate

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS: Scheme of Maneuver
Current Tactical Situation

FUNCTIONAL
REQUIREMENTS; Situation Monitoring Parameters
Impact Evaluation

TASK: UPDATE SCHEME OF MANEUVER

KEYWORD: Update

REFERENCE: FMFM 3-1

CLASS: Multi-attribute
Individual
Dynamic
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Mission Requirements
Scheme of Maneuver

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEVELOP THE INTELLIGENCE ESTIMATE

KEYWORD: Estimate

REFERENCE: FMFM 2-1

SUBTASKS: Coordinate Report on the Area of Operations
Determine the Enemy's Capabilities
Analyze the Enemy's Capabilities

TASK: COORDINATE REPORT ON THE AREA OF OPERATIONS

KEYWORD: Coordinate

REFERENCE: FMFM 2-1

SUBTASKS: Identify Characteristics of the Area of Operation
Determine Enemy Military Situation
Assess Enemy Unconventional and Psychological
Warfare Situation
Analyze Enemy Intelligence and Counter-intelligence
Activities

TASK: IDENTIFY CHARACTERISTICS OF THE AREA OF OPERATIONS

KEYWORD: Identify

REFERENCE: FMFM 2-1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Mission Statement Including Subtasks and Assigned
Priorities
Reasons for Assigning Mission to the Command

FUNCTIONAL
REQUIREMENTS: Information Purchasing
Source Identification and Selection
Information Ranking
Applying Stop Rules

TASK: DETERMINE ENEMY MILITARY SITUATION

KEYWORD: Determine

REFERENCE: FMFM 2-1

CLASS: Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of the Mission

FUNCTIONAL
REQUIREMENTS: Information Purchasing
Source Identification and Selection
Information Ranking
Applying Stop Rules

TASK: ANALYZE ENEMY UNCONVENTIONAL AND PSYCHOLOGICAL WARFARE SITUATION

KEYWORD: Analyze

REFERENCE: FMFM 2-1

CLASS: Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of the Mission

FUNCTIONAL
REQUIREMENTS: Information Purchasing
Source Identification and Selection
Information Ranking
Applying Stop Rules
Risks and Probability Assignments

TASK: ANALYZE ENEMY INTELLIGENCE AND COUNTER-INTELLIGENCE ACTIVITIES

KEYWORD: Analyze

REFERENCE: ENFM 2-1

CLASS: Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of the Mission

FUNCTIONAL
REQUIREMENTS: Information Purchasing
Source Identification and Selection
Information Ranking
Applying Stop Rules

TASK: DETERMINE ENEMY CAPABILITIES

KEYWORD: Determine

REFERENCE: FMFM 2-1

SUBTASKS: Identify All Enemy Capabilities
Select Enemy Capabilities for Further
Analysis
Assess Earliest Time of Execution Of Each Enemy
Capability
Identify Maximum Strength of Each Enemy Capability

TASK: IDENTIFY ALL ENEMY CAPABILITIES

KEYWORD: Identify

REFERENCE: FMFM 2-1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Mission Statement
Report on the Area of Operations
Overall Enemy Strategic Situation

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action

TASK: SELECT ENEMY CAPABILITIES SUITABLE FOR FURTHER ANALYSIS

KEYWORD: Select

REFERENCE: ENFM 2-1

CLASS: Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of Mission
List of All Enemy Capabilities

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Establish Decision Rules
Analysis of Outcomes and Impacts

TASK: ASSESS EARLIEST TIME OF EXECUTION OF EACH ENEMY CAPABILITY

KEYWORD: Assess

REFERENCE: FMFM 2-1

CLASS: Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of Mission
List of All Enemy Capabilities

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Establish Decision Rules

TASK: IDENTIFY MAXIMUM STRENGTH OF EACH ENEMY CAPABILITY

KEYWORD: Identify

REFERENCE: FMFM 2-1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of the Mission
List of All Enemy Capabilities

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Establish Decision Rules

TASK: ANALYZE ENEMY CAPABILITIES

KEYWORD: Analyze

REFERENCE: FMFM 2-1

SUBTASKS: Determine Impact on Mission of Each Enemy
Capability
Determine Relative Probability of Adoption of
Enemy Capabilities
Identify the Vulnerabilities of the Enemy

TASK: DETERMINE IMPACT ON MISSION OF EACH ENEMY CAPABILITY

KEYWORD: Determine

REFERENCE: FMFM 2-1

CLASS: Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of Mission
List of All Enemy Capabilities
Previous Intelligence Analysis

