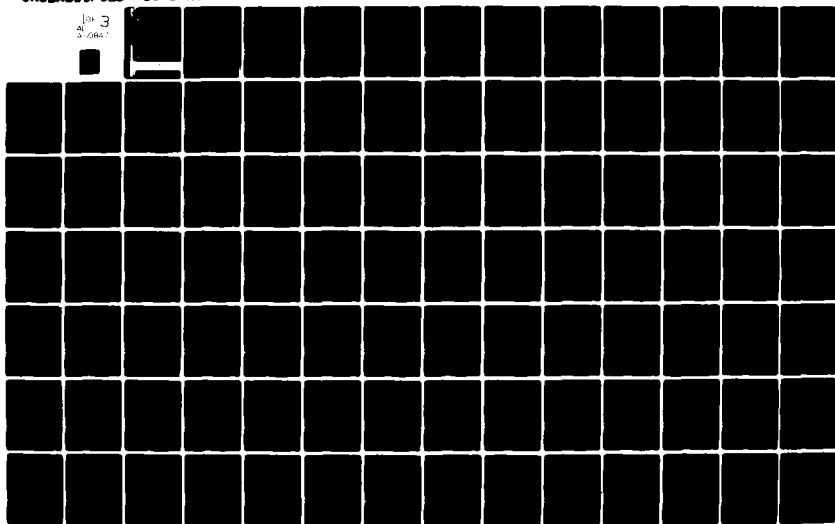


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Technical Report: NAVTRAEQUIPCEN 78-C-1082-2

Objectives Hierarchy for Air Intercept Controller
Prototype Training System

Robin Halley, J. Thel Hooks, Jr.,
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December 1981

Final Report from 28 September 1978 - 28 June 1981

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report presents the Objectives Hierarchy for development of the Air Intercept Controller Prototype Training System. Behavioral objectives previously developed for the Behavioral Objectives Report, NAVTRAEQUIPCEN 78-C-0182-1, are expanded in depth and detail for tasks. Hierarchy diagrams present the subordinate objectives structures; conditions, behaviors, and standards are presented for component tasks within the objectives hierarchy.		

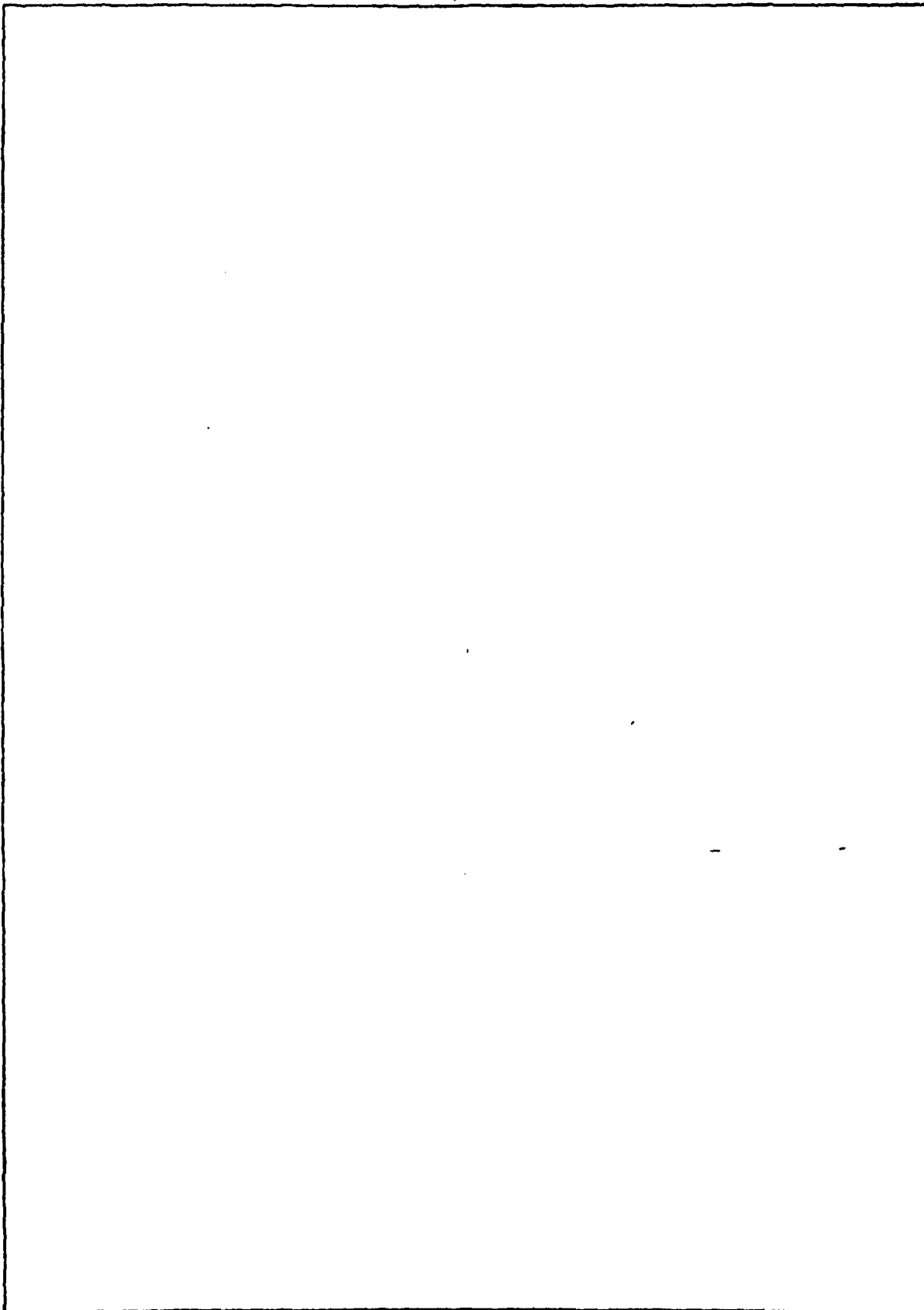
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This is the second report of a series describing the design, implementation, and tests of the use of computer speech recognition technology in the tactical training area. The technical issues in psychology, training, and speech recognition will require a highly complex integration effort in order to be successful.

This report provides the details required in order to develop a syllabus. Objectives are arranged in hierarchies to depict their interrelationships. An alternate numbers table indicates objectives required on more than one higher level objective. It will be the task of the syllabus development effort to teach these objectives in a sequence which provides training cost effectiveness and efficient skill acquisition. More tasks are included here than are taught now, but none of these tasks are irrelevant to the AIC.

The prototype system developed from these objectives will serve as a test vehicle for incorporation of advanced technologies into the specifications of follow-on trainers. Fleet personnel will play a major role in the design and evaluation of the prototype, and thereby play a major role in the selection of the advanced technologies. The training enhancements evolving from this process will maintain the Navy's image as a leader in training systems.

Thanks are extended to the command and staff of the Fleet Combat Training Center, Pacific. The continuing efforts of LCDR Robert Cleveland, OSCS Jerry Billups, OSC John Lindsay, all of Code 31, and Mr. Charlie Spencer of Code 9A have been invaluable.

R. Breaux
R. BREAU, Ph.D.
Scientific Officer

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SECTION I

INTRODUCTION

The Objectives Hierarchy Report documents the second major step in the process of developing the courseware for the Air Intercept Controller (AIC) experimental prototype training system. This report expands on the Behavioral Objectives Report by presenting a more intensive and in-depth look at the content of the behavioral objectives required for overall AIC training and the relationships between those objectives.

The broadened scope of the objectives hierarchy is necessary for any further courseware development. First, the knowledge gained from writing the objectives can be applied to the development of a detailed ordinal course syllabus, identifying the major instructional tasks for each part of each sequence of the basic course. Second, the expanded set of objectives provides a wider base for the development of practice and testing materials, of lesson specification and development, and of performance measurement criteria.

The Mission Objective is presented in Appendix A, with the four Terminal Objectives. Appendices B, C, D and E present the four Terminal Objectives and their subordinate objectives with hierarchy diagrams.

SECTION II

DESCRIPTION OF THE OBJECTIVES HIERARCHY DEVELOPMENT PROCESS

The development of the objectives hierarchy grew directly out of the work done for the Behavioral Objectives Report (BOR).¹ For the BOR, Logicon developed a conceptualization of the AIC's entire job, which was modeled in the task flow diagrams (see BOR pp. 12-16).

The next step in the development of the objectives hierarchy was the delineation of the scope of the hierarchy. The question was, "Exactly how would we know when we had gone into enough detail?" The answer was supplied through a search of the relevant historical documentation. Generally speaking, the analysis was to cover the topics presently addressed by the AIC school at the Fleet Combat Training Center Pacific during the synthetics portion of the course. Where the school went into great instructional detail, the hierarchy (and instructional system) would go into similar detail. Conversely, for tasks not addressed by the AIC school curriculum, the hierarchy shows minimal expansion.

The third step in the process was that of expanding the task flow diagrams supplied for the BOR. The job task categorization had defined the amount of depth required for each listed task topic. Consequently, some tasks were broken out four more levels before they seemed comprehensive enough for developing training (e.g., 3.1.1.1.2.1.1 Display Bearing and Range Information by Operating NTDS Console with Operational Program), and other tasks were broken out no further (e.g., 3.1.3 Display Data by Operating Direction Finding Equipment). The sources referenced during the task list expansion process were AIC school student materials, standard operations manuals for the NTDS console, and AIC school staff and Logicon staff experience with the job. The expanded task flow diagram is presented in this report as the objectives hierarchy.

After the task flow diagram had been expanded, the fourth task was to write behavioral objectives to match each newly identified task. The process of expanding the task flow diagram also helped to identify some tasks that had been expressed one way in the BOR, but now seemed to require a slightly different treatment for this hierarchy report. Behavioral objectives were devised, or revised, for each of the altered task listings. Here, as with the previous step, the AIC school student materials, standard operations manuals, and AIC school staff and Logicon staff experience with the job were referenced as data sources. These expanded objectives are supplied on the pages facing the objectives hierarchy tasks to which they refer.

1. Behavioral Objectives for Air Intercept Controller Prototype Training System; NAVTRAEQUIPCEN 78-C-0182-1; Logicon, Inc.; in press.

Concurrent with writing the objectives, tasks which were composed of the same behaviors as other tasks were identified. Each of these identified tasks was listed and can be found in the alternate numbers tables. They are identified in diagrams by a triangle preceding the number.

The Hierarchy Diagrams, Objectives Sheets, and Alternate Numbers Tables follow the formats in MIL-T-29053 Training Requirements for Aviation Weapons Systems and NAVTRAEQUIPCEN UOI-H-25717 Objectives Hierarchy of 1 September 1977. Objectives, for which a further breakdown into subordinate objectives will be provided on subsequent pages, are indicated by an arrow underneath the block in the hierarchy diagram.

The final step in this process was the careful quality control review of each output item required for this report. The objectives hierarchy, the behavioral objectives, and the alternate numbers tables were each reviewed for completeness and accuracy.

A task flow diagram for the objectives hierarchy development is shown in Figure 1.

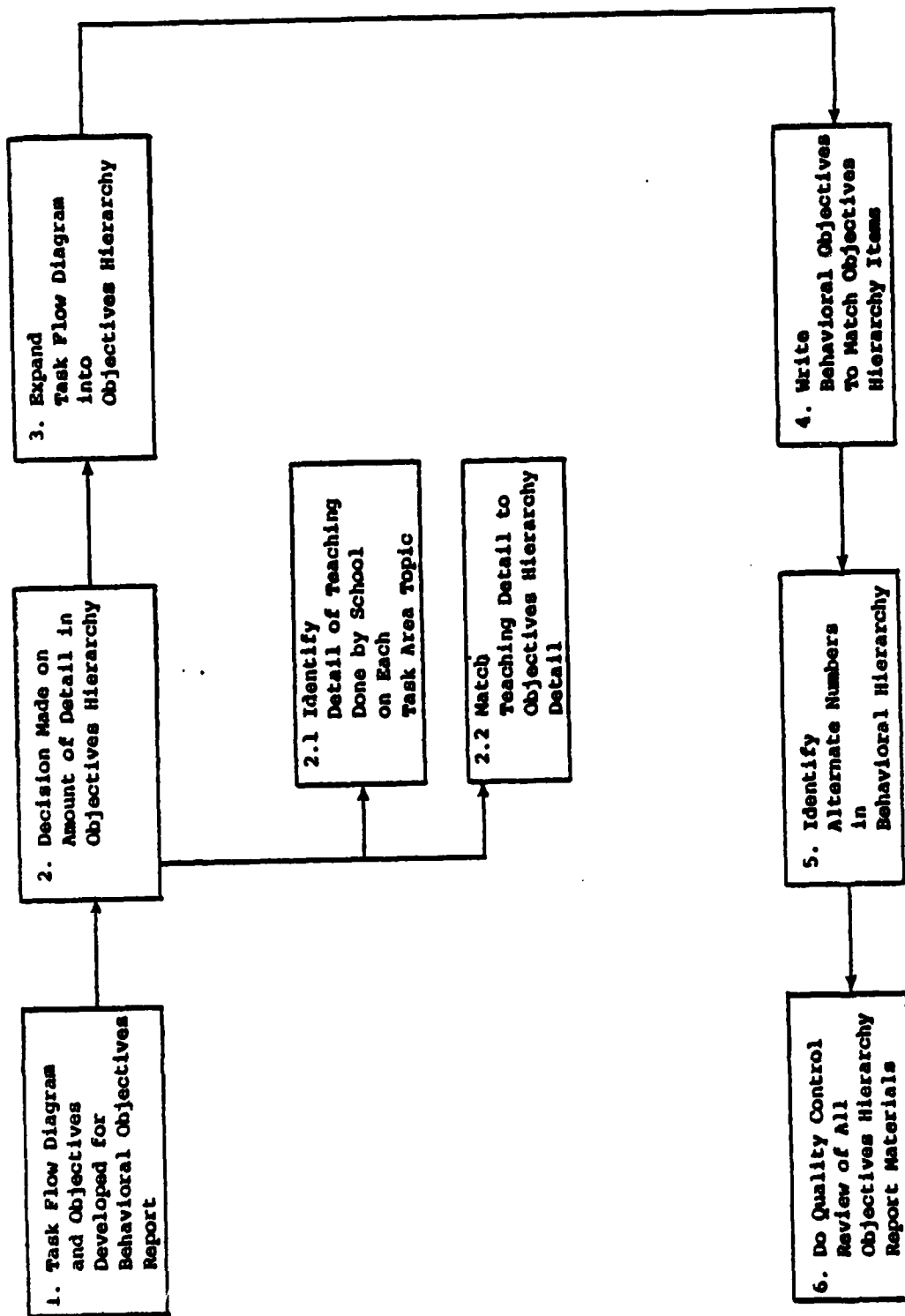


Figure 1. Task Flow Diagram - Objectives Hierarchy Development

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APPENDIX A

MISSION OBJECTIVE

The AIC Experimental Prototype Training System is designed to prepare learners to carry out Air Intercept Control on live aircraft, under supervision of an instructor. The learner population is composed of U.S. Navy officers and senior enlisted Operation's Specialist (OS) personnel. They will be trained in the synthetics portion of the AIC School curriculum (K-221-027) at the Fleet Combat Training Center, Pacific, San Diego, California.

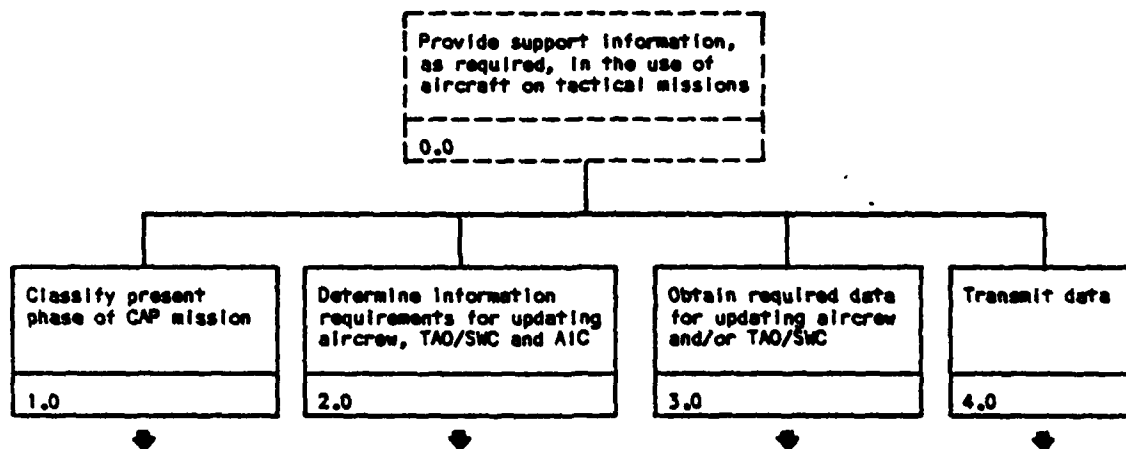
The Mission Objective, as stated in the Behavioral Objectives Report, is:

0.0 PROVIDE SUPPORT INFORMATION AS REQUIRED IN THE USE OF AIRCRAFT IN TACTICAL MISSIONS

- c. Given an AC mode console, CIC information, aircrew inputs and appropriate preparatory documents
- b. the AIC will provide support information as required, in the use of aircraft on tactical missions
- s. within the time and accuracy parameters required by the situation

The hierarchy diagram and objectives sheet which follow in this section present the four terminal objectives which are immediately subordinate to the mission objective. Subsequent sections will present the four Terminal Objectives and their respective subordinate objectives:

<u>Appendix</u>	<u>Terminal Objective</u>
B	1.0
C	2.0
D	3.0
E	4.0



NAVTRAEQUIPCEN 78-C-0182-2

1.0 CLASSIFY PRESENT PHASE OF CAP MISSION

- c. Given information from an AC mode console, the aircrew, CIC personnel, and appropriate preparatory documents
- b. the AIC will classify the present phase of the CAP mission, by name, and will list the specific modifying factors within the situation
- s. within one minute after activating the console or within one minute after a situation change; 100% on general classification; 90% of specific situation modifiers

2.0 DETERMINE INFORMATION REQUIREMENTS FOR UPDATING THE AIRCREW, TAO/SWC, AND AIC

- c. Given the CAP mission phase classification, the specific modifying factors, and a knowledge already acquired by the aircrew and TAO/SWC
- b. list the types of information required to support an update of the tactical situation and list the standards of timeliness and accuracy for each
- s. 90% correct, within one minute of classification

3.0 OBTAIN REQUIRED DATA FOR UPDATING THE AIRCREW AND/OR THE TAO/SWC

- c. Given an AC mode console, communications links to the aircrew and CIC personnel, and knowledge of the data required for transmission
- b. obtain the required data for listing through display, interpretation and calculation, as necessary
- s. within two minutes, 100% of the data, 90% accurate

4.0 TRANSMIT DATA

- c. Given the information required for transmission, the CAP mission phase classification, transmission equipment, and transmission rules and guidelines
- b. transmit the required information according to the rules and guidelines for transmission method selection and use, and for timeliness and accuracy
- s. on the correct transmission equipment, 100% following the rules for use, 100% following the rules for timeliness, 90% following the rules for accuracy

APPENDIX B

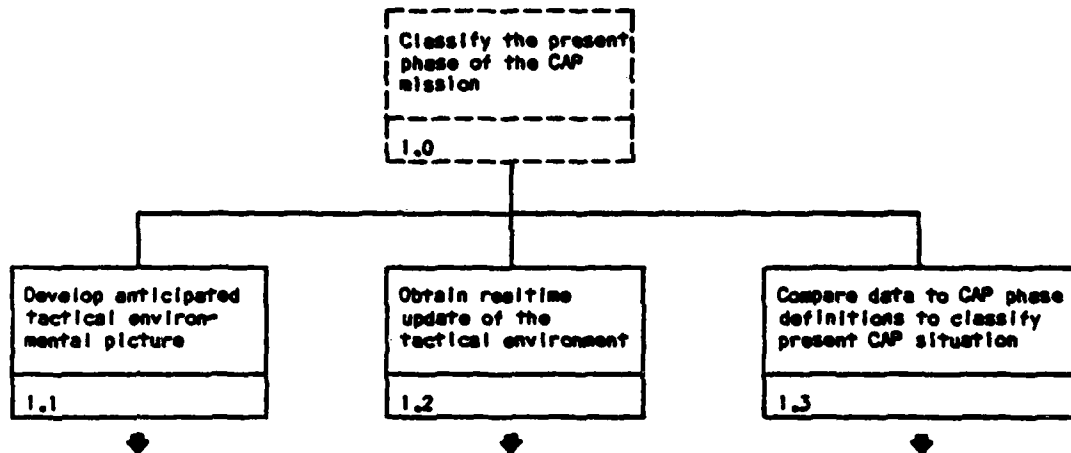
TERMINAL OBJECTIVE 1.0

The first Terminal Objective is:

1.0 CLASSIFY PRESENT PHASE OF CAP MISSION

- c. Given information from an AC mode console, the aircrew, CIC personnel, and appropriate preparatory documents
- b. the AIC will classify the present phase of the CAP mission, by name, and will list the specific modifying factors within the situation
- s. within one minute after activating the console or within one minute after a situation change; 100% on general classification; 90% of specific situation modifiers

Hierarchy diagrams and objectives sheets which follow present the subordinate objectives.