FUNCTIONAL
REQUIREMENTS: Risks and Probability Assignments

TASK: PREDICT RELATIVE PROBABILITY OF ADOPTION OF EACH ENEMY
CAPABILITY

KEYWORD: Predict

REFERENCE: FMFM 2-1

CLASS: Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Previous Intelligence Analysis

FUNCTIONAL
REQUIREMENTS: Information Situation Diagnosis
Risks and Probability Assignments

TASK: IDENTIFY THE VULNERABILITIES OF THE ENEMY

KEYWORD: Identify

REFERENCE: FMFM 2-1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Intelligence Report on the Enemy Military
Situation

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains

TASK: DEVELOP THE COLLECTION PLAN

KEYWORD: PLAN

REFERENCE: FNM 2-1

SUPTASKS: Determine Basic Requirements
Determine EEI's
Determine Indicators
Select Collection Agencies
Supervise and Coordinate Collection Effort
Appraise Need for Revision of Collection Plan

TASK: DETERMINE BASIC REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 2-1

CLASS: Single Attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Type of Operation envisioned
Basic Requirements Outline

FUNCTIONAL
REQUIREMENTS: Information Purchasing

TASK: DETERMINE EEI'S

KEYWORD: Determine

REFERENCE: ENFM 2-1

CLASS: Single Attribute
Individual
Dynamic
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Information Available
Information Requirements

FUNCTIONAL
REQUIREMENTS: Information Purchasing
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE INDICATORS

KEYWORD: Determine

REFERENCE: FMEM 2-1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Intelligence Requirements

FUNCTIONAL
REQUIREMENTS: Recognition of Standards
Identification of Dimensions and Parameters

TASK: SELECT COLLECTION AGENCIES

KEYWORD: Select

REFERENCE: FMEM 2-1

CLASS: Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Overall Requirements
Agencies Available

FUNCTIONAL
REQUIREMENTS: Information Purchasing
Source Identification and Selection
Criteria Assignment
Risks and Probability Assignments

TASK: SUPERVISE AND COORDINATE COLLECTION EFFORT

KEYWORD: Supervise

REFERENCE: FMEM 2-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Orders and Requests for Information

FUNCTIONAL
REQUIREMENTS: Applying Stop Rules
Impact Evaluation
Recognition of Change

TASK: APPRAISE NEED FOR REVISION OF THE COLLECTION PLAN

KEYWORD: Appraise

REFERENCE: FMFI 2-1

CLASS: Single attribute
Individual
Dynamic
Repetitive
Risk
Concrete
Well Defined
Decision-Making
Time Critical
Normal Range
Type 1 (Problem Structuring)

INPUTS: Information Received
New Information Requirements

FUNCTIONAL
REQUIREMENTS: Recognition of Standards
Identification of Dimensions and Parameters
Problem Emergency Criteria and Thresholds
Comparison of Actual and Desirable States
Situation Monitoring Parameters

TASK: DEVELOP THE RECONNAISSANCE AND SURVEILLANCE PLAN

KEYWORD: Plan

REFERENCE: FMFM 2-1

SUBTASKS: Determine Requirements for R&S
Integrate Reconnaissance and Surveillance
Coordinate R&S Planning with Other Operations

TASK: DETERMINE REQUIREMENTS FOR R&S

KEYWORD: Determine

REFERENCE: FMFM 2-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of Mission
Information Requirements
Intelligence Information Available

FUNCTIONAL
REQUIREMENTS: Comparison of Actual and Desirable States
Information Purchasing

TASK: INTEGRATE RECONNAISSANCE AND SURVEILLANCE

KEYWORD: Integrate

REFERENCE: ENEM 2-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Statement of Mission
Requirements for R&S

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COORDINATE R&S PLANNING WITH OTHER OPERATIONS

KEYWORD: Coordinate

REFERENCE: EFM 2-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Statement of Mission
Information Requirements
Plan of Operations

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: PERFORM TARGET INTELLIGENCE

KEYWORD: Perform

REFERENCE: FMFM 2-1

SUBTASKS: Develop Target Acquisition Plan
Interpet Target Information

TASK: DEVELOP TARGET ACQUISITION PLAN

KEYWORD: Plan

REFERENCE: FNM 2-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Statement of Mission
List of Targets
Sources and Collection Agencies

FUNCTIONAL
REQUIREMENTS: Information Purchasing
Source Identification and Selection
Information Ranking
Applying Stop Rules
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: INTERPRET TARGET INFORMATION

KEYWORD: Interpret

REFERENCE: FMEM 2-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of Mission
Target Information Available (description, degree
of protection)

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: PREPARE INITIAL ESTIMATES

KEYWORD: ESTIMATE

REFERENCE: FMFM 5-1
FMFM 7-2
FMFM 7-4

SUBTASKS: Prepare Naval Gunfire Estimate
Prepare Aviation Estimate
Prepare Artillery Estimate

TASK: PREPARE NAVAL GUNFIRE ESTIMATE

KEYWORD: Estimate

REFERENCE: FMFM 7-2

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Commander's Analysis of the Overall Mission
Other Staff Estimates
Courses of Action Under Consideration

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: PREPARE AVIATION ESTIMATE

KEYWORD: Estimate

REFERENCE: FFM 5-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Mission of Aviation Element
Characteristics of the Objective Area
Characteristics of Enemy Forces and Targets
Courses of Action Under Consideration

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: PREPARE ARTILLERY ESTIMATE

KEYWORD: Estimate

REFERENCE: FMFM 7-4

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Concept of Operations Ashore
Capabilities of the Enemy
Type of Terrain
Transportation Means Available
Amount of Artillery Available
Courses of Action Under Consideration

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE OVERALL LF FIRE SUPPORT REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 5-1
FMFM 7-2
FMFM 7-4

SUBTASKS: Formulate Preliminary NGF Plan
Formulate Preliminary Aviation Plan
Formulate Preliminary Artillery Plan

TASK: FORMULATE PRELIMINARY NCF PLAN

KEYWORD: Plan

REFERENCE: FMFM 7-2

CLASS: Multi-attribute
Individual
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Statement of Mission
Concept of Operations Ashore
Intelligence Information

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: FORMULATE PRELIMINARY AVIATION PLAN

KEYWORD: Plan

REFERENCE: FMFM 5-1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Abstract
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: MAGTF Commander's Estimate of the Situation
Mission of the Aviation Element
Characteristics of the Objective Area
Type, Composition, and Organization of Enemy
Forces
Target Characteristics of the Objective Area
Concept of Operations Ashore

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: FORMULATE PRELIMINARY ARTILLERY PLAN

KEYWORD: Plan

REFERENCE: ENFM 7-4

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Landing Force Mission
Enemy Situation
Requires Artillery Support
Topography and Weather
Observations and Communication Required

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

AD-A075 971

PERCEPTRONICS INC WOODLAND HILLS CALIF

F/G 15/7

DEVELOPMENT OF A DECISION TAXONOMY FOR THE MARINE COMMAND AND C--ETC(U)