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1.1 DEVELOP ANTICIPATED TACTICAL ENVIRONMENTAL PICTURE

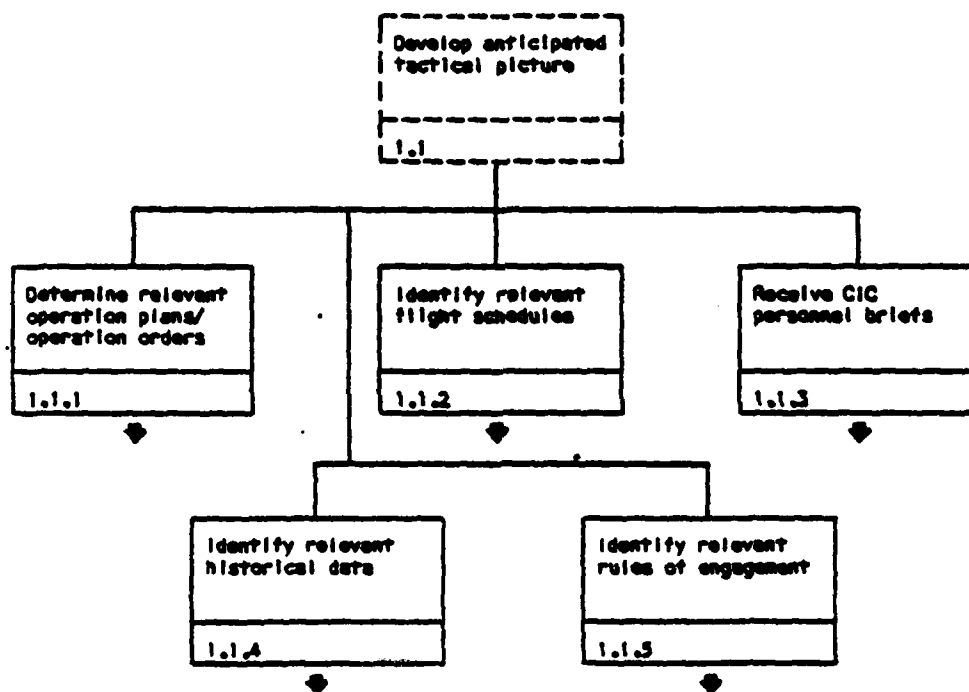
- c. Given operation plans/orders, flight schedules, CIC information, rules of engagement, historical data
- b. enumerate the major elements of the anticipated tactical environment
- s. prior to going to watch stations, including 90% of the major tactical element

1.2 OBTAIN REALTIME UPDATE OF THE TACTICAL ENVIRONMENT

- c. Given the anticipated tactical environment inputs from an AC mode console, inputs from the aircrew, and CIC information
- b. enumerate the major elements of the tactical environment update
- s. within one minute of starting watch and within one minute of a major situational change, including 90% of the major tactical elements

1.3 COMPARE DATA TO CAP PHASE DEFINITIONS TO CLASSIFY PRESENT CAP SITUATION

- c. Given current data about the tactical environment and about anticipated tactical occurrences, and given category definitions
- b. name the present CAP mission phase category and the special modifying factors by comparing the current data to the category and modifier definitions
- s. within 15 seconds, 100% correct on general situation, 100% correct on modifications caused by hostile aircraft, 90% correct on other modifiers



NAVTRAEQUIPCEN 78-C-0182-2

1.1.1 DETERMINE RELEVANT OPERATION ORDERS/PLANS

- c. Given information on a status board
- b. copy down the operation plans/orders associated with your ship/CAP
- s. prior to going to watch station, 100% of orders/plans

1.1.2 IDENTIFY RELEVANT FLIGHT SCHEDULES

- c. Given information on a status board
- b. copy down the flight schedules which pertain to your CAP
- s. prior to going to watch station, 100% of flight schedules

1.1.3 RECEIVE CIC PERSONNEL BRIEFS

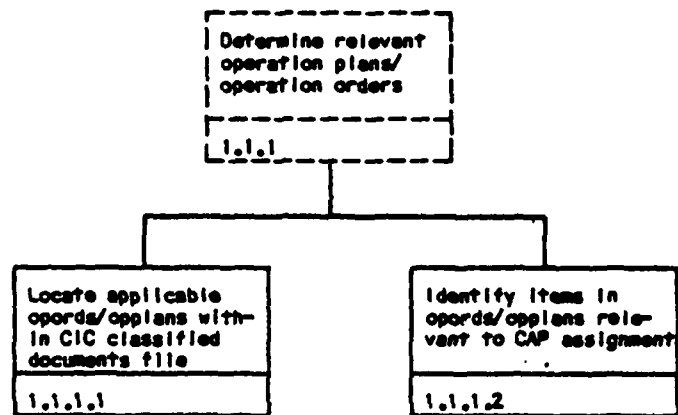
- c. Given sources of information in the CIC
- b. list the CIC personnel from whom you could receive information and the type of information you could receive from each
- s. prior to going to watch station, 100% personnel, 90% types of information

1.1.4 IDENTIFY RELEVANT HISTORICAL DATA

- c. Given message board and status board information, and other historic data
- b. list the items relevant to your CAP and ship
- s. prior to going to watch station, 90% of relevant items

1.1.5 IDENTIFY RELEVANT RULES OF ENGAGEMENT

- c. Given the rules of engagement
- b. list the rules of engagement pertaining to CAP
- s. prior to going to watch station, 100% of rules of engagement



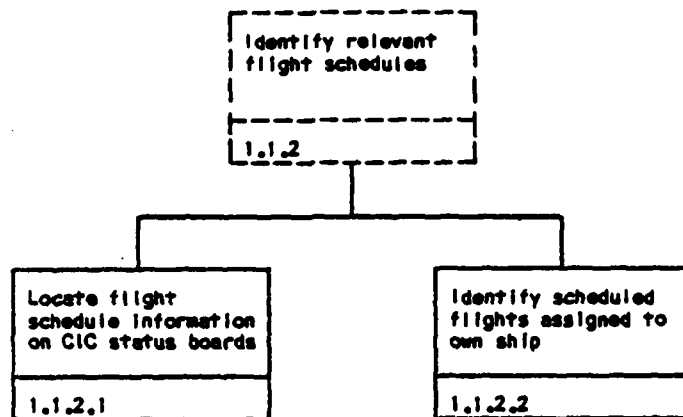
NAVTRAEQUIPCEN 78-C-0182-2

1.1.1.1 LOCATE APPLICABLE OPERATIONS ORDERS/PLANS WITHIN THE CIC CLASSIFIED DOCUMENTS FILE

- c. Given information on a CIC status board and the CIC classified documents file
- b. locate the applicable operations orders/plans
- a. 100% correct

1.1.1.2 IDENTIFY INFORMATION ITEMS IN OPERATIONS ORDERS/PLANS RELEVANT TO CAP ASSIGNMENT

- c. Given information on a CIC status board and applicable operations orders/plans
- b. identify information items relevant to CAP
- a. 90% correct



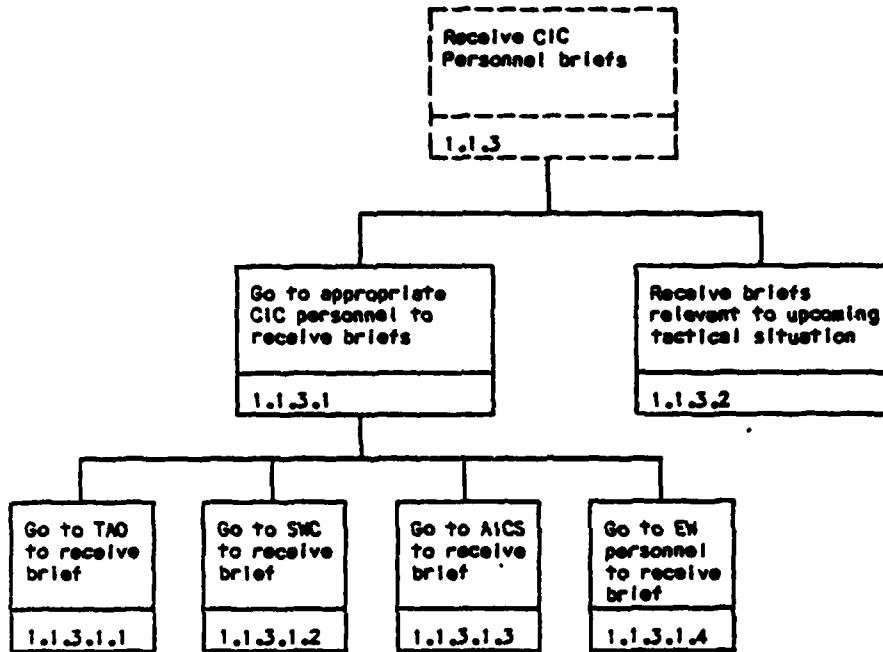
NAVTRAEQUIPCEN 78-C-0182-2

1.1.2.1 LOCATE FLIGHT SCHEDULE INFORMATION ON THE CIC STATUS BOARD

- c. Given information on a CIC status board
- b. identify the information concerned with flight schedules
- s. 100% correct

1.1.2.2 IDENTIFY SCHEDULED FLIGHTS ASSIGNED TO OWN SHIP

- c. Given flight schedule information on a CIC status board
- b. identify the scheduled flights which are assigned to own ship
- s. 100% correct



NAVTRAEQUIPCEN 78-C-0182-2

1.1.3.1 GO TO APPROPRIATE CIC PERSONNEL TO RECEIVE BRIEFS

- c. Given sources of information in the CIC
- b. name the personnel who can supply briefs and the watch station where you can find each
- s. prior to assuming watch

1.1.3.1.1 GO TO TAO TO RECEIVE BRIEF

- c. Given sources of information in the CIC
- b. name the watch station where you find the TAO
- s. prior to assuming watch

1.1.3.1.2 GO TO SWC TO RECEIVE BRIEF

- c. Given sources of information in the CIC
- b. name the watch station where you find the SWC
- s. prior to assuming watch

1.1.3.1.3 GO TO AIR INTERCEPT CONTROLLER SUPERVISOR (AICS) TO RECEIVE BRIEF

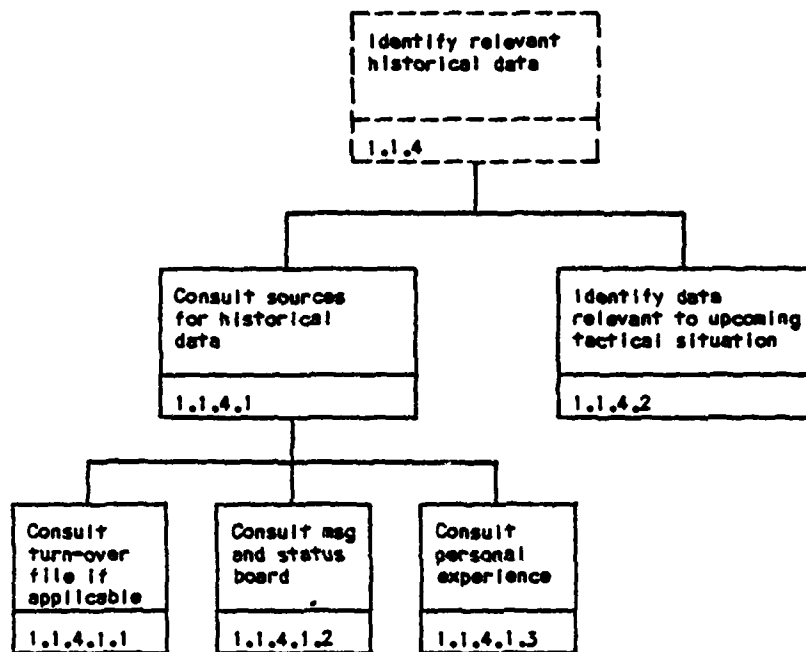
- c. Given sources of information in the CIC
- b. name the watch station where you find the AICS
- s. prior to assuming watch

1.1.3.1.4 GO TO EW PERSONNEL TO RECEIVE BRIEF

- c. Given sources of information in the CIC
- b. name the watch station where you find EW personnel
- s. prior to assuming watch

1.1.3.2 RECEIVE BRIEFS RELEVANT TO UPCOMING TACTICAL SITUATION

- c. Given sources of information in the CIC
- b. list the types of briefing information available from each of the CIC personnel you consult
- s. prior to assuming watch, 100% personnel, 90% information



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1.1.4.1 CONSULT SOURCES FOR HISTORICAL DATA

- c. Given message board and status board information, and other historical data
- b. list the sources for historical data and the relevant information available from each
- s. prior to going to watch station, 90% of relevant items

1.1.4.1.1 CONSULT TURN-OVER FILE IF APPLICABLE

- c. Given message board and status board information, and other historical data
- b. list the information items available from the turn-over file and indicate when they are applicable
- s. prior to going to watch station, 90% of relevant items

1.1.4.1.2 CONSULT MESSAGE AND STATUS BOARDS

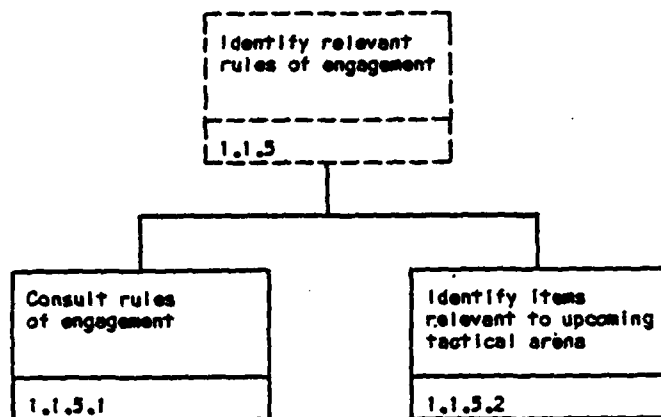
- c. Given message board and status board information, and other historical data
- b. list the information items available from the message and status boards
- s. prior to going to watch station, 90% of relevant items

1.1.4.1.3 CONSULT PERSONAL EXPERIENCE

- c. Given message board and status board information, and other historical data
- b. list the types of information items available from personal experience
- s. prior to going to watch station, 90% of relevant items

1.1.4.2 IDENTIFY DATA RELEVANT TO UPCOMING TACTICAL SITUATION

- c. Given message board and status board information, and other historical data
- b. identify data items relevant to upcoming tactical situation
- s. prior to going to watch station, 90% of relevant items



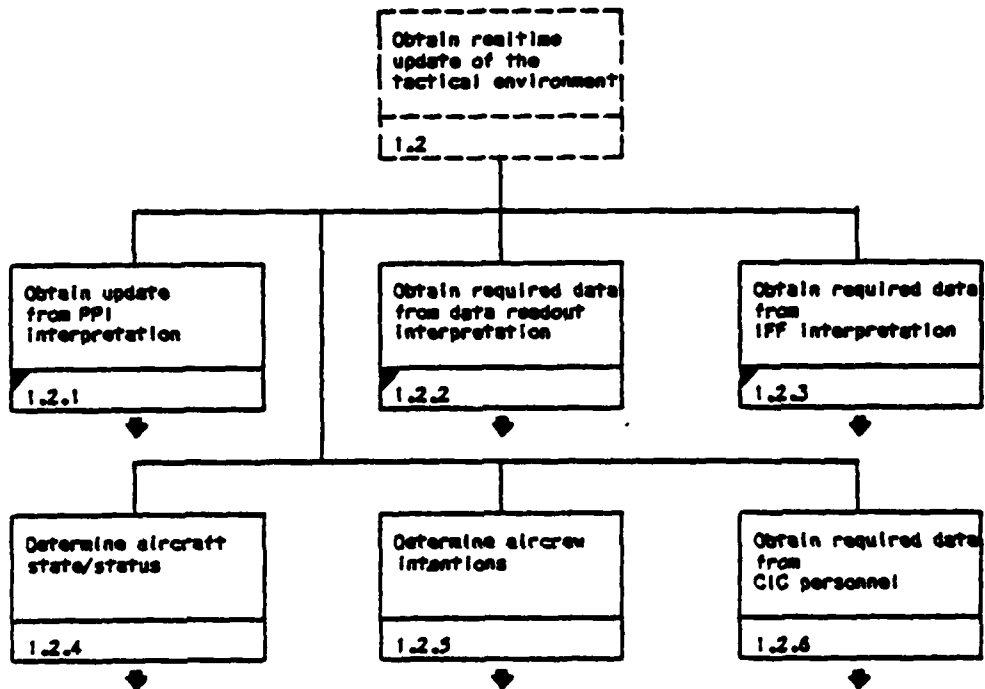
NAVTRAEQUIPCEN 78-C-0182-2

1.1.5.1 CONSULT THE RULES OF ENGAGEMENT

- c. Given a normal CIC personnel
- b. name the CIC team member who controls access to the Rules of Engagement publication
- s. 100% correct, with 10 seconds

1.1.5.2 IDENTIFY ITEMS RELEVANT TO THE UPCOMING TACTICAL ARENA

- c. Given a mission and access to the Rules of Engagement
- b. list the rules of engagement relevant to your CAP during the upcoming mission
- s. prior to going to watch station, 100% of rules of engagement



1.2.1 OBTAIN UPDATE FROM PPI INTERPRETATION

- c. Given returns on an AC mode console from radar and IFF equipment
- b. name the source of all scope radar returns and name the meanings of all scope IFF returns
- s. within one minute of sweep, 90% correct on radar, 100% correct on IFF

1.2.2 OBTAIN REQUIRED DATA FROM DATA READOUT INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. point out the DROs which supply required information and state the meanings of each DRO
- s. within one minute, 100% of sources, 90% of meanings

1.2.3 OBTAIN REQUIRED DATA FROM IFF INTERPRETATION

- c. Given an operating PPI display and IFF equipment
- b. point out and state the meanings of all IFF returns on the display supplying required data
- s. within one minute, 100% of meanings

1.2.4 DETERMINE AIRCRAFT STATE/STATUS

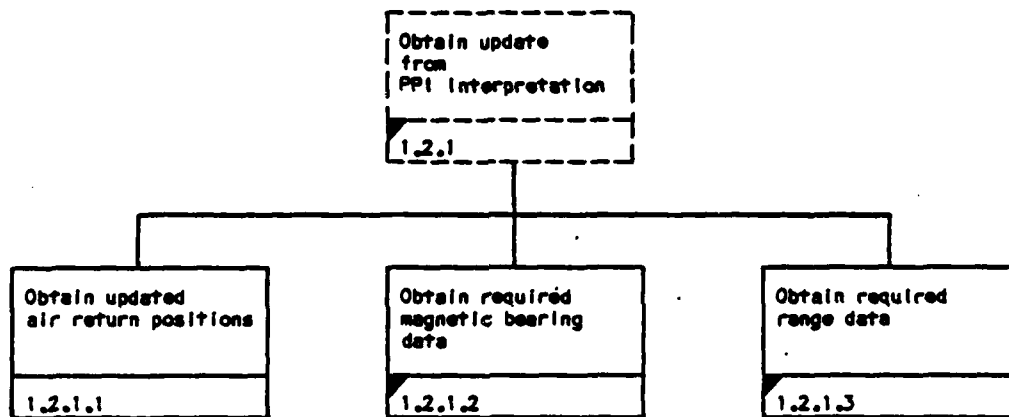
- c. Given information from the aircrew via radio/telephone
- b. list the fuel state and weapons status of the aircraft
- s. within 30 seconds of receiving information, 100% correct

1.2.5 DETERMINE AIRCREW INTENTIONS

- c. Given information from the aircrew via R/T and given aircraft track history
- b. state the aircrew's flight intentions relative to the present mission
- s. detect and report when the aircrew is locked on the wrong contact 100% of the time

1.2.6 OBTAIN REQUIRED DATA FROM CIC PERSONNEL RESPONSE INTERPRETATION

- c. Given CIC personnel response, in technical terms or jargon, to an information request
- b. state the functional meaning of each response
- s. within 15 seconds of the response, 90% accurate



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1.2.1.1 OBTAIN UPDATED AIR RETURN POSITIONS

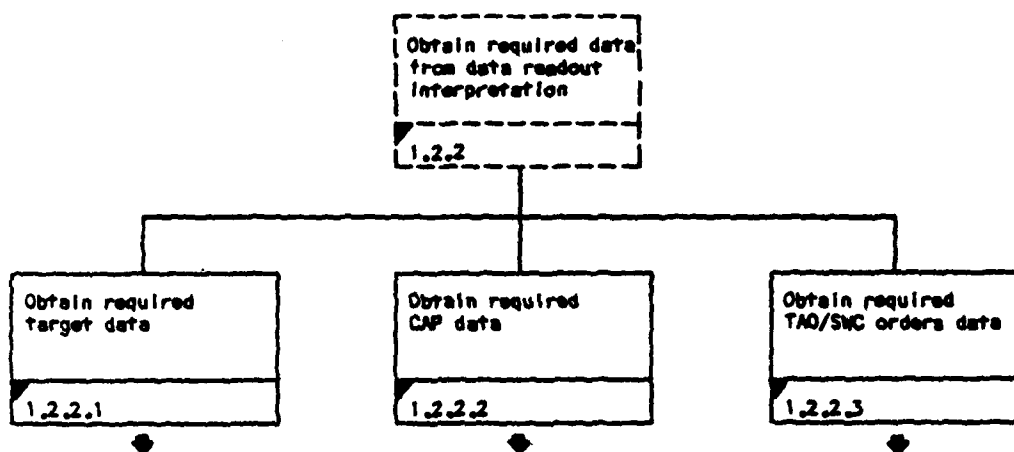
- c. Given a functioning NTDS console, PPI and radar,
- b. operate the NTDS console so as to get radar returns on the PPI
- s. legible returns

1.2.1.2 OBTAIN REQUIRED MAGNETIC BEARING DATA FROM PPI DISPLAY INTERPRETATION

- c. Given an operating PPI display and (1) operating NTDS program or (2) non-operative NTDS program
- b. state the magnetic bearing information obtained from an interpretation of the PPI display
- s. within one minute, 100% correct

1.2.1.3 OBTAIN REQUIRED RANGE DATA FROM PPI DISPLAY INTERPRETATION

- c. Given an operating PPI display and (1) operating NTDS program or (2) non-operative NTDS program
- b. state the range information obtained from an interpretation of the PPI display
- s. within one minute, 100% correct.



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1.2.2.1 OBTAIN REQUIRED TARGET DATA FROM DRO INTERPRETATION

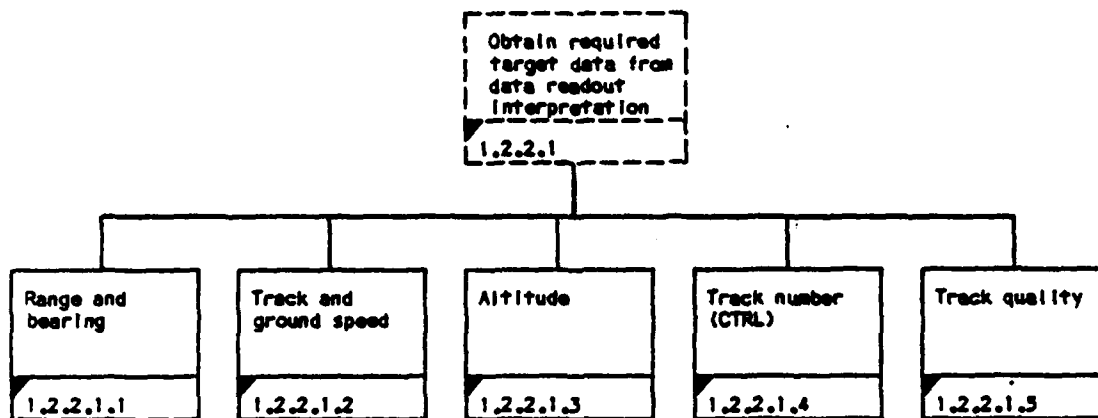
- c. Given operating AC mode console with complement of DROs
- b. state the meaning of target information displayed on the DROs
- s. within one minute, 90% of meanings

1.2.2.2 OBTAIN REQUIRED CAP DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the meaning of the CAP information displayed on the DRO
- s. within one minute, 90% of meanings

1.2.2.3 OBTAIN REQUIRED TAO/SWC ORDERS DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the meaning of the TAO/SWC information displayed on the DROs
- s. within one minute, 90% of meanings



1.2.2.1.1 OBTAIN REQUIRED RANGE AND BEARING DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state target range and bearing interpreted from the DRO display
- s. 100% correct

1.2.2.1.2 OBTAIN REQUIRED TRACK AND GROUND SPEED DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the target track and ground speed interpreted from the DRO display
- s. 100% correct

1.2.2.1.3 OBTAIN REQUIRED ALTITUDE DATA FROM DRO INTERPRETATION

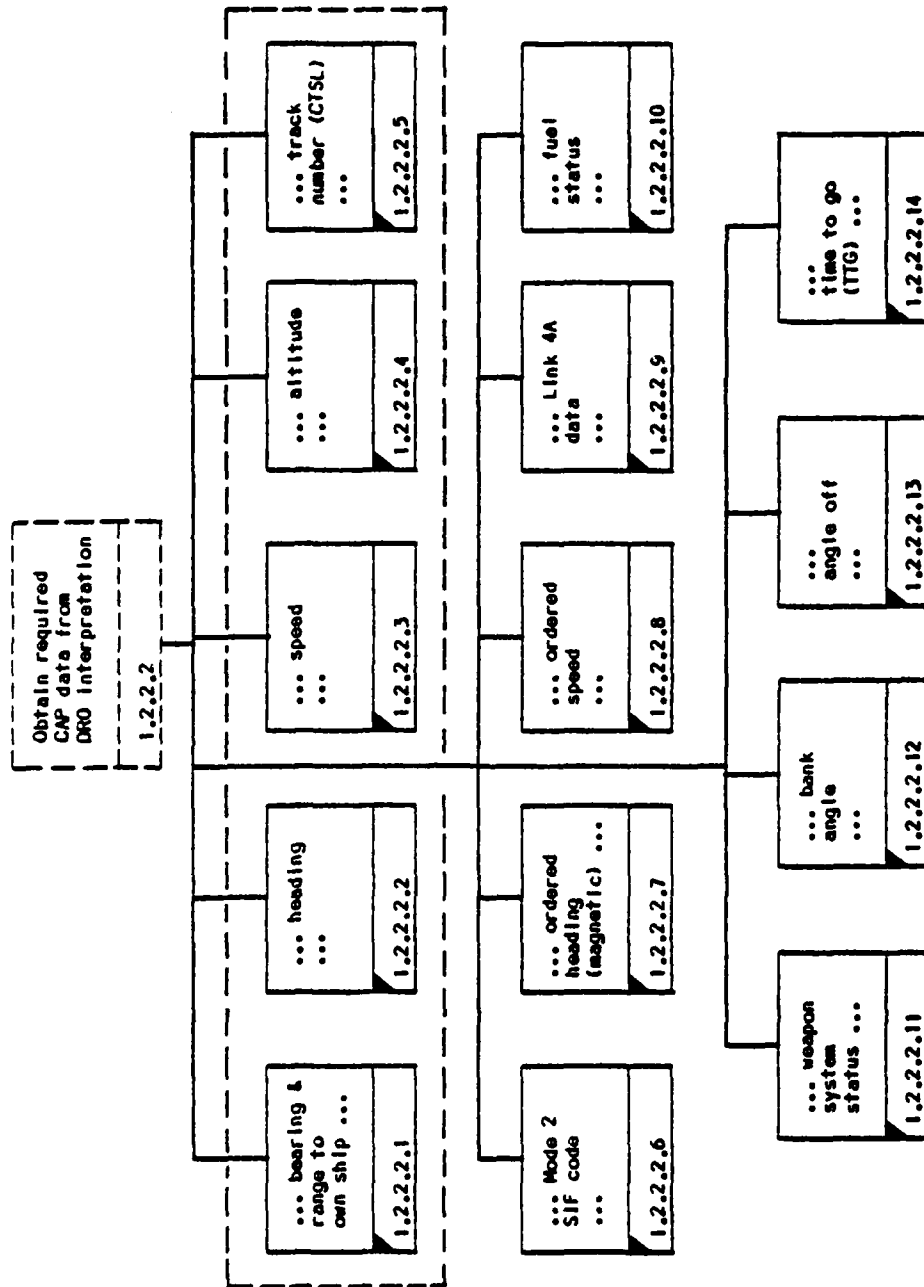
- c. Given operating AC mode console with complement of DROs
- b. state the target altitude interpreted from the DRO display
- s. 100% correct

1.2.2.1.4 OBTAIN REQUIRED TRACK NUMBER (CTSL) FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the target track numbers (CTSL) interpreted from the DRO display
- s. 100% correct

1.2.2.1.5 OBTAIN REQUIRED TRACK QUALITY DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the track quality interpreted from the DRO display
- s. 100% correct



1.2.2.2.1 OBTAIN REQUIRED BEARING AND RANGE TO OWN SHIP DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP bearing and range to own ship interpreted from the DRO display
- s. 100% correct

1.2.2.2.2 OBTAIN REQUIRED HEADING DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP heading interpreted from the DRO display
- s. 100% correct

1.2.2.2.3 OBTAIN REQUIRED SPEED DATA FROM DRO INTERPRETATION

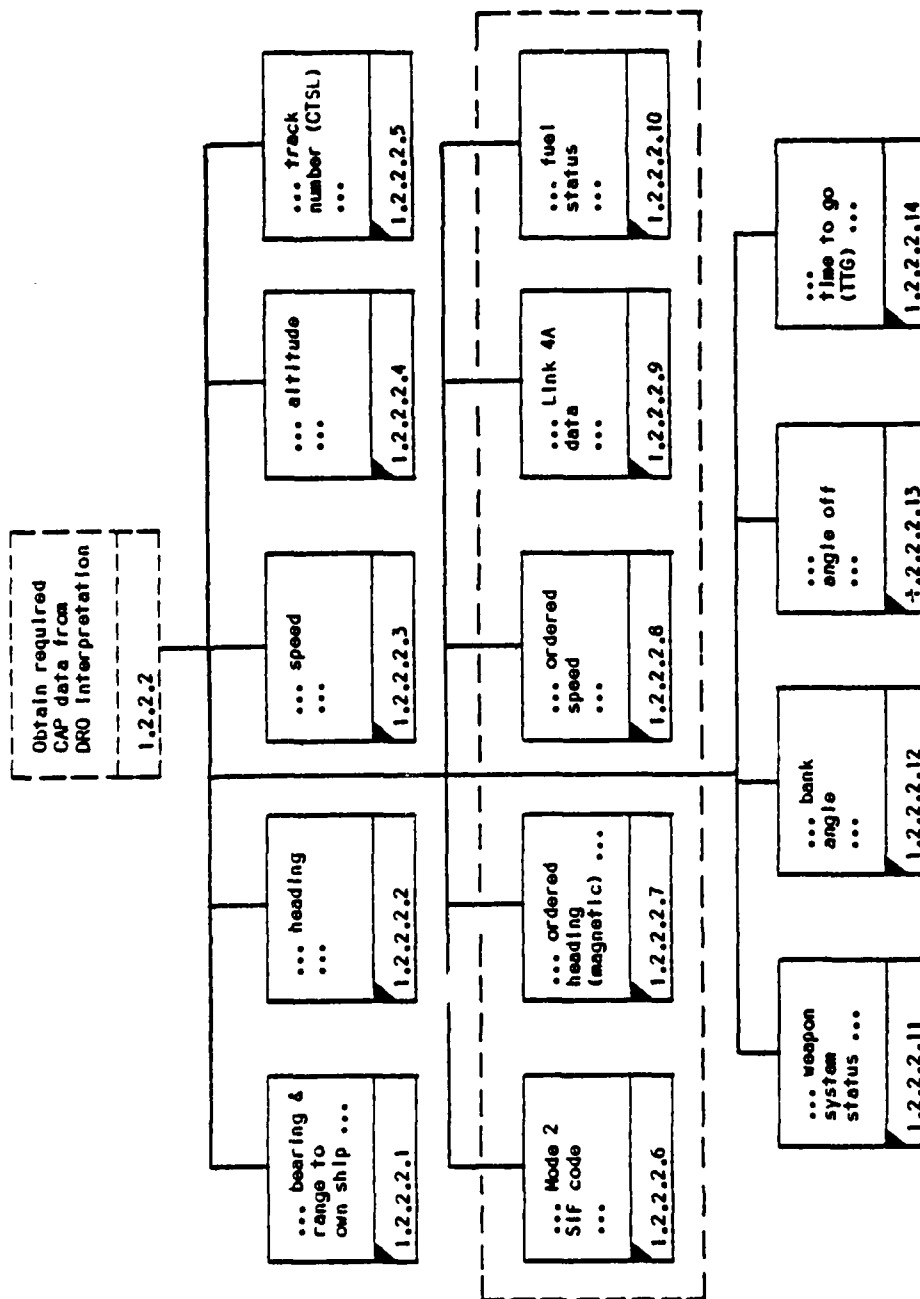
- c. Given operating AC mode console with complement of DROs
- b. state the CAP speed interpreted from the DRO display
- s. 100% correct

1.2.2.2.4 OBTAIN REQUIRED ALTITUDE DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP altitude interpreted from the DRO display
- s. 100% correct

1.2.2.2.5 OBTAIN REQUIRED TRACK NUMBER (CTSL) FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP track number (CTSL) interpreted from the DRO display
- s. 100% correct



1.2.2.2.6 OBTAIN REQUIRED MODE 2 SIF CODE FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP mode 2 SIF code interpreted from the DRO display
- s. 100% correct

1.2.2.2.7 OBTAIN REQUIRED ORDERED HEADING (MAGNETIC) DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP ordered heading (magnetic) interpreted from the DRO display
- s. 100% correct

1.2.2.2.8 OBTAIN REQUIRED CAP ORDERED SPEED DATA FROM DRO INTERPRETATION

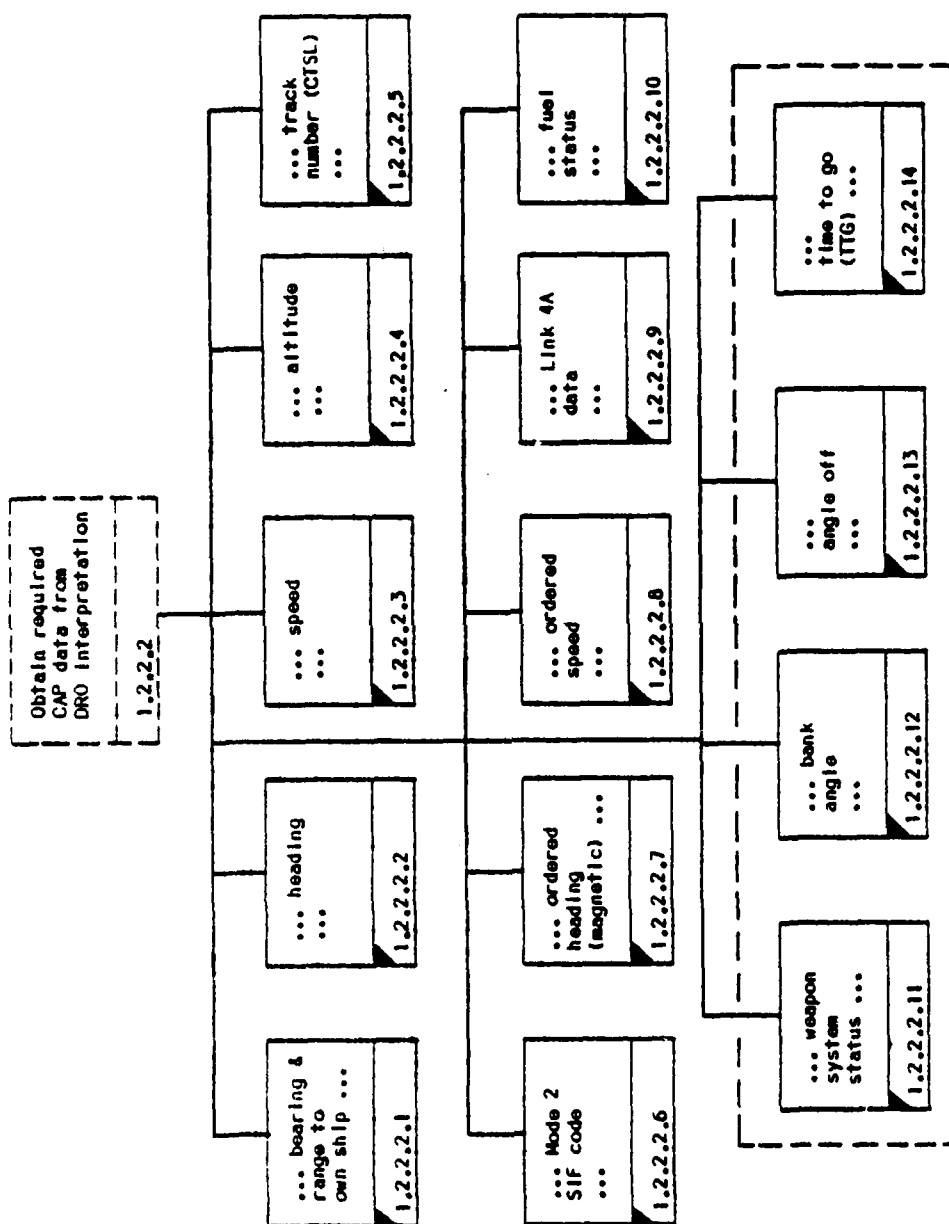
- c. Given operating AC mode console with complement of DROs
- b. state the CAP ordered speed
- s. 100% correct

1.2.2.2.9 OBTAIN REQUIRED LINK 4A DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP link information interpreted from the DRO display
- s. 100% correct

1.2.2.2.10 OBTAIN REQUIRED CAP FUEL STATUS DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP fuel status
- s. 100% correct



1.2.2.2.11 OBTAIN REQUIRED CAP WEAPON SYSTEM STATUS FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP weapon system status
- s. 100% correct

1.2.2.2.12 OBTAIN REQUIRED BANK ANGLE DATA FROM DRO INTERPRETATION

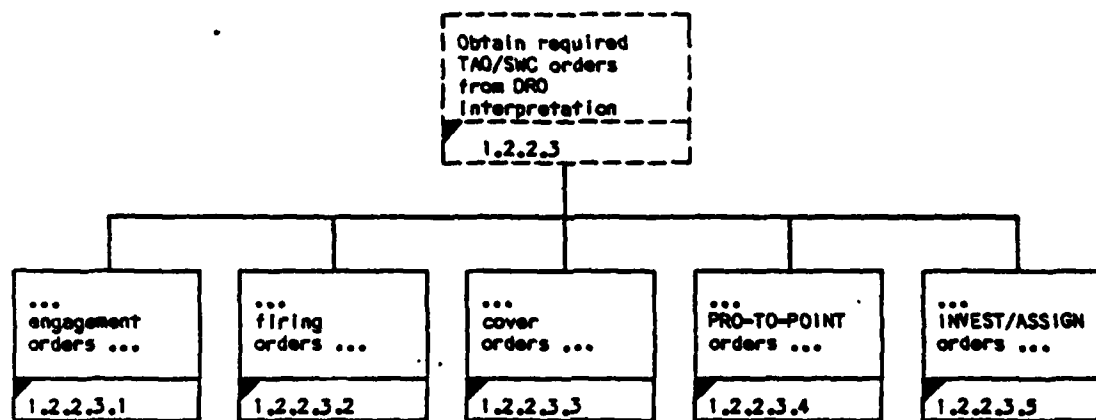
- c. Given operating AC mode console with complement of DROs
- b. state the CAP bank angle interpreted from the DRO display
- s. 100% correct

1.2.2.2.13 OBTAIN REQUIRED ANGLE-OFF DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP angle off interpreted from the DRO display
- s. 100% correct

1.2.2.2.14 OBTAIN REQUIRED TIME TO GO (TTG) DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP time to go (TTG) interpreted from the DRO display
- s. 100% correct



1.2.2.3.1 OBTAIN REQUIRED TAO/SWC ENGAGEMENT ORDERS FROM DRO
INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the engagement orders interpreted from the DRO display
- s. 100% correct

1.2.2.3.2 OBTAIN REQUIRED TAO/SWC FIRING ORDERS FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the firing orders interpreted from the DRO display
- s. 100% correct

1.2.2.3.3 OBTAIN REQUIRED TAO/SWC COVER ORDERS FROM DRO INTERPRETATION

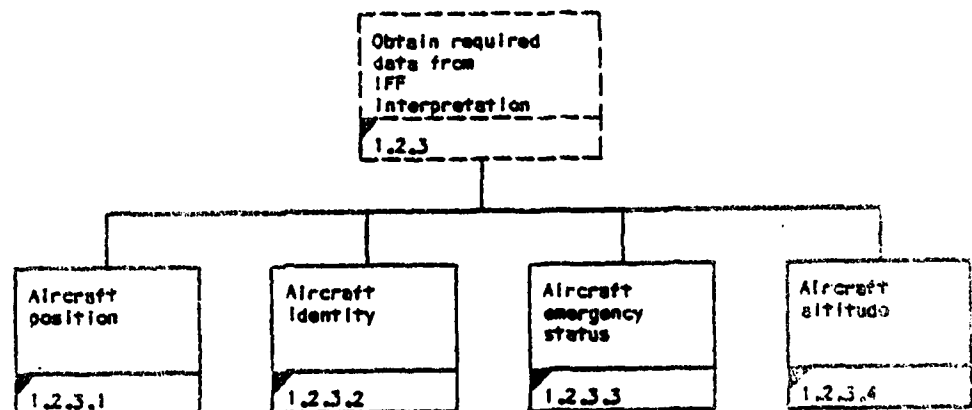
- c. Given operating AC mode console with complement of DROs
- b. state the cover orders interpreted from the AC general DRO display
- s. 100% correct

1.2.2.3.4 OBTAIN REQUIRED TAO/SWC PRO-TO-POINT ORDERS FROM DRO
INTERPRETATION.

- c. Given operating AC mode console with complement of DROs
- b. state the PRO-TO-POINT orders interpreted from the DRO display
- s. 100% correct

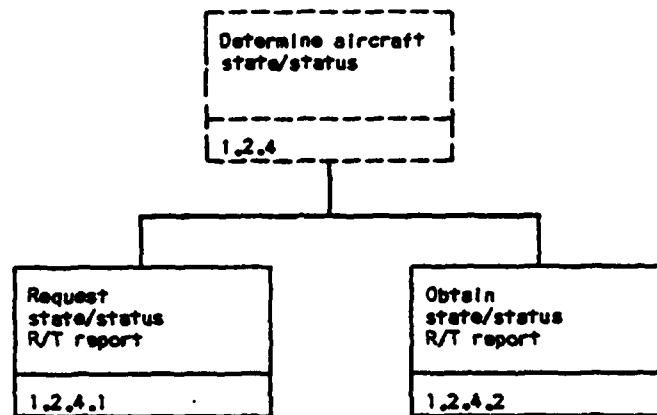
1.2.2.3.5 OBTAIN REQUIRED TAO/SWC INVESTIGATE/ASSIGN ORDERS FROM DRO
INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the INVEST/ASSIGN orders interpreted from the DRO display
- s. 100% correct