JUN 79 A CROLOTTE , J SALEH

N00014-78-C-0495

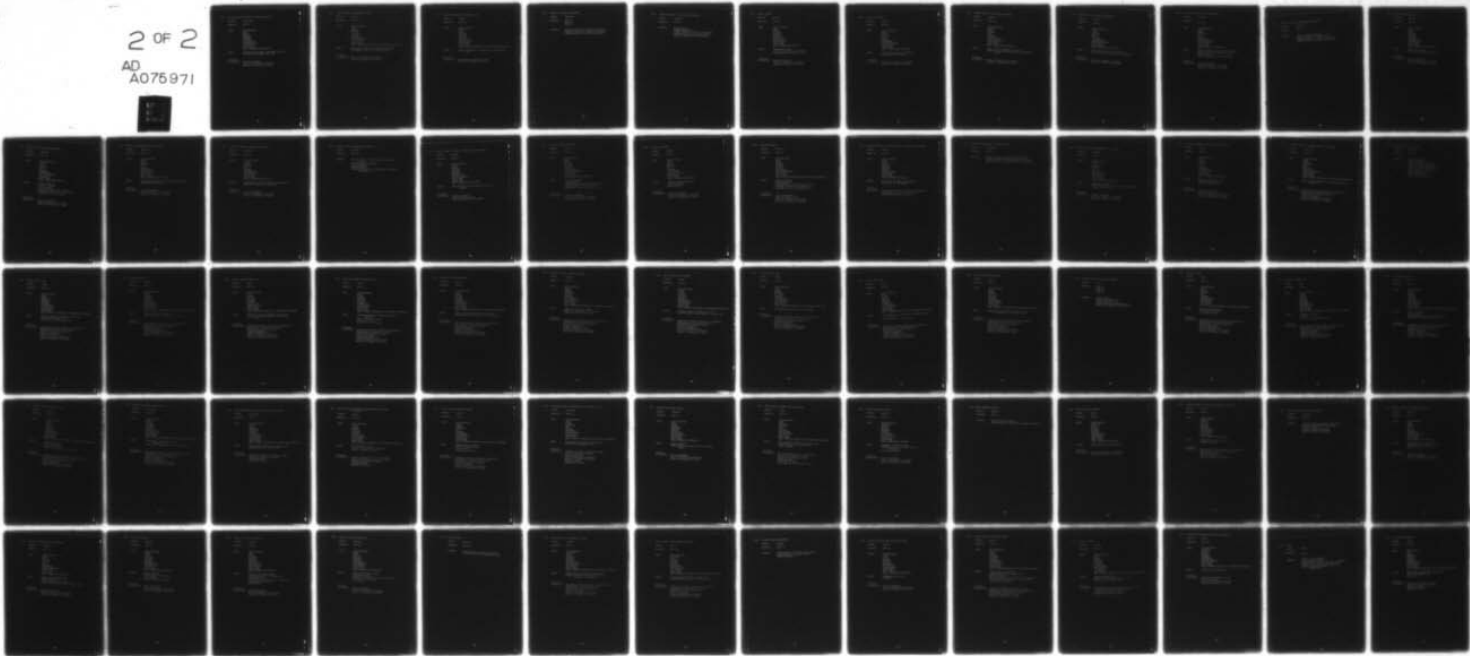
UNCLASSIFIED

PATR-1069-79-6-VOL-2

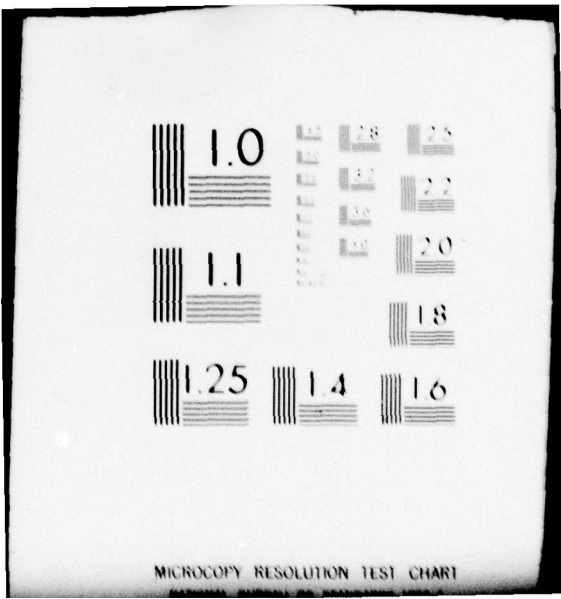
NL

2 OF 2

AD
A075971



END
DATE
FILMED
12-79
DDC



MICROCOPY RESOLUTION TEST CHART

TASK: CONSOLIDATE FIRE SUPPORT AND NAVAL REQUIREMENTS

KEYWORD: Consolidate

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: LF Overall Fire Support Requirements from CLF
NGF Overall Requirements from CATE

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COMPARE OVERALL REQUIREMENTS TO MEANS

KEYWORD: Compare

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Consolidated Overall Fire Support Requirements
Fire Support Means of All Supporting Arms

FUNCTIONAL
REQUIREMENTS: Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: ADJUST PRELIMINARY FIRE SUPPORT PLANS

KEYWORD: Adjust

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Updated Information on Enemy Forces, Capabilities,
etc.

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Analysis of Outcomes and Impacts

TASK: DETERMINE DETAILED REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMEP 5-1
FMEP 7-2
FMEP 7-4

SUBTASKS: Determine Detailed NCF Support Requirements
Determine Detailed Air Support Requirements
Determine Detailed Artillery Requirements

TASK: DETERMINE DETAILED MCF SUPPORT REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 7-2

SUBTASKS: Analyze Targets
Compute Ammunitions
Compute Duration of Pre-D-Day Bombardment
Compute Ship and Aircraft Requirements
Estimate Post-D-Day Daily Requirements

TASK: ANALYZE TARGETS

KEYWORD: Analyze

REFERENCE: EFM 7-2

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of Mission
List of Targets Under Consideration
Characteristics of Supporting Arms