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- 1.2.3.1 OBTAIN REQUIRED AIRCRAFT POSITION DATA FROM IFF INTERPRETATION
 - c. Given an operating PPI display and IFF equipment
 - b. obtain aircraft position from an interpretation of the IFF display
 - s. within one minute, 100% accuracy
- 1.2.3.2 OBTAIN REQUIRED AIRCRAFT IDENTITY DATA FROM IFF INTERPRETATION
 - c. Given an operating PPI display and IFF equipment
 - b. obtain aircraft identity from an interpretation of the IFF display
 - s. within one minute, 100% accuracy
- 1.2.3.3 OBTAIN REQUIRED AIRCRAFT EMERGENCY STATUS DATA FROM IFF INTERPRETATION
 - c. Given an operating PPI display and IFF equipment
 - b. obtain aircraft emergency status from an interpretation of the IFF display
 - s. within one minute, 100% accuracy
- 1.2.3.4 OBTAIN REQUIRED AIRCRAFT ALTITUDE DATA FROM IFF INTERPRETATION
 - c. Given an operating PPI display and IFF equipment
 - b. obtain aircraft altitude from an interpretation of the IFF display
 - s. within one minute, 100% accuracy



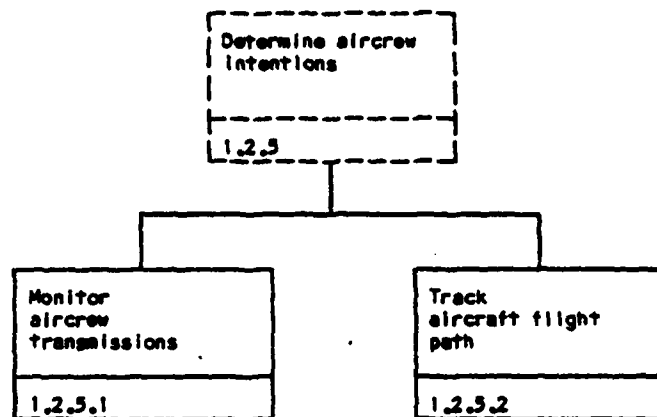
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1.2.4.1 REQUEST STATE/STATUS R/T REPORT

- c. Given an assigned CAP and an operating R/T system
- b. request state/status R/T report
- s. within 2 minutes of CAP arriving one station or terminating an intercept and once every 10 minutes while on station

1.2.4.2 OBTAIN STATE/STATUS R/T REPORT

- c. Given information from the aircraft radio/telephone
- b. indicate the amount of fuel and the status of the weapon system
- c. within 30 seconds of receiving the report

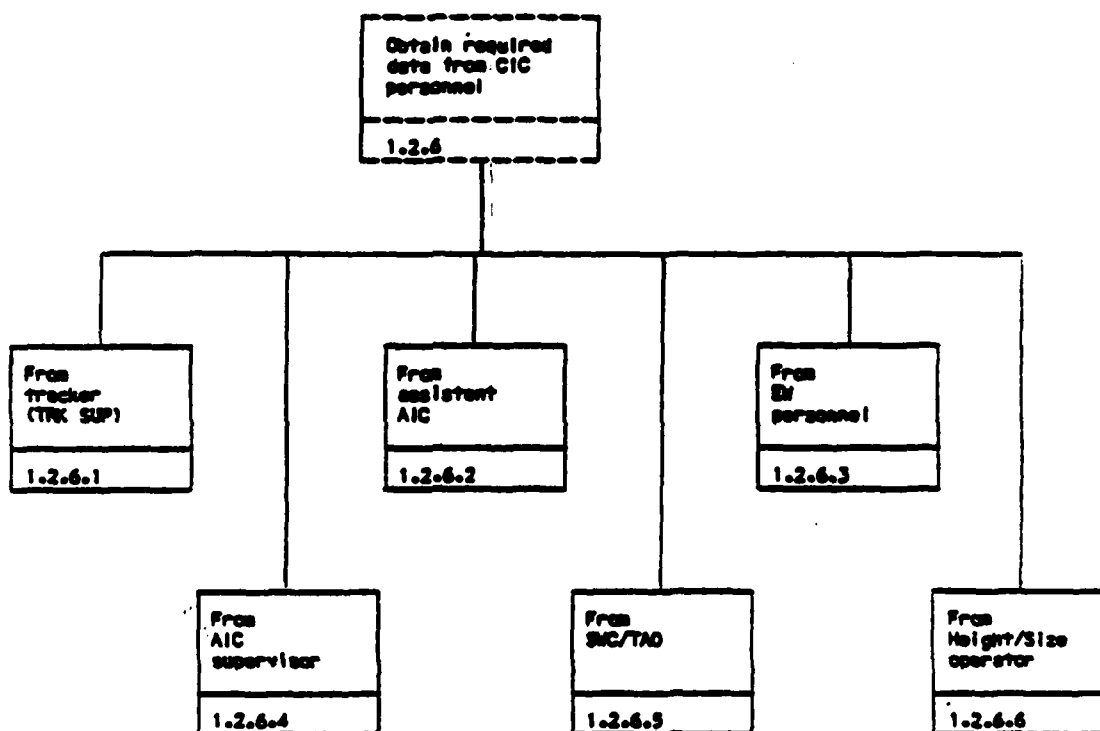


1.2.5.1 MONITOR AIRCREW TRANSMISSIONS

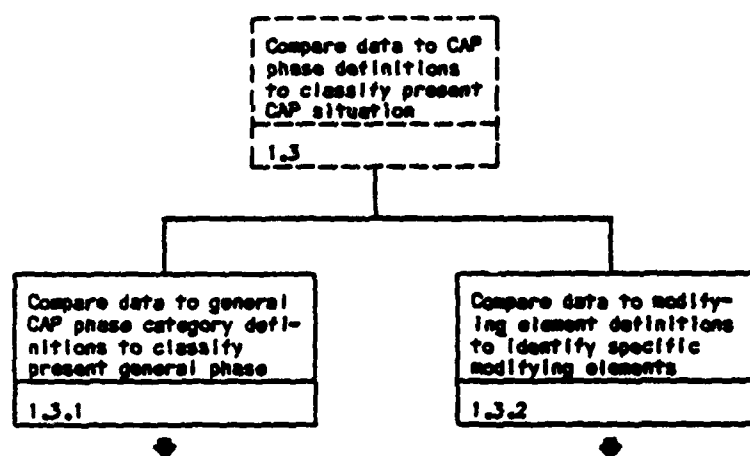
- c. Given information from the aircraft via data link or R/T and given aircraft track history,
- b. detect and report significant information (e.g., when the aircrew is locked on the wrong contact) by monitoring aircrew transmissions
- s. 100% of the time

1.2.5.2 TRACK AIRCRAFT FLIGHT PATH

- c. Given information from the aircraft via data link or R/T and given aircraft track history
- b. detect and report significant information (e.g., when the aircrew is locked on the wrong contact) by tracking aircrew flight path
- s. 100% of the time



- 1.2.6.1 OBTAIN CLARIFYING OR AMPLIFYING INPUTS FROM TRACKER (TRK SUP)
 - c. Given a full complement of CIC personnel
 - b. list the types of clarifying or amplifying inputs available from the tracker (TRK SUP)
 - s. 90% of the types of information
- 1.2.6.2 OBTAIN CLARIFYING OR AMPLIFYING INPUTS FROM ASSISTANT AIC
 - c. Given a full complement of CIC personnel
 - b. list the types of clarifying or amplifying inputs available from assistant AIC
 - s. 90% of the types of information
- 1.2.6.3 OBTAIN CLARIFYING OR AMPLIFYING INPUTS FROM EW PERSONNEL
 - c. Given a full complement of CIC personnel
 - b. list the types of clarifying or amplifying input available from EW personnel
 - s. 90% of the types of information
- 1.2.6.4 OBTAIN CLARIFYING OR AMPLIFYING INPUTS FROM AIC SUPERVISOR
 - c. Given a full complement of CIC personnel
 - b. list the types of clarifying or amplifying inputs available from AIC supervisor
 - s. 90% of the types of information
- 1.2.6.5 OBTAIN CLARIFYING OR AMPLIFYING INPUTS FROM SWC/TAO
 - c. Given a full complement of CIC personnel
 - b. list the types of clarifying or amplifying inputs available from SWC/TAO
 - s. 90% of the types of information
- 1.2.6.6 OBTAIN CLARIFYING INPUTS FROM HEIGHT/SIZE OPERATOR
 - c. Given a full complement of CIC personnel
 - b. list the types of clarifying or amplifying inputs available from height/size operator
 - s. 90% of the types of information

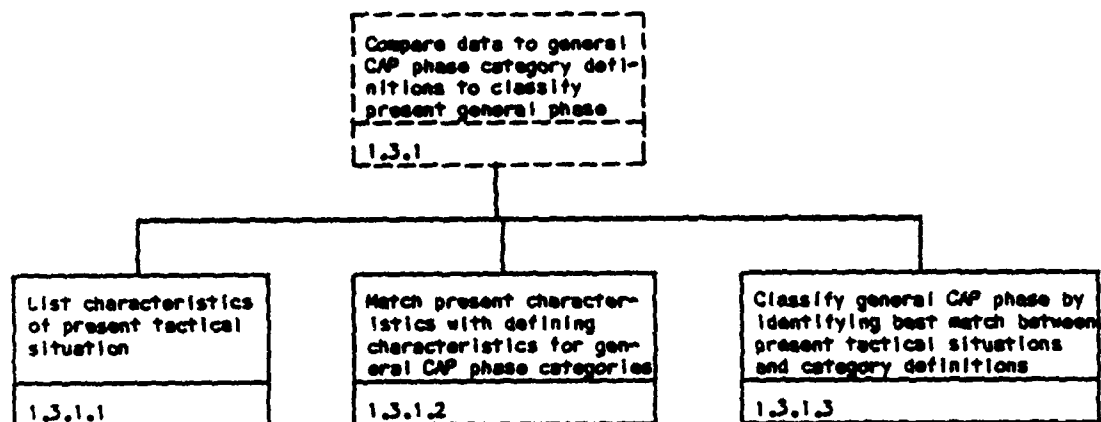


1.3.1 COMPARE DATA TO GENERAL CAP PHASE CATEGORY DEFINITIONS TO CLASSIFY PRESENT GENERAL PHASE

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, and given definitions of general phases of aircraft missions
- b. name the general phase of the present CAP mission by comparing the tactical data to the definitions
- s. within 10 seconds, 100% correct on categorization

1.3.2 COMPARE DATA TO MODIFYING ELEMENT DEFINITIONS TO IDENTIFY SPECIFIC MODIFYING ELEMENTS

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, the general phase of the present CAP mission, and a list of possible modifying elements
- b. check the elements on the list which are present in the current situation
- s. within 10 seconds, 100% correct on modifications caused by hostile aircraft, 90% correct on other modifiers



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1.3.1.1 LIST THE CHARACTERISTICS OF PRESENT TACTICAL SITUATION

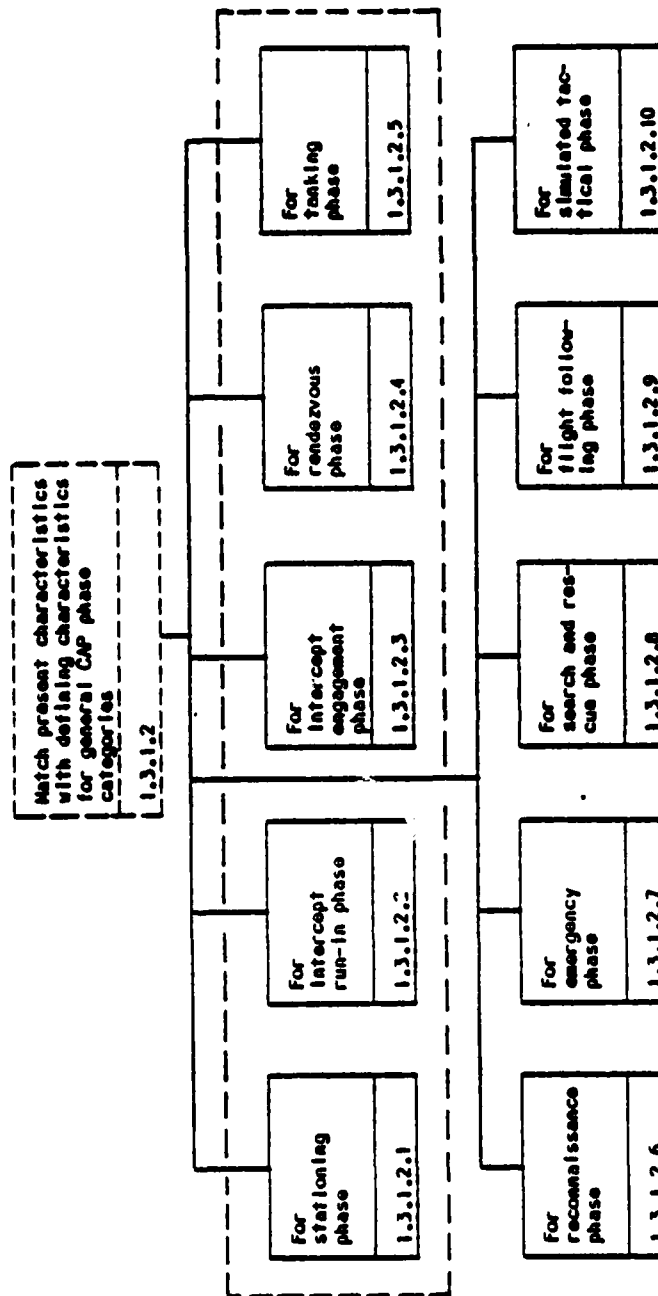
- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, and given definitions of general phases of aircraft missions
- b. list the characteristics of present tactical situation
- s. within 2 minutes, 90% correct on characteristics

1.3.1.2 MATCH PRESENT CHARACTERISTICS WITH DEFINING CHARACTERISTICS FOR GENERAL CAP PHASE CATEGORIES

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, and given definitions of general phases of aircraft missions
- b. list any matches between present characteristics with defining characteristics for general CAP phase categories
- s. within 1 minute, 95% correct

1.3.1.3 CLASSIFY GENERAL CAP PHASE BY IDENTIFYING BEST MATCH BETWEEN PRESENT TACTICAL SITUATION AND CATEGORY DEFINITIONS

- c. Given the identified matches between present situation characteristics and CAP phase defining characteristics
- b. classify general CAP phase by identifying best match between present tactical situation and category definitions
- s. within 30 seconds, 100% correct on categorization



1.3.1.2.1 MATCH CHARACTERISTICS WITH DEFINITIONS FOR STATIONING PHASE

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, and given definitions of general phases of aircraft missions
- b. list any matches between present characteristics and defining characteristics for stationing phase
- s. within 30 seconds, 95% correct

1.3.1.2.2 MATCH CHARACTERISTICS WITH DEFINITIONS FOR INTERCEPT RUN-IN PHASE

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, and given definitions of general phases of aircraft missions
- b. list any matches between present characteristics and defining characteristics for intercept run-in phase
- s. within 30 seconds, 95% correct

1.3.1.2.3 MATCH CHARACTERISTICS WITH DEFINITIONS FOR INTERCEPT ENGAGEMENT PHASE

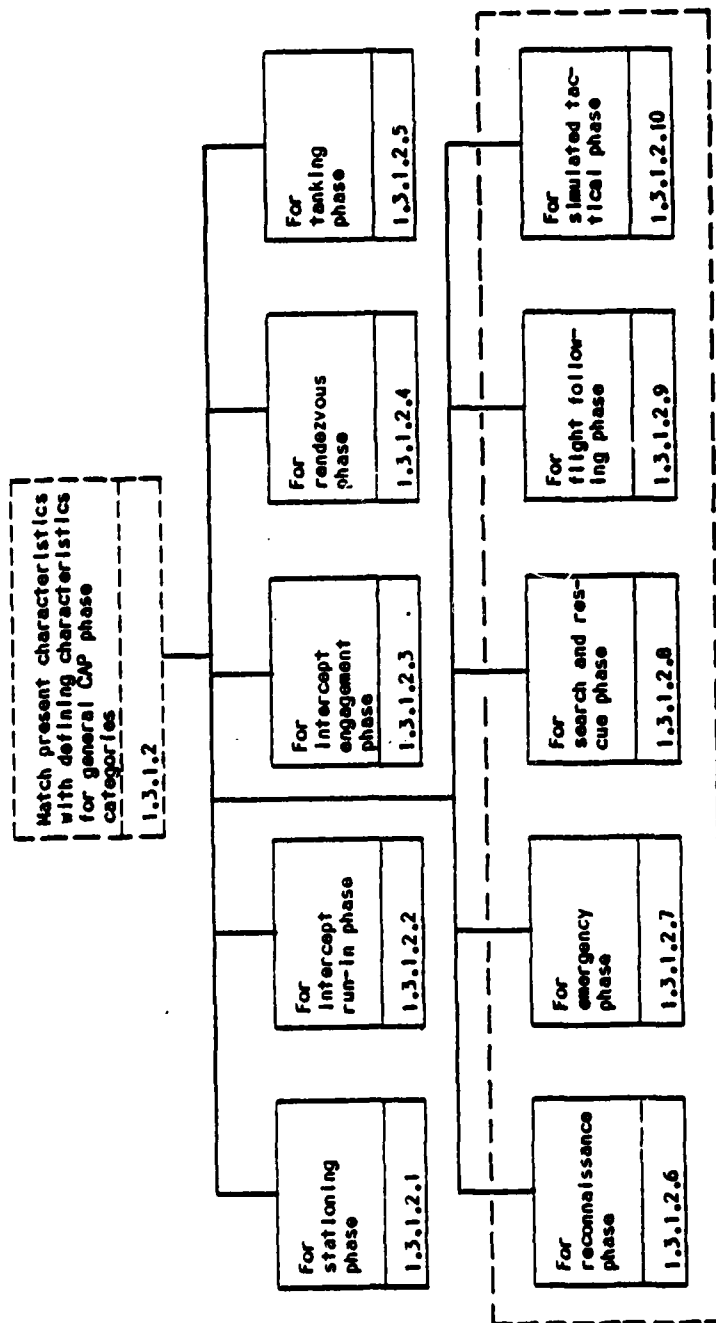
- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, and given definitions of general phases of aircraft missions
- b. list any matches between present characteristics and defining characteristics for intercept engagement phase
- s. within 30 seconds, 95% correct

1.3.1.2.4 MATCH CHARACTERISTICS WITH DEFINITIONS FOR RENDEZVOUS PHASE

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, and given definitions of general phases of aircraft missions
- b. list any matches between present characteristics and defining characteristics for rendezvous phase
- s. within 30 seconds, 95% correct

1.3.1.2.5 MATCH CHARACTERISTICS WITH DEFINITIONS FOR TANKING PHASE

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, and given definitions of general phases of aircraft missions
- b. list any matches between present characteristics with defining characteristics for tanking phase
- s. within 1 minute, 95% correct



1.3.1.2.6 MATCH CHARACTERISTICS WITH DEFINITIONS FOR RECONNAISSANCE PHASE

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, and given definitions of general phases of aircraft missions
- b. list any matches between present characteristics and defining characteristics for reconnaissance phase
- s. within 30 seconds, 95% correct

1.3.1.2.7 MATCH CHARACTERISTICS WITH DEFINITIONS FOR EMERGENCY PHASE

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, and given definitions of general phases of aircraft missions
- b. list any matches between present characteristics and defining characteristics for emergency phase
- s. within 30 seconds, 95% correct

1.3.1.2.8 MATCH CHARACTERISTICS WITH DEFINITIONS FOR SEARCH AND RESCUE PHASE

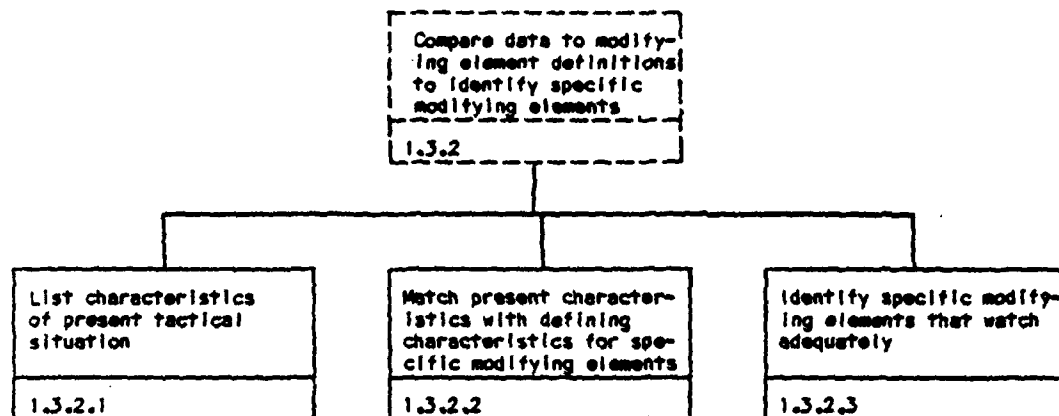
- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, and given definitions of general phases of aircraft missions
- b. list any matches between present characteristics and defining characteristics for search and rescue phase
- s. within 30 seconds, 95% correct

1.3.1.2.9 MATCH CHARACTERISTICS WITH DEFINITIONS FOR FLIGHT FOLLOWING PHASE

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, and given definitions of general phases of aircraft missions
- b. list any matches between present characteristics and defining characteristics for flight following phase
- s. within 30 seconds, 95% correct