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COMPUTE AMMUNITIONS

KEYWORD: Compute

REFERENCE: FMFM 7-2

CLASS: Single Attribute
Group
Static
One Shot
Risk
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: List of All Targets to Be Attacked
Characteristics of Weapons

FUNCTIONAL
REQUIREMENTS: Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COMPUTE DURATION OF PRE-D-DAY BOMBARDMENT

KEYWORD: Compute

REFERENCE: FMFM 7-2

CLASS: Multi-attribute
Group
Static
One Shot
Risk
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Total Number of Missions to Be Fired
Number and Type of Ships Available for Pre-D-Day
Fires

FUNCTIONAL
REQUIREMENTS: Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COMPUTE SHIP AND AIRCRAFT REQUIREMENTS

KEYWORD: Compute

REFERENCE: FMFM 7-2

CLASS: Multi-attribute
Group
Static
One Shot
Risk
Concrete
Well-Defined
Decision Execution
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS: Total Number of Targets to Be Attacked
Capabilities of Ships And Aircraft Available

FUNCTIONAL
REQUIREMENTS: Analysis of Outcomes and Impacts
Risks and Probability Assignments

TASK: ESTIMATE POST-D-DAY DAILY REQUIREMENTS

KEYWORD: Estimate

REFERENCE: FMEV 7-2

CLASS: Multi-attribute
Group
Static
One Shot
Risk
Concrete
Well-Defined
Decision Execution
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS: Amount of Artillery and Air Support Required
Number of Ships and Ammunition Available
Enemy Situation
Planned Activity of the Landing Force

FUNCTIONAL
REQUIREMENTS: Criteria Assignment,
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE DETAILED AIR SUPPORT REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 5-1

SUBTASKS: Analyze Targets and Mission
Determine Amount of Aviation Required
Determine Ammunition, Bombs, and Rockets
Determine Supply and Resupply Requirements

TASK: ANALYZE TARGETS AND MISSION

KEYWORD: Analyze

REFERENCE: FMFM 5-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of Mission
List of Targets under Consideration

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE AMOUNT OF AVIATION REQUIRED

KEYWORD: Determine

REFERENCE: FMEM 5-1

CLASS: Multi-attribute
Group
Static
One Shot
Risk
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Mission of the LF
Scheme of Maneuver
Enemy Situation
Estimated Duration of the Operation
Employment of Other Fire Support Means
Employment Of Nuclear Weapons

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE AMMUNITION, BOMBS, AND ROCKETS

KEYWORD: Determine

REFERENCE: FMEM 5-1

CLASS: Single Attribute
Group
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Preliminary Estimate of Air Support Requirements
Characteristics of Targets

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE SUPPLY AND RESUPPLY REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 5-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Determination of Amount of Ammunition Required
Estimated Duration of the Operation

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE DETAILED ARTILLERY REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 7-4

SUBTASKS: Analyze Mission, Scheme of Maneuver, and Enemy
Forces
Determine Artillery Required
Compute Ammunition
Estimate Resupply
Analyze Effect of NGF and Air Support on Artillery
Requirements

TASK: ANALYZE MISSION, SCHEME OF MANEUVER, AND ENEMY FORCES

KEYWORD: Analyze

REFERENCE: FMFM 7-4

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: CLF's Decision to Ensure Adequate Artillery
Support

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments

TASK: DETERMINE ARTILLERY REQUIRED

KEYWORD: Determine

REFERENCE: FMEM 7-11

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Scheme of Maneuver
Enemy Situation
Characteristics of the Area of Operations
Estimated Duration of the Operation
Employment of Other Fire Support Means

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COMPUTE AMMUNITION

KEYWORD: Compute

REFERENCE: FMFM 7-4

CLASS: Multi-attribute
Group
Static
One Shot
Risk
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Mission of the Landing Force
Scheme of Maneuver
Enemy Situation

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: ESTIMATE RESUPPLY

KEYWORD: Estimate

REFERENCE: FMFM 7-4

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Scheme of Maneuver
Enemy Situation
Characteristics of the Area of Operations
Estimated Duration of the Operation
Employment of Other Fire Support Means

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: ANALYZE EFFECT OF NCF AND AIR SUPPORT ON ARTILLERY REQUIREMENTS

KEYWORD: Analyze

REFERENCE: FMFM 7-4

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Preliminary Air Support Requirements
Preliminary NCF Requirements