1.3.1.2.10 MATCH CHARACTERISTICS WITH DEFINITIONS FOR SIMULATED TACTICAL PHASES

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, and given definitions of general phases of aircraft missions
- b. list any matches between present characteristics and defining characteristics for simulated tactical phase
- s. within 30 seconds, 95% correct



1.3.2.1 LIST CHARACTERISTICS OF PRESENT TACTICAL SITUATION

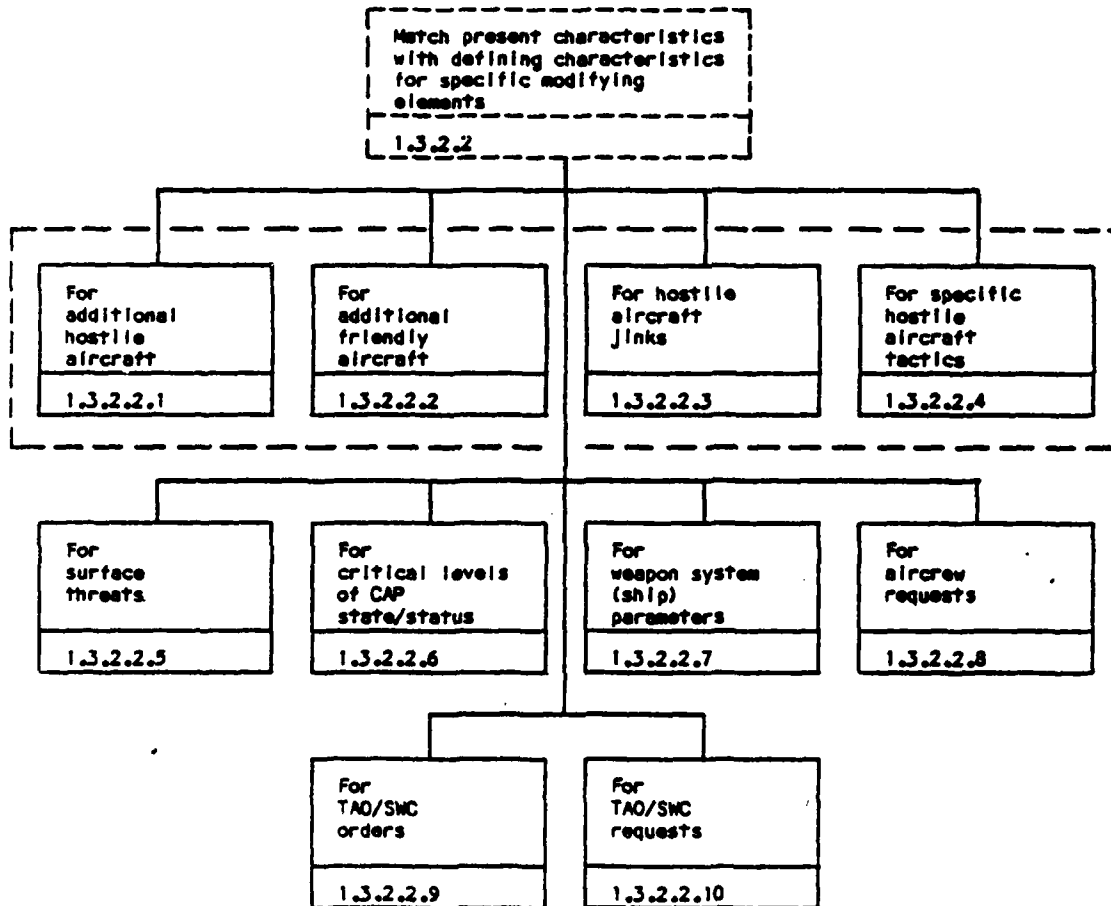
- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, the general phase of the present CAP mission, and a list of possible modifying elements
- b. list the characteristics of the present tactical situation
- s. within 2 minutes, 90% of the characteristics

1.3.2.2 MATCH PRESENT CHARACTERISTICS WITH DEFINING CHARACTERISTICS FOR SPECIFIC MODIFYING ELEMENTS

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, the general phase of the present CAP mission, and a list of possible modifying elements
- b. list the matches between the present characteristics and the defining characteristics for specific modifying elements
- s. within 30 seconds, 100% correct on modifications caused by hostile aircraft, 90% correct on other modifiers

1.3.2.3 IDENTIFY SPECIFIC MODIFYING ELEMENTS THAT MATCH ADEQUATELY

- c. Given the list of matches between present characteristics and defining characteristics for specific modifying elements
- b. state which specific modifying elements are present
- s. within 30 seconds, 100% correct on modifications caused by hostile aircraft, 90% correct on other modifiers



1.3.2.2.1 MATCH PRESENT CHARACTERISTICS WITH DEFINING CHARACTERISTICS FOR
ADDITIONAL HOSTILE AIRCRAFT

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, the general phase of the present CAP mission, and a list of possible modifying elements,
- b. list the matches between the present characteristics and the defining characteristics for additional hostile aircraft
- s. within 30 seconds, 100% correct on modifications caused by hostile aircraft, 90% correct on other modifiers

1.3.2.2.2 MATCH PRESENT CHARACTERISTICS WITH DEFINING CHARACTERISTICS FOR
ADDITIONAL FRIENDLY AIRCRAFT

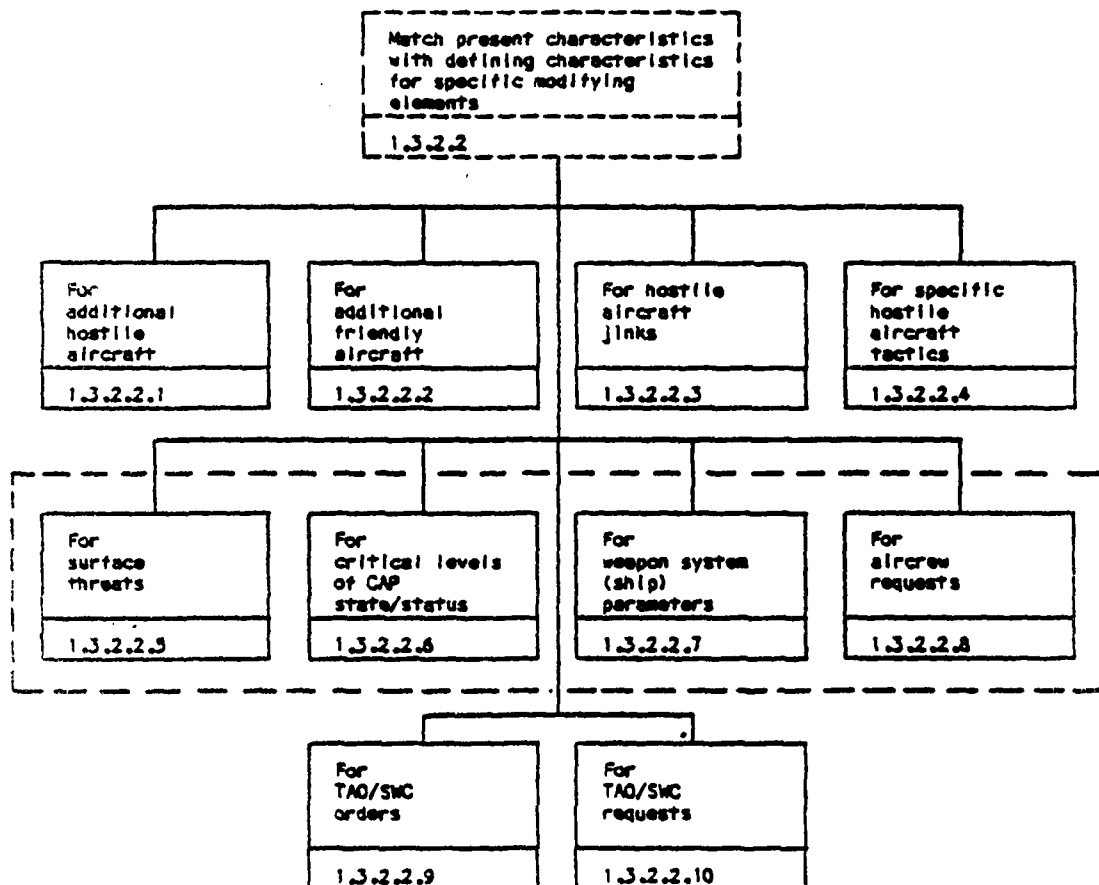
- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, the general phase of the present CAP missions, and a list of possible modifying elements
- b. list the matches between the present characteristics and the defining characteristics for additional friendly aircraft
- s. within 30 seconds, 100% correct on modifications caused by hostile aircraft, 90% correct on other modifiers

1.3.2.2.3 MATCH PRESENT CHARACTERISTICS WITH DEFINING CHARACTERISTICS FOR
HOSTILE AIRCRAFT JINKS

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, the general phase of the present CAP mission, and a list of possible modifying elements
- b. list the matches between the present characteristics and the defining characteristics for hostile aircraft jinks
- s. within 30 seconds, 100% correct on modifications caused by hostile aircraft, 90% correct on other modifiers

1.3.2.2.4 MATCH PRESENT CHARACTERISTICS WITH DEFINING CHARACTERISTICS FOR
SPECIFIC HOSTILE AIRCRAFT TACTICS

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, the general phase of the present CAP mission, and a list of possible modifying elements
- b. list the matches between the present characteristics and the defining characteristics for specific hostile aircraft tactics
- s. within 30 seconds, 100% correct on modifications caused by hostile aircraft, 90% correct on other modifiers



1.3.2.2.5 MATCH PRESENT CHARACTERISTICS WITH DEFINING CHARACTERISTICS FOR SURFACE THREATS

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, the general phase of the present CAP mission, and a list of possible modifying elements
- b. list the matches between the present characteristics and the defining characteristics for surface threats
- s. within 30 seconds, 100% correct on modifications caused by hostile aircraft, 90% correct on other modifiers

1.3.2.2.6 MATCH PRESENT CHARACTERISTICS WITH DEFINING CHARACTERISTICS FOR CRITICAL LEVELS OF CAP STATE/STATUS

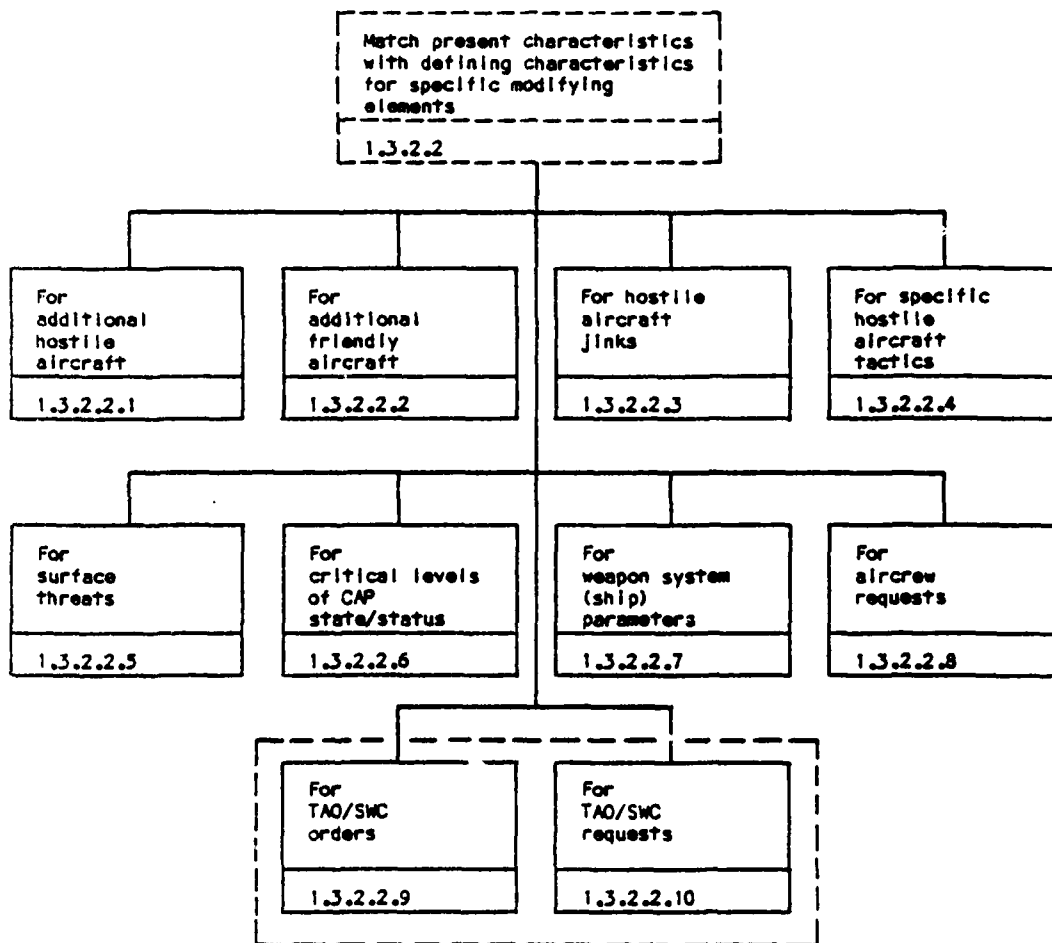
- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, the general phase of the present CAP mission, and a list of possible modifying elements
- b. list the matches between the present characteristics and the defining characteristics for critical levels of CAP state/status
- s. within 30 seconds, 100% correct on modifications caused by hostile aircraft, 90% correct on other modifiers

1.3.2.2.7 MATCH PRESENT CHARACTERISTICS WITH DEFINING CHARACTERISTICS FOR WEAPON SYSTEM (SHIP) PARAMETERS

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, the general phase of the present CAP mission, and a list of possible modifying elements
- b. list the matches between the present characteristics and the defining characteristics for weapon system (ship) parameters
- s. within 30 seconds, 100% correct on modifications caused by hostile aircraft, 90% correct on other modifiers

1.3.2.2.8 MATCH PRESENT CHARACTERISTICS WITH DEFINING CHARACTERISTICS FOR AIRCREW REQUESTS

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, the general phase of the present CAP mission, and a list of possible modifying elements
- b. list the matches between the present characteristics and the defining characteristics for aircrew requests
- s. within 30 seconds, 100% correct on modifications caused by hostile aircraft, 90% correct on other modifiers



1.3.2.2.9 MATCH PRESENT CHARACTERISTICS WITH DEFINING CHARACTERISTICS FOR TAO/SWC ORDERS

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, the general phase of the present CAP mission, and a list of possible modifying elements
- b. list the matches between the present characteristics and the defining characteristics for additional TAO/SWC orders
- s. within 30 seconds, 100% correct on modifications caused by hostile aircraft, 90% correct on other modifiers

1.3.2.2.10 MATCH PRESENT CHARACTERISTICS WITH DEFINING CHARACTERISTICS FOR TAO/SWC REQUESTS

- c. Given up-to-date data about the current tactical environment and anticipated tactical occurrences, the general phase of the present CAP mission, and a list of possible modifying elements
- b. list the matches between the present characteristics and the defining characteristics for TAO/SWC requests
- s. within 30 seconds, 100% correct on modifications caused by hostile aircraft, 90% on other modifiers

TABLE B1. ALTERNATE NUMBERS TABLE - TERMINAL OBJECTIVE 1.0 HIERARCHY

Objective Number	Objective and/or Reference
1.2.1	OBTAIN UPDATE FROM PPI INTERPRETATION a. Given returns on an AC mode console from radar and IFF equipment b. name the source of all scope radar returns and name the meanings of all scope IFF returns s. within one minute of sweep, 90% correct on radar, 100% correct on IFF Alternate numbers: 3.3.1
1.2.1.2	OBTAIN REQUIRED MAGNETIC BEARING DATA FROM PPI DISPLAY INTERPRETATION c. Given an operating PPI display and (1) operating NTDS program or (2) non-operative NTDS program b. state the bearing information obtained from an interpretation of the PPI display s. within one minute, 100% correct Alternate numbers: 3.3.1.1
1.2.1.3	OBTAIN REQUIRED RANGE DATA FROM PPI DISPLAY INTERPRETATION c. Given an operating PPI display and (1) operating NTDS program or (2) non-operative NTDS program b. state the range information obtained from an interpretation of the PPI display s. within one minute, 100% correct Alternate numbers: 3.3.1.2
1.2.2	OBTAIN REQUIRED DATA FROM DATA READOUT INTERPRETATION c. Given operating AC mode console with complement of DROs b. point out the DROs which supply required information and state the meanings of each DRO s. within one minute, 100% of sources, 90% of meanings Alternate numbers: 3.3.2

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TABLE B1. ALTERNATE NUMBERS TABLE - TERMINAL OBJECTIVE 1.0 HIERARCHY (Cont)

Objective Number	Objective and/or Reference
1.2.2.1	OBTAIN REQUIRED TARGET DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the meaning of target information displayed on the DROs s. within one minute, 90% of meanings Alternate numbers: 3.3.2.1
1.2.2.1.1	OBTAIN REQUIRED RANGE AND BEARING DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state target range and bearing interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.1.1
1.2.2.1.2	OBTAIN REQUIRED TRACK AND GROUND SPEED DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the target track and ground speed interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.1.2
1.2.2.1.3	OBTAIN REQUIRED ALTITUDE DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the target altitude interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.1.3
1.2.2.1.4	OBTAIN REQUIRED TRACK NUMBER (CTSL) FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the target track numbers (CTSL) interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.1.4

TABLE B1. ALTERNATE NUMBERS TABLE - TERMINAL OBJECTIVE 1.0 HIERARCHY (Cont)

Objective Number	Objective and/or Reference
1.2.2.1.5	OBTAIN REQUIRED TRACK QUALITY DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the track quality interpreted from the DRO display a. 100% correct Alternate numbers: 3.3.2.1.5
1.2.2.2	OBTAIN REQUIRED CAP DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the meaning of the CAP information displayed on the DRO a. within one minute, 90% of meanings Alternate numbers: 3.3.2.2
1.2.2.2.1	OBTAIN REQUIRED BEARING AND RANGE TO OWN SHIP DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the CAP bearing and range to own ship interpreted from the DRO display a. 100% correct Alternate numbers: 3.3.2.2.1
1.2.2.2.2	OBTAIN REQUIRED HEADING DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the CAP heading interpreted from the DRO display a. 100% correct Alternate numbers: 3.3.2.2.2
1.2.2.2.3	OBTAIN REQUIRED SPEED DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the CAP speed interpreted from the DRO display a. 100% correct Alternate numbers: 3.3.2.2.3
1.2.2.2.4	OBTAIN REQUIRED ALTITUDE DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the CAP altitude interpreted from the DRO display a. 100% correct Alternate numbers: 3.3.2.2.4

TABLE B1. ALTERNATE NUMBERS TABLE - TERMINAL OBJECTIVE 1.0 HIERARCHY (Cont)

Objective Number	Objective and/or Reference
1.2.2.2.5	OBTAIN REQUIRED TRACK NUMBER (CTSL) FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the CAP track number (CTSL) interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.2.5
1.2.2.2.6	OBTAIN REQUIRED MODE 2 SIF CODE FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the CAP mode 2 SIF code interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.2.6
1.2.2.2.7	OBTAIN REQUIRED ORDERED HEADING (MAGNETIC) DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the CAP ordered heading (magnetic) interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.2.7
1.2.2.2.8	OBTAIN REQUIRED CAP ORDERED SPEED DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the CAP ordered speed s. 100% Alternate numbers: 3.3.2.2.8
1.2.2.2.9	OBTAIN REQUIRED LINK 4A DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the CAP link information interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.2.9
1.2.2.2.10	OBTAIN REQUIRED CAP FUEL STATUS DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the CAP fuel status s. 100% correct Alternate numbers: 3.3.2.2.10

TABLE B1. ALTERNATE NUMBERS TABLE -- TERMINAL OBJECTIVE 1.0 HIERARCHY (Cont)

Objective Number	Objective and/or Reference
1.2.2.2.11	OBTAIN REQUIRED CAP WEAPON SYSTEM STATUS FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the CAP weapon system status s. 100% correct Alternate numbers: 3.3.2.2.11
1.2.2.2.12	OBTAIN REQUIRED BANK ANGLE DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the CAP bank angle interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.2.12
1.2.2.2.13	OBTAIN REQUIRED ANGLE-OFF DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the CAP angle off interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.2.13
1.2.2.2.14	OBTAIN REQUIRED TIME TO GO (TTG) DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the CAP time to go (TTG) interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.2.14
1.2.2.3	OBTAIN REQUIRED TAO/SWC ORDERS DATA FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the meaning of the TAO/SWC information displayed on the DROs s. within one minute, 90% of meanings Alternate numbers: 3.3.2.3
1.2.2.3.1	OBTAIN REQUIRED TAO/SWC ENGAGEMENT ORDERS FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the engagement orders interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.3.1

TABLE B1. ALTERNATE NUMBERS TABLE - TERMINAL OBJECTIVE 1.0 HIERARCHY (Cont)

Objective Number	Objective and/or Reference
1.2.2.3.2	OBTAIN REQUIRED TAO/SWC FIRING ORDERS FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the firing orders interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.3.2
1.2.2.3.3	OBTAIN REQUIRED TAO/SWC COVER ORDERS FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the cover orders interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.3.3
1.2.2.3.4	OBTAIN REQUIRED TAO/SWC PRO-TO-POINT ORDERS FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the PRO-TO-POINT orders interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.3.4
1.2.2.3.5	OBTAIN REQUIRED TAO/SWC INVESTIGATE/ASSIGN ORDERS FROM DRO INTERPRETATION c. Given operating AC mode console with complement of DROs b. state the INVEST/ASSIGN orders interpreted from the DRO display s. 100% correct Alternate numbers: 3.3.2.3.5
1.2.3	OBTAIN REQUIRED DATA FROM IFF INTERPRETATION c. Given an operating PPI display and IFF equipment b. point out and state the meanings of all IFF returns on the display supplying required data s. within one minute, 100% of meanings Alternate numbers: 3.3.3