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action

TASK: COORDINATE DETERMINATION OF REQUIREMENTS

KEYWORD: Coordinate

REFERENCE: FMFM 7-1

SUBTASKS: Determine Target Classification and Priority
Select Most Effective Means of Attacking Targets
Determine Method and Sequence of Attack of Targets

TASK: DETERMINE TARGET CLASSIFICATION AND PRIORITY

KEYWORD: Determine

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of Mission
Target Lists from All Levels of the Landing Force
Current Target Bulletins

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: SELECT MOST EFFECTIVE MEANS OF ATTACKING TARGETS

KEYWORD: Select

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Situation of Opposing Forces
Target Characteristics
Available Means of Attack

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE METHOD AND SEQUENCE OF ATTACK OF TARGETS

KEYWORD: Determine

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Risk
Abstract
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Analysis and Comparison of Most Effective Means of
Attack

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEVELOP COORDINATION MEASURES

KEYWORD: Coordinate

REFERENCE: FMFM 7-1

SUBTASKS: Define Zones of Fire
Define Boundaries
Define Coordinated Fire Line
Define Fire Support Coordination Line
Define Restrictive Fire Lines
Define Airspace Coordination Area
Define Trajectory Limitations
Define Free-Fire Area
Define No-Fire Area
Define Restrictive Fire Area

TASK: DEFINE ZONES OF FIRE

KEYWORD: Define

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Scheme of Maneuver of Supported Troop Units
Preliminary NGF Support Plan
Preliminary Artillery Support Plan

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEFINE BOUNDARIES

KEYWORD: Define

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Characteristics of the Terrain
Size, Visibility, and Accessibility to Fire

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEFINE COORDINATED FIRE LINE

KEYWORD: Define

REFERENCE: EMFM 7-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Scheme of Maneuver of Supported Troop Units
Each Battalion's Recommended Coordinated Fire
Lines

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEFINE FIRE SUPPORT COORDINATION LINE

KEYWORD: Define

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Commander's Selection of Areas to Patrol and
Penetrate
Overall Scheme of Maneuver
Terrain and Weather
Type of Air and NCF Support

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEFINE RESTRICTIVE FIRE LINES

KEYWORD: Define

REFERENCE: FFM 7-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Scheme of Maneuver of Both Friendly Forces
Characteristics of Terrain near Stationary Force

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE AIRSPACE COORDINATION AREA

KEYWORD: Determine

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Request for Close Air Support
Request for Employment of Helicopters
Amount of Friendly Surface Fire

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEFINE TRAJECTORY LIMITATIONS

KEYWORD: Define

REFERENCE: FFM 7-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Trajectory Charts for Artillery and NGF
List of Critical Targets Requiring Immediate Fire

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEFINE FREE-FIRE AREA

KEYWORD: Define

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: LF Determination of Need of Fire-Free Area

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEFINE NO-FIRE AREA

KEYWORD: Define

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Identification by Host Country of Proposed No-Fire
Areas
Changes to Previous No-Fire Areas

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEFINE RESTRICTIVE FIRE AREA

KEYWORD: Define

REFERENCE: FFM 7-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Commander's Determination of Need for Close
Defensive Fire to Support Troops

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEVELOP PLANS FOR FIRE AND AIR SUPPORT

KEYWORD: Plan

REFERENCE: FMEP 5-1
FMEP 7-1
FMEP 7-2
FMEP 7-4

SUBTASKS: Develop NCF Plan
Develop Air Support Plan
Develop Artillery Plan
Resolve Conflicts and Adjust Plans
Develop Fire Support Coordination Tab

TASK: DEVELOP MGF PLAN

KEYWORD: Plan

REFERENCE: FMFM 7-2

CLASS: Multi-attribute
Group
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Detailed MGF Requirements
Fire Support Available
Statement of Mission

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEVELOP AIR SUPPORT PLAN

KEYWORD: Plan

REFERENCE: FMEM 5-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Statement of Mission
MCF Plan
Detailed Air Support Requirements

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEVELOP ARTILLERY PLAN

KEYWORD: Plan

REFERENCE: FMFM 7-4

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Scheme of Maneuver
Enemy Situation
Characteristics of the Area of Operations
Employment of Other Fire Support Means

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: RESOLVE CONFLICTS AND ADJUST PLANS

KEYWORD: Resolve

REFERENCE: FMEV 7-1

CLASS: Multi-attribute
Group
Static
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Statement of Mission
Scheme of Maneuver
Supporting Arms Plans
Target Classifications and Priorities

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEVELOP FIRE SUPPORT COORDINATION TAB

KEYWORD: Coordinate

REFERENCE: FMEM 7-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Communications from Supporting Arms
Representatives
Maneuver Unit Reports Passed by the Unit Staff

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Remains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COORDINATE PLANNED FIRES WITH ONGOING TROOP MOVEMENTS

KEYWORD: Coordinate

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Detailed Fire Plans of the Supporting Arms
Current Position of Tactical Units

FUNCTIONAL
REQUIREMENTS: Comparison of Actual and Desirable States
Analysis of Outcomes and Impacts
Impact Evaluation
Recognition of Change

TASK: RESOLVE CONFLICTS BETWEEN SCHEDULED FIRES AND TACTICAL OPERATIONS

KEYWORD: Resolve

REFERENCE: FFM 7-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Plan of Scheduled Fires
Current Plan for Tactical Operations
Display of Tactical Situation

FUNCTIONAL REQUIREMENTS: Problem Emergency Criteria and Thresholds
Comparison of Actual and Desirable States
Analysis of Outcomes and Impacts
Impact Evaluation
Recognition of Change

TASK: MONITOR REQUESTS FOR FIRE SUPPORT

KEYWORD: Monitor

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Requests for Fire Support
Current Tactical Situation
Fires Available
Coordination Measures

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COORDINATE TARGETS OF OPPORTUNITY AND SUPPORTING ARMS

KEYWORD: Coordinate

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Reconnaissance and Intelligence Reports
Availability of Supporting Arms

FUNCTIONAL
REQUIREMENTS: Comparison of Actual and Desirable States
Situation Monitoring Parameters
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts
Impact Evaluation
Recognition of Change

TASK: DETERMINE THE EFFECT OF FIRE

KEYWORD: Determine

REFERENCE: FMFM 7-1

CLASS: Single Attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Target Bulletins
Effects Needed to Accomplish Specific Tactical
Mission

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: UPDATE CONTROL MEASURES FOR FRIENDLY FIRES

KEYWORD: Update

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Detailed Fire Plans for the Supporting Arms
Current Position of Tactical Units
Target Bulletins

FUNCTIONAL
REQUIREMENTS: Problem Emergency Criteria and Thresholds
Formulation of Courses of Action
Analysis of Outcomes and Impacts
Impact Evaluation
Recognition of Change
Short Range and Long Range Evaluation

TASK: DEVELOP LOGISTICS ESTIMATE

KEYWORD: Estimate

REFERENCE: FMFM #1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Commander's Planning Guidance
Assessment of Logistic Capabilities and
Limitations
Other Staff Estimates

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEVELOP PERSONNEL ESTIMATE

KEYWORD: Estimate

REFERENCE: FMFM 4-1

SUBTASKS: Assess Personnel Situation
Compare Courses of Action from a Personnel Standpoint

TASK: ASSESS PERSONNEL SITUATION

KEYWORD: Assess

REFERENCE: FFM 4-1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Reports from Subordinate Officers

FUNCTIONAL
REQUIREMENTS: Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COMPARE COURSES OF ACTION FROM A PERSONNEL STANDPOINT

KEYWORD: Compare

REFERENCE: FME: 4-1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Commander's Planning Guidance
Personnel Situation

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments

TASK: FINALIZE CONCEPTS OF LOGISTIC SUPPORT

KEYWORD: Finalize

REFERENCE: FMEM 4-1

SUBTASKS: Determine Supply and Resupply Requirements
Determine Transportation Requirements
Make Loss Estimates
Determine Medical Requirements
Determine Service Requirements

TASK: DETERMINE SUPPLY AND RESUPPLY REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 4-1

CLASS: Multi-attribute
Group
Static
One Shot
Risk
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Requirements for Logistic Support
Troop Units to Be Supported
Expected Duration of the Operation

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE TRANSPORTATION REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMEM 4-1

CLASS: Multi-attribute
Group
Static
One Shot
Risk
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Mission of the Landing Force
Enemy Capabilities
Characteristics of the Operation
Strength and Composition of the Landing Force

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: MAKE LOSS ESTIMATES

KEYWORD: Estimate

REFERENCE: FMFM 4-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Type of Operation
Expected Length of Operation
Enemy Situation
Friendly Personnel Situation

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE MEDICAL REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMEY 4-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Mission of the Landing Force
Characteristics of the Objective Area
Enemy Capabilities
Strength and Composition of the Landing Force
Time Span of the Operation
Loss Estimates