TABLE B1. ALTERNATE NUMBERS TABLE - TERMINAL OBJECTIVE 1.0 HIERARCHY (Cont)

Objective Number	Objective and/or Reference
1.2.3.1	OBTAIN REQUIRED AIRCRAFT POSITION DATA FROM IFF INTERPRETATION c. Given an operating PPI display and IFF equipment b. obtain aircraft position from an interpretation of the IFF display s. within one minute, 100% accuracy Alternate numbers: 3.3.3.1
1.2.3.2	OBTAIN REQUIRED AIRCRAFT IDENTITY DATA FROM IFF INTERPRETATION c. Given an operating PPI display and IFF equipment b. obtain aircraft identity from an interpretation of the IFF display s. within one minute, 100% accuracy Alternate number: 3.3.3.2
1.2.3.3	OBTAIN REQUIRED AIRCRAFT EMERGENCY STATUS DATA FROM IFF INTERPRETATION c. Given an operating PPI display and IFF equipment b. obtain aircraft emergency status from an interpretation of the IFF display s. within one minute, 100% accuracy Alternate numbers: 3.3.3.3
1.2.3.4	OBTAIN REQUIRED AIRCRAFT ALTITUDE DATA FROM IFF INTERPRETATION c. Given an operating PPI display and IFF equipment b. obtain aircraft altitude from an interpretation of the IFF display s. within one minute, 100% accuracy. Alternate numbers: 3.3.3.4

APPENDIX C

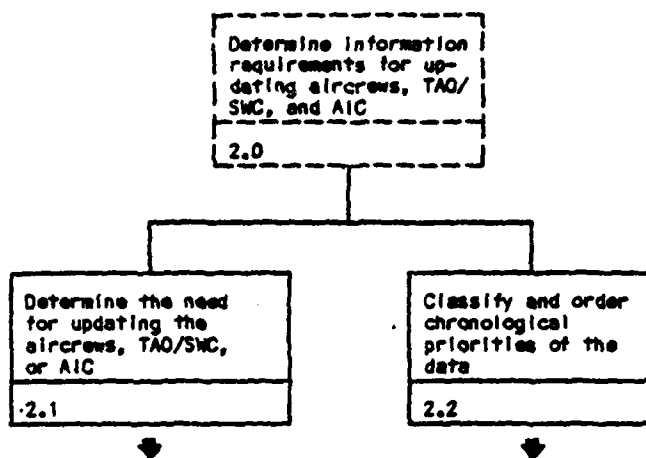
TERMINAL OBJECTIVE 2.0

The second Terminal Objective is:

2.0 DETERMINE INFORMATION REQUIREMENTS FOR UPDATING THE AIRCREWS, TAO/SWC, AND AIC

- c. Given the CAP mission phase classification, the specific modifying factors, and a knowledge already acquired by the aircrew and TAO/SWC
- b. list the types of information required to support an update of the tactical situation and list the standards of timeliness and accuracy for each
- s. 90% correct, within one minute of classification

Hierarchy diagrams and objectives sheets which follow present the subordinate objectives.



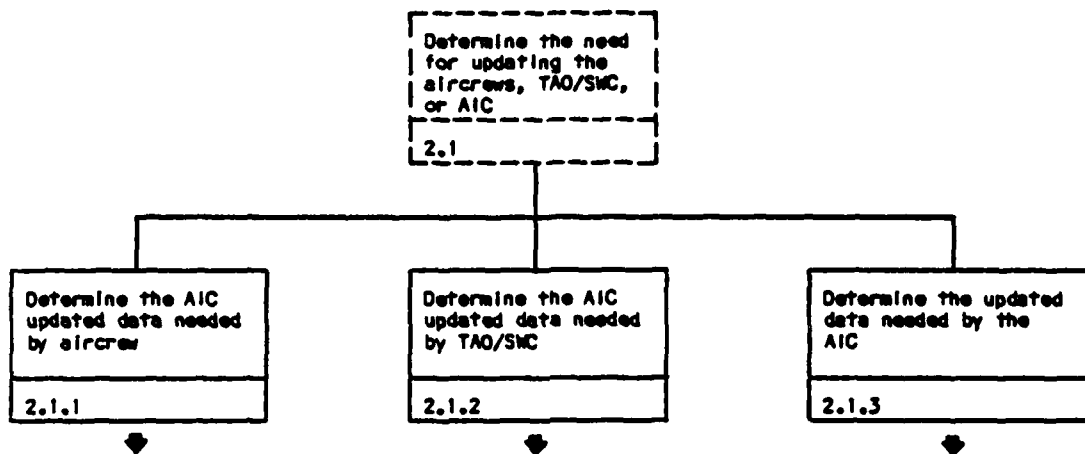
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2.1 DETERMINE THE NEED FOR UPDATING THE AIRCREW, THE TAO/SWC, AND THE AIC

- c. Given the CAP mission phase category, the specific modifying factors, and a knowledge of what support information is already known
- b. list the types of support information that are pertinent to updating the aircrew, the command network (TAO/SWC) or the AIC
- s. within one minute of CAP mission phase categorization; 90% of information types

2.2 CLASSIFY AND ORDER THE CHRONOLOGICAL PRIORITIES OF THE DATA

- c. Given the list of types of information pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC and the definitions for priorities
- b. list the information types in the order of their importance to the aircrew, to the TAO/SWC, and/or to the AIC and identify the items on the list as "high priority," "required," and "low priority"
- s. within one minute, 100% accurate classification of high priority and required information types



2.1.1 DETERMINE THE AIC UPDATED DATA NEEDED BY THE AIRCREW

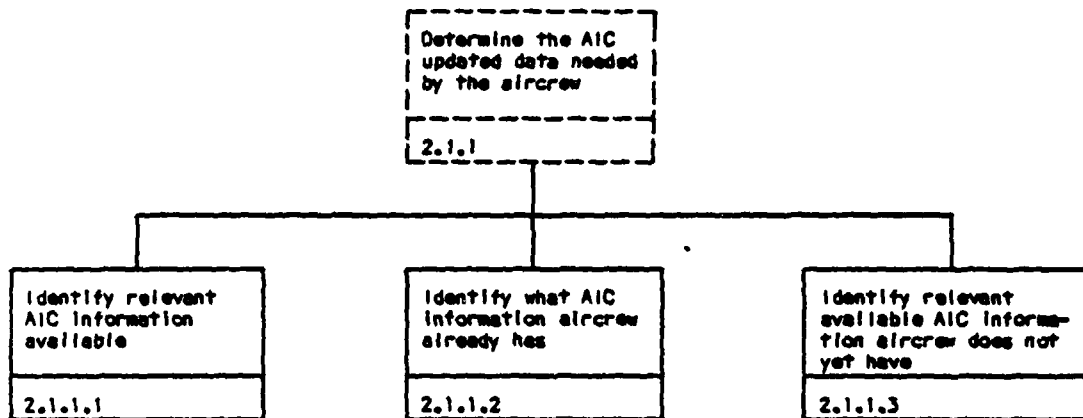
- c. Given the CAP mission phase category, the specific modifying factors, and the information available to the AIC and the aircrew
- b. list the AIC updated data needed by the aircrew
- s. with 90% accuracy

2.1.2 DETERMINE THE AIC UPDATED DATA NEEDED BY THE TAO/SWC

- c. Given the CAP mission phase category, the specific modifying factors and the information available to the AIC and the TAO/SWC
- b. list the AIC updated data needed by the TAO/SWC
- s. with 90% accuracy

2.1.3 DETERMINE THE UPDATED DATA NEEDED BY THE AIC

- c. Given the CAP mission phase category, the specific modifying factors, and the anticipated tactical situation
- b. list the updated data needed by the AIC
- s. within one minute of CAP mission phase categorization, 90% of information types, 90% standards of accuracy



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2.1.1.1 IDENTIFY RELEVANT AIC INFORMATION AVAILABLE

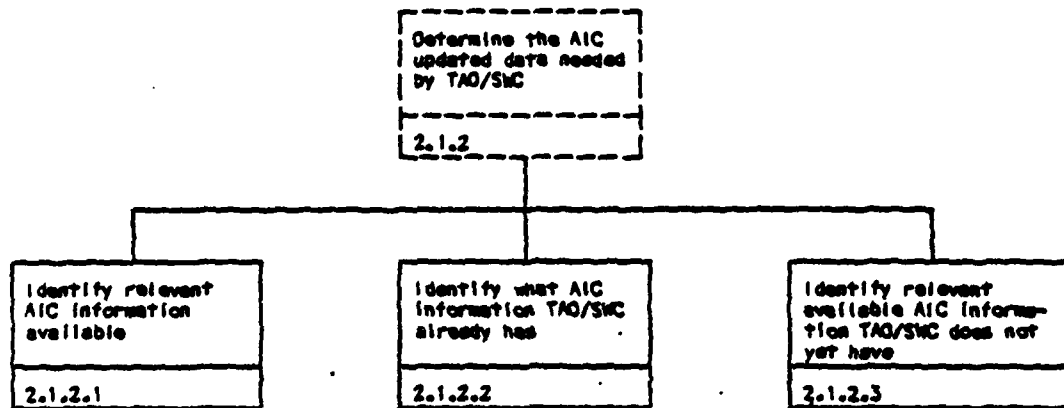
- c. Given the CAP mission phase category, the specific modifying factors, and the information available to the AIC
- b. list the types of available AIC information relevant to the CAP
- s. 90% of information types, 90% standard or accuracy

2.1.1.2 IDENTIFY WHAT AIC INFORMATION THE AIRCREW ALREADY HAS

- c. Given the CAP mission phase category, the specific modifying factors and a list of op-orders/plans, messages, etc. available to the aircrew
- b. identify what AIC information the aircrew already has
- s. with 90% accuracy

2.1.1.3 IDENTIFY RELEVANT AVAILABLE AIC INFORMATION THE AIRCREW DOES NOT YET HAVE

- c. Given the CAP mission phase category, the specific modifying factors, and the information available to the AIC and the aircrew
- b. identify relevant available AIC information the aircrew does not yet have
- s. with 90% accuracy



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2.1.2.1 IDENTIFY ALL RELEVANT AIC INFORMATION AVAILABLE

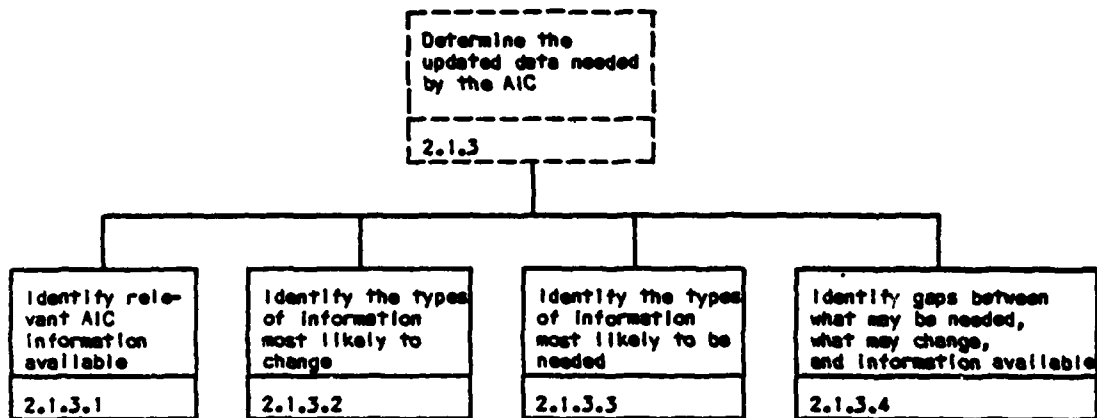
- c. Given the CAP mission phase category, the specific modifying factors, and the information available to the AIC
- b. list the types of available AIC information relevant to the TAO/SWC
- s. with 90% accuracy

2.1.2.2 IDENTIFY WHAT AIC INFORMATION THE TAO/SWC ALREADY HAS

- c. Given a tactical situation, NTDS, and CAP
- b. identify what AIC information the TAO/SWC already has
- s. with 90% accuracy

2.1.2.3 IDENTIFY RELEVANT AVAILABLE AIC INFORMATION THE TAO/SWC DOES NOT YET HAVE

- c. Given a tactical situation, NTDS, a CAP and what information (if any) has been passed to the TAO/SWC
- b. identify available AIC information the TAO/SWC does not yet have
- s. with 90% accuracy



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2.1.3.1 IDENTIFY THE RELEVANT AIC INFORMATION AVAILABLE

- c. Given the CAP mission phase category, the specific modifying factors, the anticipated tactical situation, and the information available, identify the types of information most likely to change, the types of information most likely to be needed, and the information available

2.1.3.2 IDENTIFY THE TYPES OF INFORMATION MOST LIKELY TO CHANGE

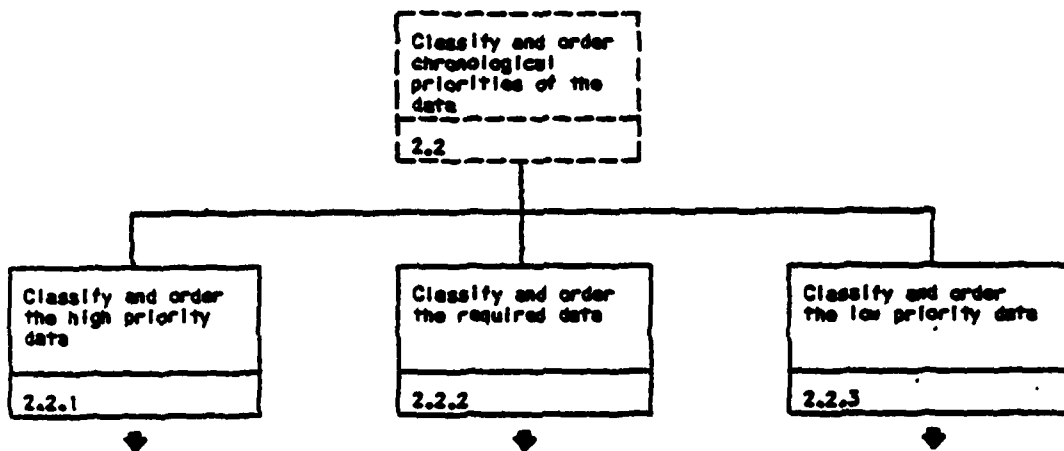
- c. Given the CAP mission phase category, the specific modifying factors, the anticipated tactical situation, and the information available, identify the types of information most likely to change, the types of information most likely to be needed, and the information available
- b. identify the types of information most likely to change
- s. with 90% accuracy

2.1.3.3 IDENTIFY THE TYPES OF INFORMATION MOST LIKELY TO BE NEEDED

- c. Given the CAP mission phase category, the specific modifying factors, the anticipated tactical situation, and the information available, identify the types of information most likely to change, the types of information most likely to be needed, and the information available
- b. identify the types of information most likely to be needed
- s. with 90% accuracy

2.1.3.4 IDENTIFY GAPS BETWEEN WHAT MAY BE NEEDED, WHAT MAY CHANGE, AND INFORMATION AVAILABLE

- c. Given the CAP mission phase category, the specific modifying factors, the anticipated tactical situation, the types of information most likely to change, the types of information most likely to be needed, and the information available, identify the types of information most likely to change, the types of information most likely to be needed, and the information available
- b. identify gaps between what may be needed, what may change, and information available
- s. with 90% accuracy



2.2.1 CLASSIFY AND ORDER THE HIGH PRIORITY DATA

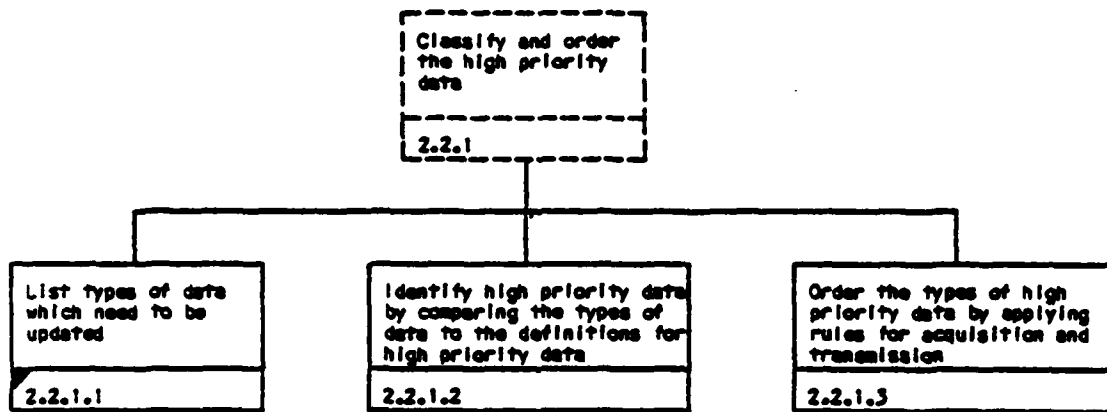
- c. Given the list of types of information pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC, and the definitions and guidelines for priorities
- b. list the high priority information in the order of its importance to the aircrew, to the TAO/SWC, or to the AIC
- s. within one minute, 100% accurate classification of high priority, 90% accurate ordering of importance

2.2.2 CLASSIFY AND ORDER THE REQUIRED DATA

- c. Given the list of types of information pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC, and the definitions and guidelines for priorities
- b. list the required, but not high priority, information in the order of its importance to the aircrew, to the TAO/SWC, or to the AIC
- s. within one minute, 100% accurate classification of required priority, 90% accurate ordering of importance

2.2.3 CLASSIFY AND ORDER THE LOW PRIORITY DATA

- c. Given the list of information types pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC, and definitions and guidelines for priorities
- b. list the low priority information in the order of its importance to the aircrew, the TAO/SWC, or to the AIC
- s. within one minute, 100% accurate classification of low priority, 80% accuracy ordering of importance



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2.2.1 CLASSIFY AND ORDER THE HIGH PRIORITY DATA

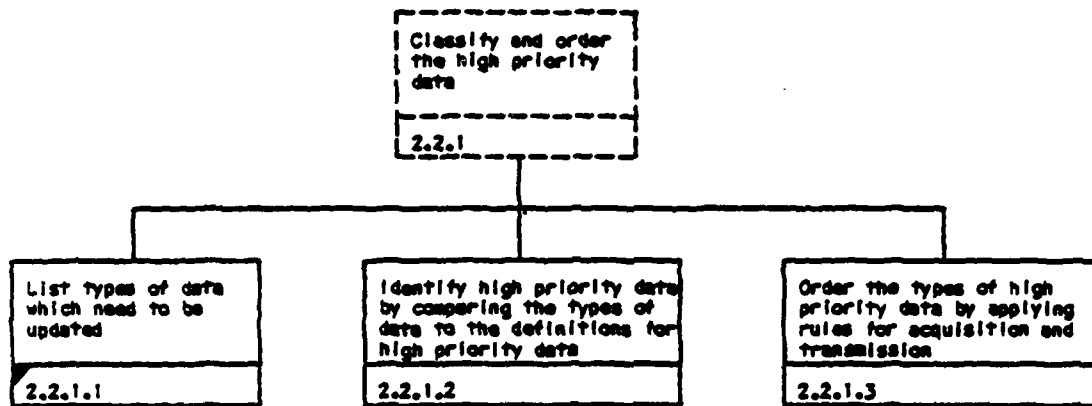
- c. Given the list of types of information pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC, and the definitions and guidelines for priorities
- b. list the high priority information in the order of its importance to the aircrew, to the TAO/SWC, or to the AIC
- s. within one minute, 100% accurate classification of high priority, 90% accurate ordering of importance

2.2.2 CLASSIFY AND ORDER THE REQUIRED DATA

- c. Given the list of types of information pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC, and the definitions and guidelines for priorities
- b. list the required, but not high priority, information in the order of its importance to the aircrew, to the TAO/SWC, or to the AIC
- s. within one minute, 100% accurate classification of required priority, 90% accurate ordering of importance

2.2.3 CLASSIFY AND ORDER THE LOW PRIORITY DATA

- c. Given the list of information types pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC, and definitions and guidelines for priorities
- b. list the low priority information in the order of its importance to the aircrew, the TAO/SWC, or to the AIC
- s. within one minute, 100% accurate classification of low priority, 80% accuracy ordering of importance



2.2.1.1 LIST THE TYPES OF DATA WHICH NEED TO BE UPDATED

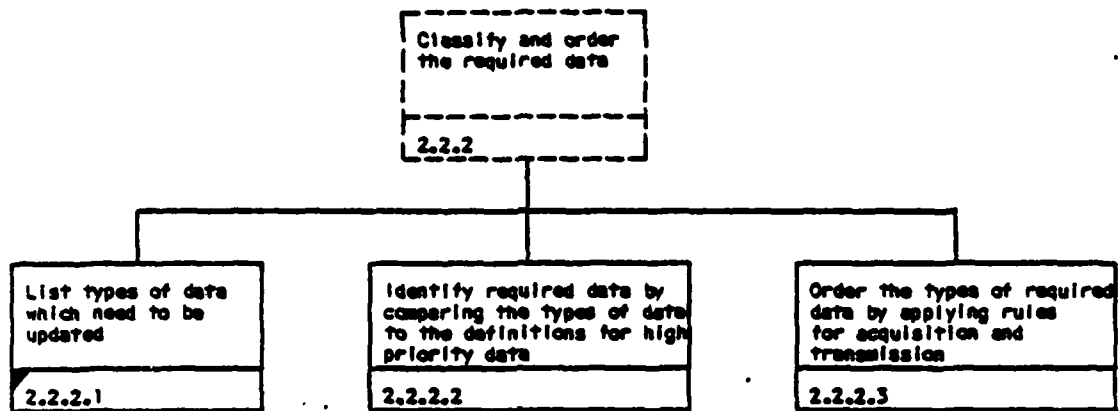
- c. Given the list of types of information pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC, and the definitions and guidelines for priorities
- b. list the types of data which need to be updated
- s. within one minute, with 90% accuracy

2.2.1.2 IDENTIFY HIGH PRIORITY DATA BY COMPARING THE TYPES OF DATA TO THE DEFINITIONS FOR HIGH PRIORITY DATA

- c. Given the list of types of information pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC, and the definitions and guidelines for priorities
- b. identify high priority data by comparing the types of data to the definitions for high priority data
- s. within one minute, 100% accurate classification of high priority, 90% accurate ordering of importance

2.2.1.3 ORDER THE TYPES OF HIGH PRIORITY DATA BY APPLYING THE RULES FOR ACQUISITION AND TRANSMISSION

- c. Given the list of types of information pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC, and the definitions and guidelines for priorities
- b. order the types of high priority data by applying the rules for acquisition and transmission
- s. within one minute, 100% accurate classification of high priority, 90% accurate ordering of importance



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2.2.2.1 LIST THE TYPES OF DATA WHICH NEED TO BE UPDATED

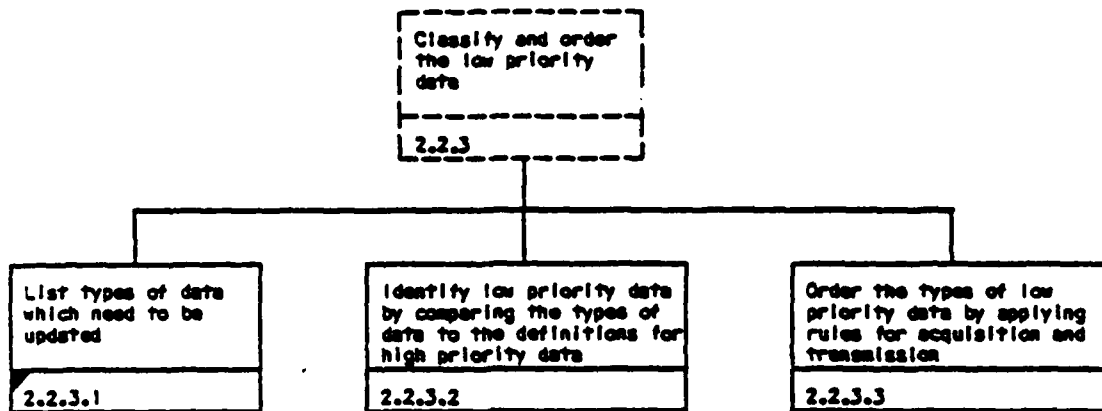
- c. Given the list of types of information pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC, and the definitions and guidelines for priorities
- b. list the types of data which need to be updated
- s. within one minute, with 90% accuracy

2.2.2.2 IDENTIFY REQUIRED DATA BY COMPARING THE TYPES OF DATA TO THE DEFINITIONS FOR HIGH PRIORITY DATA

- c. Given the list of types of information pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC, and the definitions and guidelines for priorities
- b. identify required data by comparing the types of data to the definitions for high priority data
- s. within one minute, 100% accurate classification of high priority, 90% accurate ordering of importance

2.2.2.3 ORDER THE TYPES OF REQUIRED DATA BY APPLYING THE RULES FOR ACQUISITION AND TRANSMISSION

- c. Given the list of types of information pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC, and the definitions and guidelines for priorities
- b. order the types of required data by applying the rules for acquisition and transmission
- s. within one minute, 100% accurate classification of high priority, 90% accurate ordering of importance

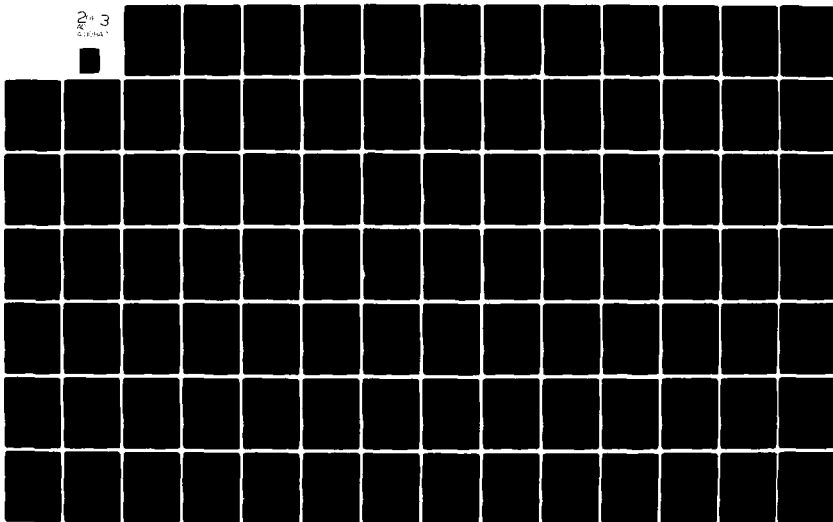


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2.2.3.1 LIST THE TYPES OF DATA WHICH NEED TO BE UPDATED

- c. Given the list of types of information pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC, and the definitions and guidelines for priorities
- b. list the types of data which need to be updated
- s. within one minute, with 90% accuracy

2.2.3.2 IDENTIFY LOW PRIORITY DATA BY COMPARING THE TYPES OF DATA TO THE DEFINITIONS FOR HIGH PRIORITY DATA

- c. Given the list of types of information pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC, and the definitions and guidelines for priorities
- b. identify low priority data by comparing the types of data to the definitions for high priority data
- s. within one minute, 100% accurate classification of high priority, 90% accurate ordering of importance

2.2.3.3 ORDER THE TYPES OF LOW PRIORITY DATA BY APPLYING THE RULES FOR ACQUISITION AND TRANSMISSION

- c. Given the list of types of information pertinent to updating the aircrew, the command network (TAO/SWC), or the AIC, and the definitions and guidelines for priorities
- b. order the types of low priority data by applying the rules for acquisition and transmission
- s. within one minute, 100% accurate classification of high priority, 90% accurate ordering of importance

TABLE C1. ALTERNATE NUMBERS TABLE - TERMINAL OBJECTIVE 2.0 HIERARCHY

Objective Number	Objective and/or Reference
2.1.1.1	LIST THE TYPES OF DATA WHICH NEED TO BE UPDATED c. Given the list of types of information pertinent to updating the aircrew, the command network (TAC/SWC), or the AIC, and the definitions and guidelines for priorities b. list the types of data which need to be updated s. within one minute, with 90% accuracy Alternate numbers: 2.2.1.1, 2.2.3.1
2.2.1.1	See 2.1.1.1 and 2.2.3.1
2.2.3.1	See 2.1.1.1 and 2.2.1.1

APPENDIX D

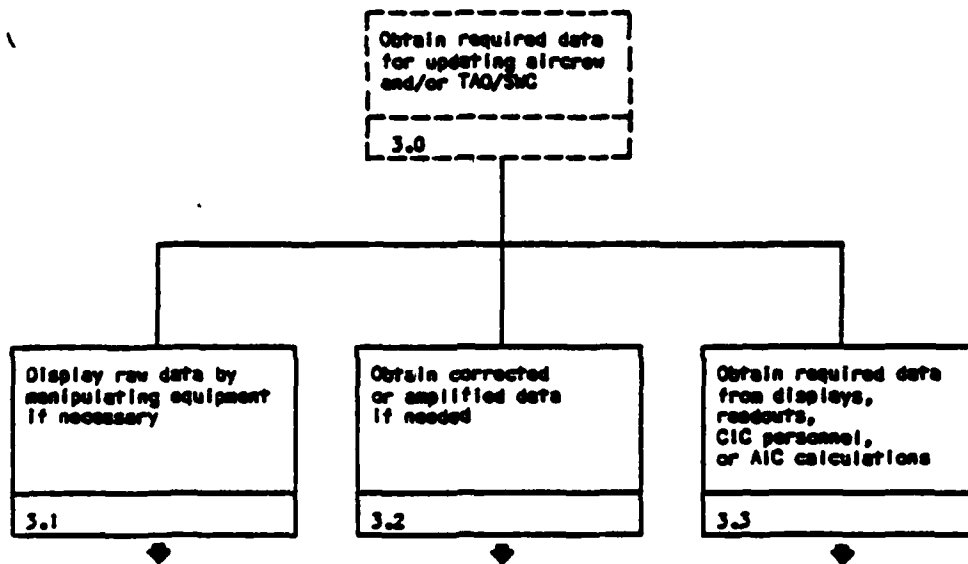
TERMINAL OBJECTIVE 3.0

The third Terminal Objective is:

3.0 OBTAIN REQUIRED DATA FOR UPDATING THE AIRCREW AND/OR TAO/SWC

- c. Given an AC mode console, communications links to the aircrew and CIC personnel, and knowledge of the data required for transmission
- b. obtain the required data for listing through display, interpretation and calculation, as necessary
- s. within two minutes, 100% of the data, 90% accuracy

Hierarchy diagrams and objectives sheets which follow present the subordinate objectives.



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3.1 DISPLAY RAW DATA BY MANIPULATING EQUIPMENT, IF NECESSARY

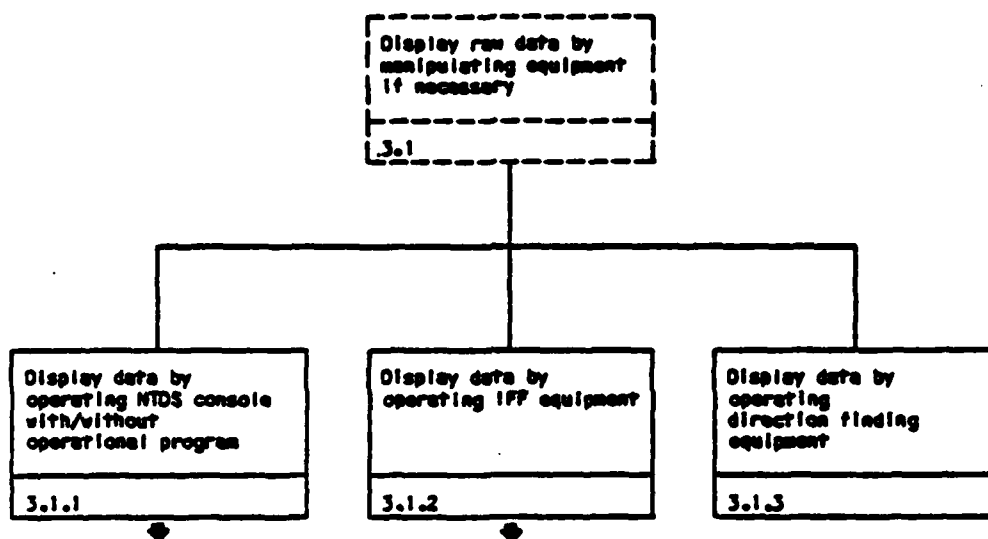
- c. Given an AC mode console, aircrew communications link, IFF and direction finding equipment, and a knowledge of the required information
- b. display the data required for further AIC use by manipulating the equipment, if necessary
- s. within 45 seconds, 100% of the required data

3.2 OBTAIN CORRECTED OR AMPLIFIED DATA, IF NEEDED

- c. Given symbols that do not correspond to the video or insufficient data
- b. follow the procedures for obtaining corrected or amplified data
- s. 100% correct procedure, with 15 seconds

3.3 OBTAIN REQUIRED DATA FROM DISPLAY, CALCULATIONS, READOUTS OR CIC PERSONNEL

- c. Given necessary raw data from AC console, aircrew and CIC personnel
- b. list the data required for transmission
- s. within one minute, 100% of the data, 90% accurate



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3.1.1 DISPLAY UPDATED DATA BY OPERATING NTDS CONSOLE WITH/WITHOUT OPERATIONAL PROGRAM

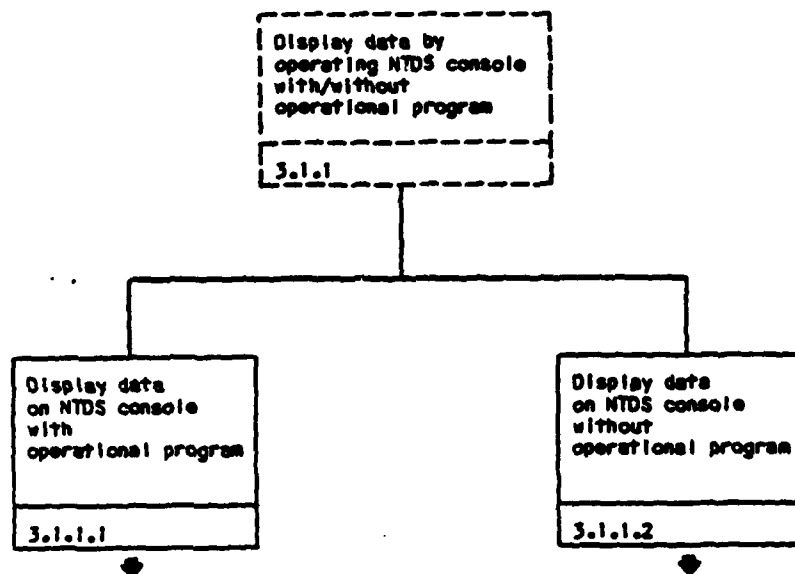
- c. Given 1. an NTDS console with operational program and data link,
or
2. an NTDS console with operational program and without data link, or
3. an NTDS console without an operational program and without data link
- b. display and point out the data required for further AIC use by manipulating the equipment, if necessary
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data, or
3. 50 seconds, 100% of the required data

3.1.2 DISPLAY DATA BY OPERATING IFF EQUIPMENT

- c. Given operating IFF equipment and a PPI scope, and a knowledge of the required data
- b. display and point out the data required for further AIC use by manipulating the equipment, if necessary
- s. within 30 seconds, 100% of the required data

3.1.3 DISPLAY DATA BY OPERATING DIRECTION FINDING EQUIPMENT

- c. Given operating direction finding equipment and a PPI scope, and a knowledge of the required data
- b. display and point out the data required for further AIC use by manipulating the equipment, if necessary
- s. within 30 seconds, 100% of the required data



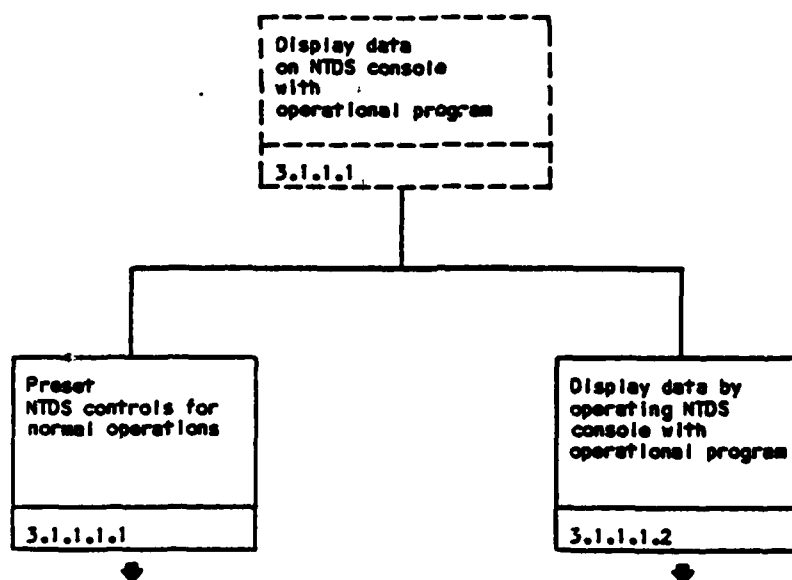
NAVTRAEQUIPCEN 78-C-0182-2

3.1.1.1 DISPLAY UPDATE DATA ON NTDS CONSOLE WITH OPERATIONAL PROGRAM

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program and without data link
- b. display update and point out the data required for further AIC use by manipulating the equipment, if necessary
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.2 DISPLAY DATA ON NTDS CONSOLE, WITHOUT OPERATIONAL PROGRAM

- c. Given an NTDS console without an operational program
- b. display data without operational program
- s. within 50 seconds, 100% of the required data

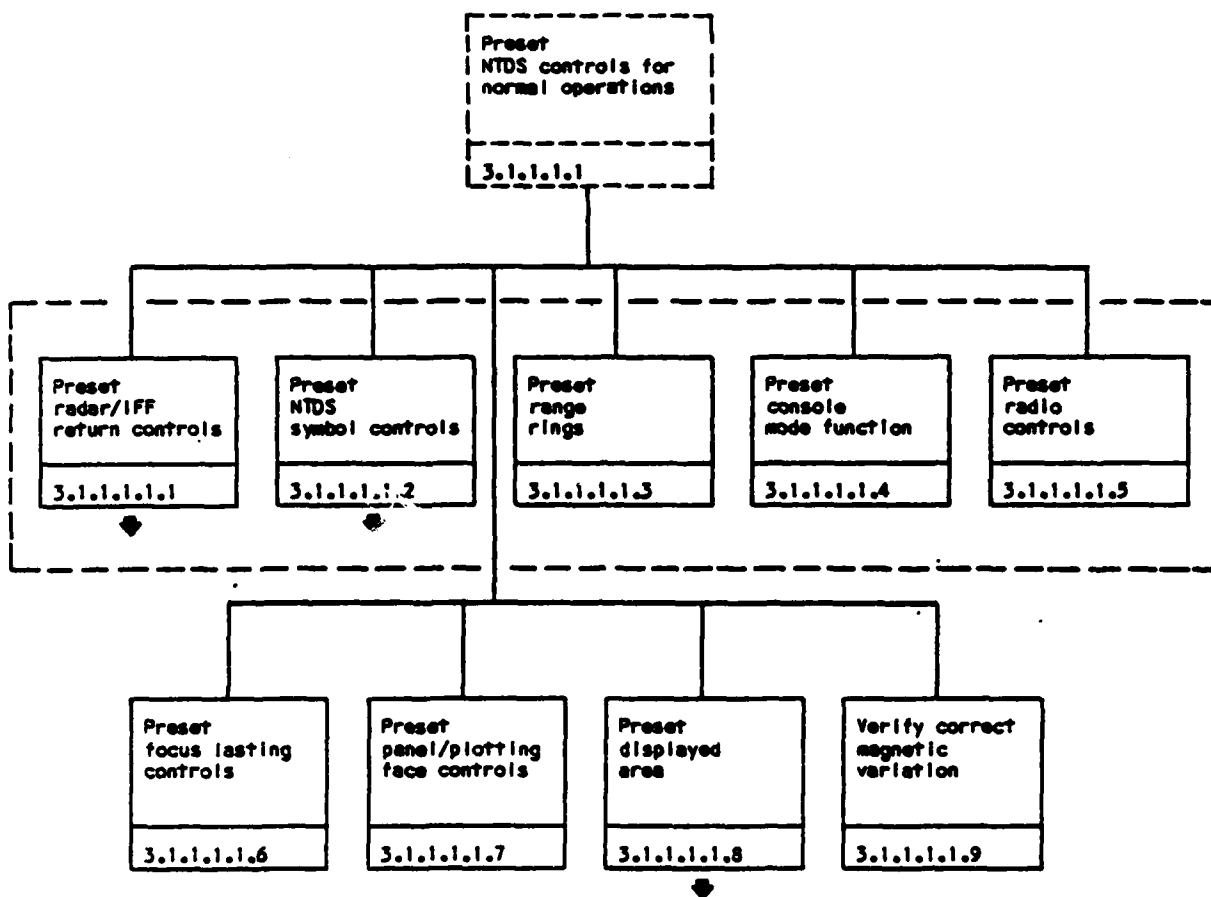


3.1.1.1.1 PRESET THE NTDS CONTROLS FOR NORMAL OPERATIONS

- c. Given an NTDS console with randomly set controls
- b. preset the NTDS controls for
 - 1. aircraft detection
 - 2. proper illumination of the controls
- s.
 - 1. 100% of the time
 - 2. 100% of the time

3.1.1.1.2 DISPLAY DATA BY OPERATING NTDS CONSOLE WITH OPERATIONAL PROGRAM

- c. Given
 - 1. an NTDS console with operational program and data link, or
 - 2. an NTDS console with operational program and without data link
- b. display data by operating NTDS console with operational program
- s. within
 - 1. 20 seconds, 100% of the required data, or
 - 2. 20 seconds, 100% of the required data



3.1.1.1.1.1 PRESET THE RADAR/IFF RETURN CONTROLS

- c. Given 1. an NTDS console with radar input, and
2. IFF input
- b. preset the radar/IFF return controls for aircraft detection
- s. 100% of the time

3.1.1.1.1.2 PRESET NTDS SYMBOL CONTROLS

- c. Given 1. an NTDS console with randomly set controls
- b. preset NTDS symbols by adjusting controls
for: 1. symbols,
2. correct categories, and
3. correct leaders
- s. 100% of the time