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE SERVICE REQUIREMENTS

KEYWORD: Determine

REFERENCE: FNEM 4-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Mission of the Landing Force
Enemy Capabilities
Strength and Composition of the Landing Force
Time Span of the Operation
Loss Estimates

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: ALLOCATE MEANS

KEYWORD: Allocate

REFERENCE: FMFM 4-1

SUBTASKS: Allocate Means to Subordinate Echelons
Assign Logistic Support Responsibilities

TASK: ALLOCATE MEANS TO SUBORDINATE ECHELONS

KEYWORD: Allocate

REFERENCE: FMFM 4-1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Planned Location of Supply Installations
Available Combat Service Support Units in
Vicinity of Installations

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: ASSIGN LOGISTIC SUPPORT RESPONSIBILITIES

KEYWORD: Assign

REFERENCE: FMFM 4-1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Planned Location of Service Installations
Helicopter Landing Zones and Operating Areas

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COMPUTE DETAILED REQUIREMENTS

KEYWORD: Compute

REFERENCE: FMFM 4-1

SUBTASKS: Compute Number of Ships and Craft Required
Phase Sequence of Logistics Support
Schedule Resupply

TASK: COMPUTE NUMBER OF SHIPS AND CRAFT REQUIRED

KEYWORD: Compute

REFERENCE: FMEV 4-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INOUTS: Statement of the Mission
Troop List

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: PHASE SEQUENCE OF LOGISTICS SUPPORT

KEYWORD: Phase

REFERENCE: FMFM 4-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Mission of the Landing Force
Characteristics of the Objective Area
Enemy Capabilities
Characteristics of the Operation to Be Supported
Strength and Composition of the Landing Force
Time Span of the Operation

FUNCTIONAL
REQUIREMENTS: Comparison of Actual and Desirable States
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Analysis of Outcomes and Impacts

TASK: SCHEDULE RESUPPLY

KEYWORD: Schedule

REFERENCE: FMEI 4-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Current Resupply Needs
Amount and Condition of Supplies on Hand
Availability of Transportation

FUNCTIONAL
REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Analysis of Outcomes and Impacts

TASK: UPDATE PLANS ACCORDING TO RESULTS OF REHEARSALS

KEYWORD: Update

REFERENCE: FPM 4-1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Evaluation of the Rehearsal

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: CONTROL

KEYWORD: Control

REFERENCE: FMEV 4-1

SUBTASKS: Monitor Landing Progress
Monitor Unloading Period
Coordinate Flow of Men , Materiel, and Equipment
Monitor Level of Supplies for Combat Units
Monitor Channels of Supplies, Service, and
Communication

TASK: MONITOR LANDING PROGRESS

KEYWORD: Monitor

REFERENCE: FMFM 4-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Instantaneous Landing Force Requirements
Needs of the Assault Units
Landing Plan

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Analysis of Outcomes and Impacts,
Impact Evaluation
Recognition of Change

TASK: MONITOR UNLOADING PERIOD

KEYWORD: Monitor

REFERENCE: FMFM 4-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Logistic Plans
Current Situation

FUNCTIONAL
REQUIREMENTS: Formulation of Courses of Action
Analysis of Outcomes and Impacts
Impact Evaluation
Recognition of Change
Short Range and Long Range Evaluation

TASK: COORDINATE FLOW OF MEN, MATERIEL, AND EQUIPMENT

KEYWORD: Coordinate

REFERENCE: FMFM 4-1

CLASS: Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Needs of Area Commanders
Overall Need of the Landing Force

FUNCTIONAL
REQUIREMENTS: Analysis of Outcomes and Impacts
Impact Evaluation

TASK: MONITOR LEVEL OF SUPPLIES FOR COMBAT UNITS

KEYWORD: Monitor

REFERENCE: FMFM 4-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Degree of Unit Separation
Overall Tactical Plan
Current Tactical Situation

FUNCTIONAL
REQUIREMENTS: Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts
Impact Evaluation

TASK: MONITOR CHANNELS OF SUPPLY, SERVICE, AND COMMUNICATION

KEYWORD: Monitor

REFERENCE: FMFM 4-1

CLASS: Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS: Enemy Situation
Degree of Unit Separation
Current Tactical Situation

FUNCTIONAL
REQUIREMENTS: Risks and Probability Assignments
Analysis of Outcomes and Impacts
Impact Evaluation
Recognition of Change
Short Range and Long Range Evaluation