3.1.1.1.1.3 PRESET RANGE RINGS

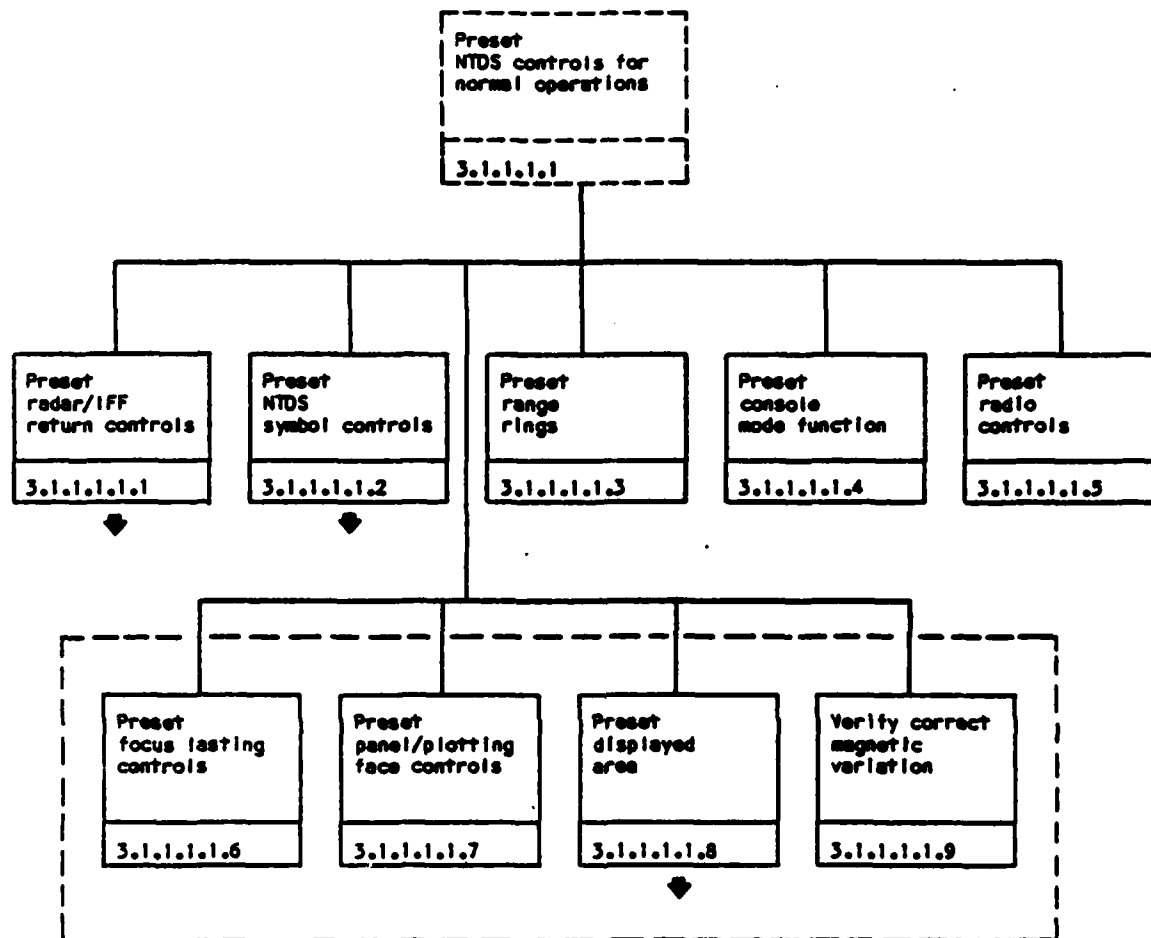
- c. Given an NTDS console with randomly set controls
- b. preset the range rings to not interfere with target detection
- s. 100% of the time

3.1.1.1.1.4 PRESET CONSOLE MODE FUNCTION

- c. Given an NTDS console with randomly set controls
- b. preset console mode function
- s. 100% of the time

3.1.1.1.1.5 PRESET RADIO CONTROLS

- c. Given an NTDS console with randomly set controls
- b. preset radio controls to the connect channel
- s. 100% of the time



3.1.1.1.1.6 PRESET FOCUS/ASTIG CONTROLS

- c. Given an NTDS console with randomly set controls
- b. preset focus/astig controls for clear and distinct NTDS symbols
- s. 100% of the time

3.1.1.1.1.7 PRESET PANEL/PLOTTING FACE DIMMERS

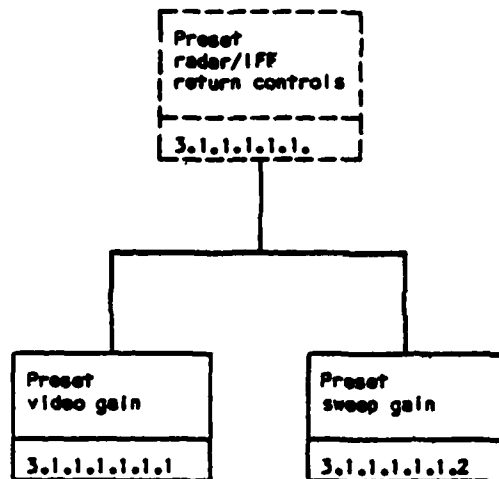
- c. Given an NTDS console with randomly set controls
- b. preset panel/plotting face dimmers to illuminate all controls
- s. 100% of the time

3.1.1.1.1.8 PRESET THE DISPLAYED AREA

- c. Given an NTDS console with randomly set controls
- b. preset the displayed area for the proper range scale and offset
- s. 90% of the time

3.1.1.1.1.9 VERIFY THE CORRECT MAGNETIC VARIATION

- c. Given an NTDS console with randomly set controls
- b. verify the correct magnetic variation is entered prior to each control period
- s. 100% of the time

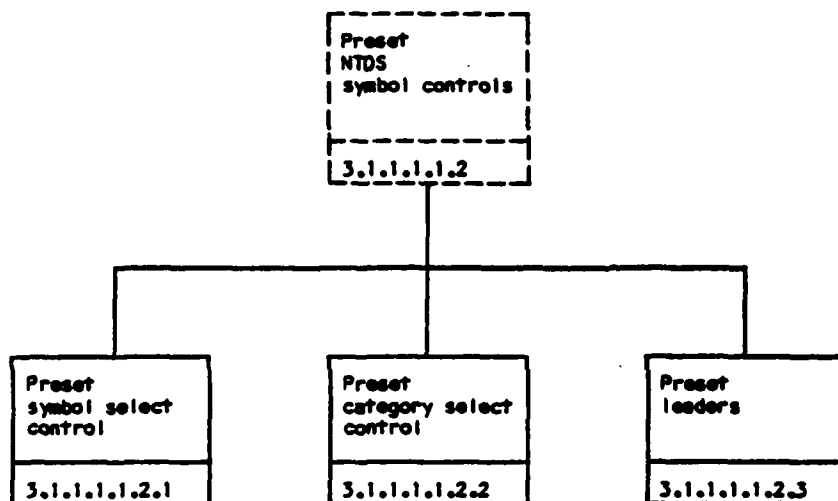


3.1.1.1.1.1 PRESET VIDEO GAIN

- c. Given 1. an NTDS console with radar input, and
2. IFF input
- b. adjust video control until targets go out of focus and back off until they again are in focus
- s. sharp focus 100% of the time

3.1.1.1.1.2 PRESET SWEEP GAIN

- c. Given 1. an NTDS console with radar input, and
2. IFF input
- b. adjust sweep control for a faint trace prior to adjusting the video gain
- s. 100% of the time



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3.1.1.1.1.2.1 PRESET THE SYMBOL SELECT CONTROL

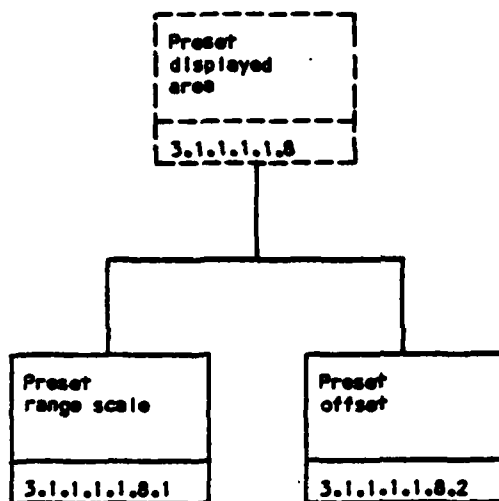
- c. Given an NTDS console with randomly set controls
- b. preset the symbol select control to normal setting
- s. 100% of the time

3.1.1.1.1.2.2 PRESET THE CATEGORY SELECT PANEL

- c. Given an NTDS console with randomly set controls
- b. preset the category select panel to display air tracks
- s. 100% of the time

3.1.1.1.1.2.3 PRESET THE LEADERS

- c. Given an NTDS console with randomly set controls
- b. preset the leaders to display standard air leaders
- s. 100% of the time

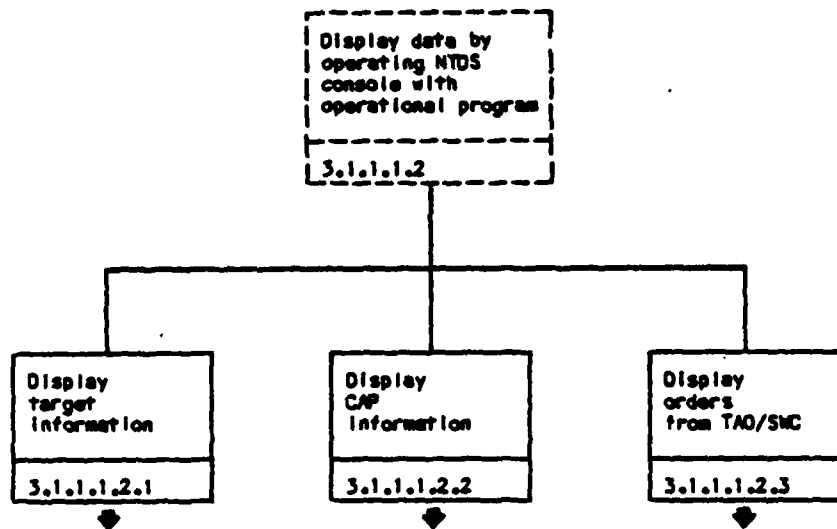


3.1.1.1.1.8.1 PRESET RANGE SCALE

- c. Given an NTDS console with randomly set controls
- b. preset range scale initially at 64 miles
- s. 100% of the time

3.1.1.1.1.8.2 PRESET OFFSET

- c. Given an NTDS console with randomly set controls
- b. preset offset with own ship away from the direction of threat/
aircraft operations
- s. 100% of the time



3.1.1.1.2.1 DISPLAY TARGET INFORMATION

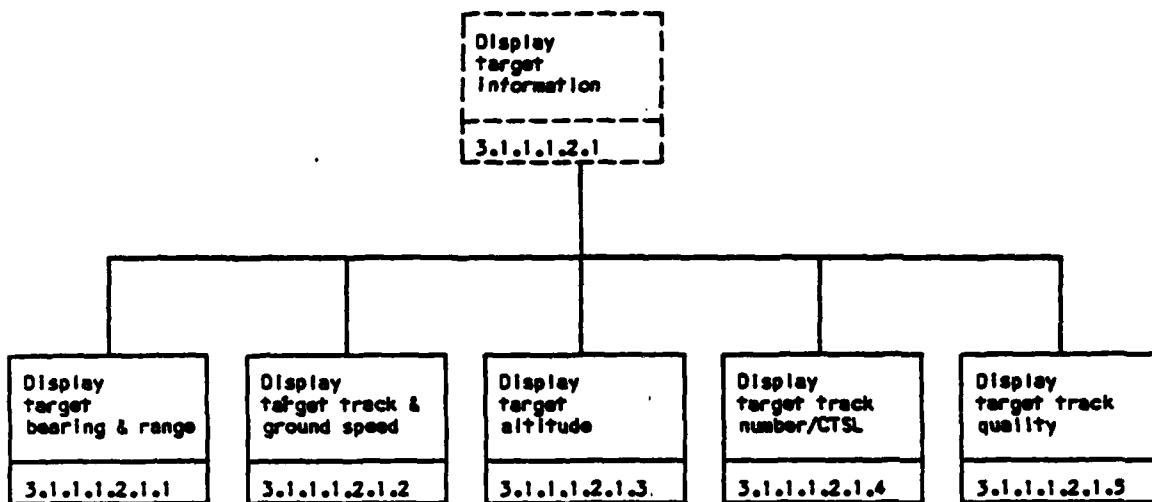
- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program and without data link
- b. display target information
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.2 DISPLAY CAP INFORMATION

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program
- b. display CAP information
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.3 DISPLAY ORDERS FROM TAO/SWC

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program
- b. display orders from TAO/SWC
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data



3.1.1.1.2.1.1 DISPLAY TARGET BEARING AND RANGE INFORMATION

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program without data link
- b. display target bearing and range information
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.1.2 DISPLAY TARGET TRACK AND GROUND SPEED

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program without data link
- b. display target track and ground speed
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.1.3 DISPLAY TARGET ALTITUDE INFORMATION

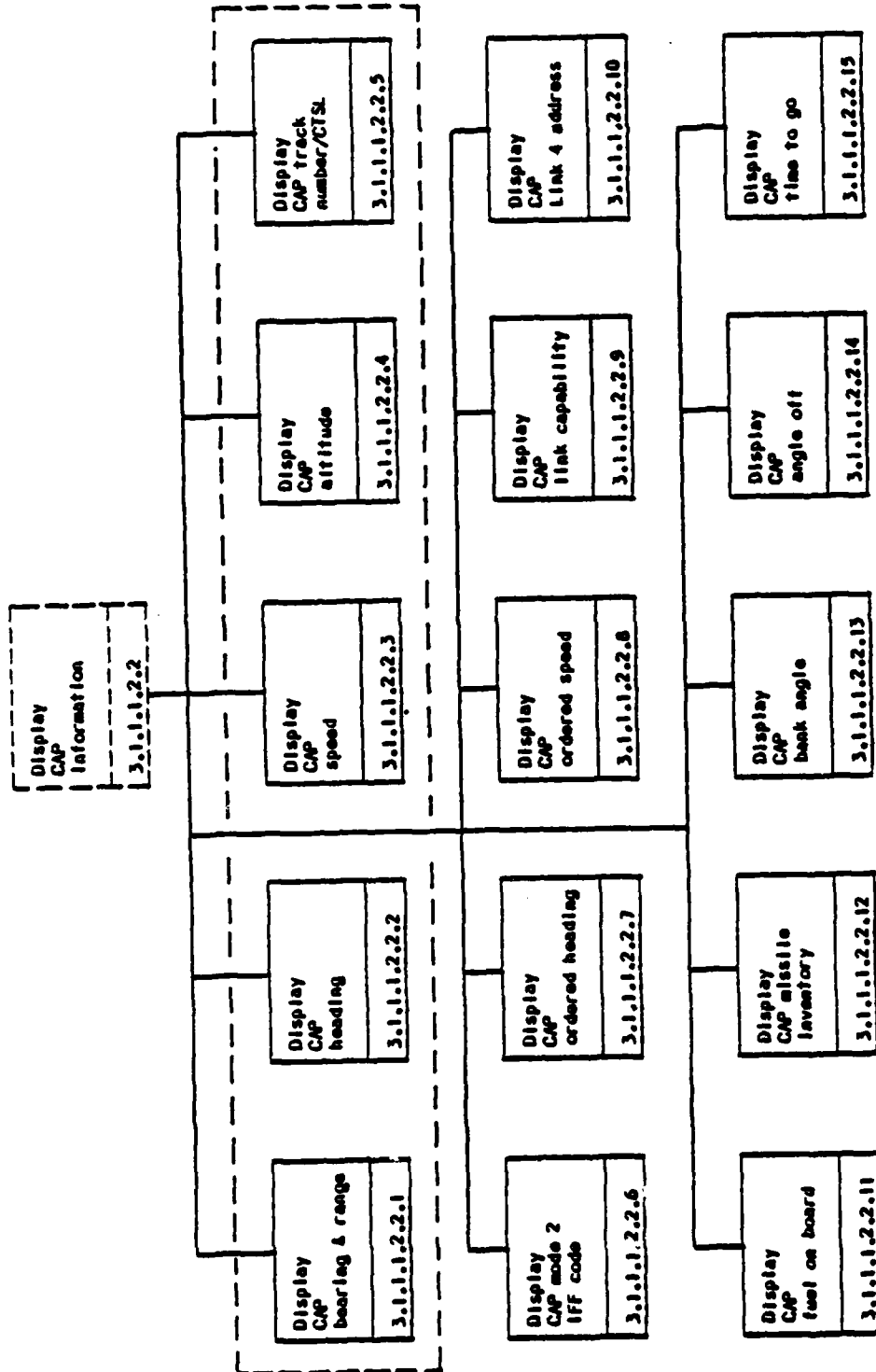
- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program without data link
- b. display target altitude information
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.1.4 DISPLAY TARGET TRACK NUMBER/CTSL

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program without data link
- b. display target track number/CTSL
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.1.5 DISPLAY TARGET TRACK QUALITY

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program without data link
- b. display target track quality
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data



3.1.1.1.2.2.1 DISPLAY CAP BEARING AND RANGE

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program but without data link
- b. display CAP bearing range
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.2.2 DISPLAY CAP HEADING

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program but without data link
- b. display CAP heading
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.2.3 DISPLAY CAP SPEED

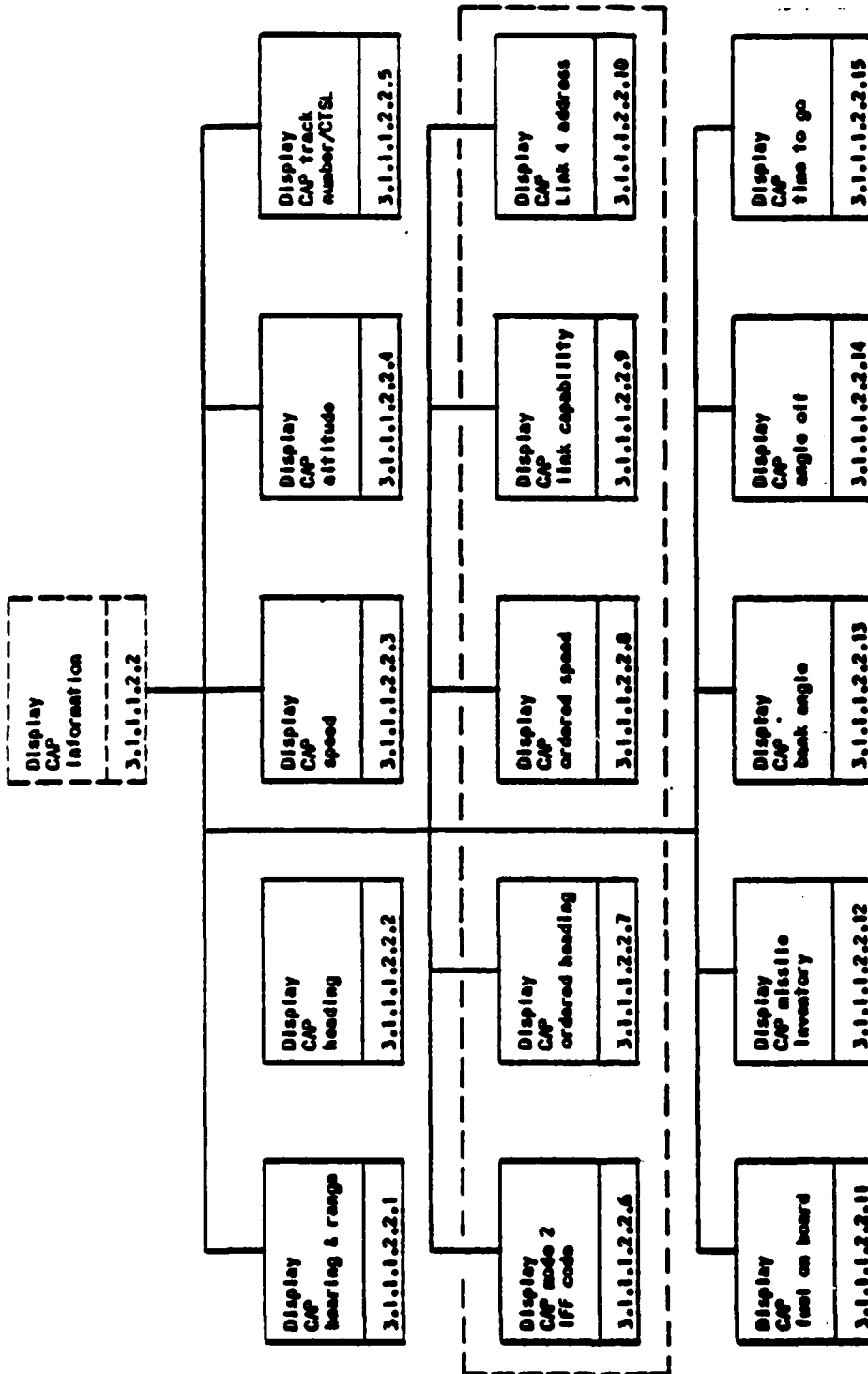
- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program but without data link
- b. display CAP speed
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.2.4 DISPLAY CAP ALTITUDE

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program but without data link
- b. display CAP altitude
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.2.5 DISPLAY CAP TRACK NUMBER/CTSL

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program but without data link
- b. display CAP track number/CTSL
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data



3.1.1.1.2.2.6 DISPLAY CAP MODE 2 IFF CODE

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program but without data link
- b. display CAP Mode 2 IFF code
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.2.7 DISPLAY CAP ORDERED HEADING

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program but without data link
- b. display CAP ordered heading
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.2.8 DISPLAY CAP ORDERED SPEED

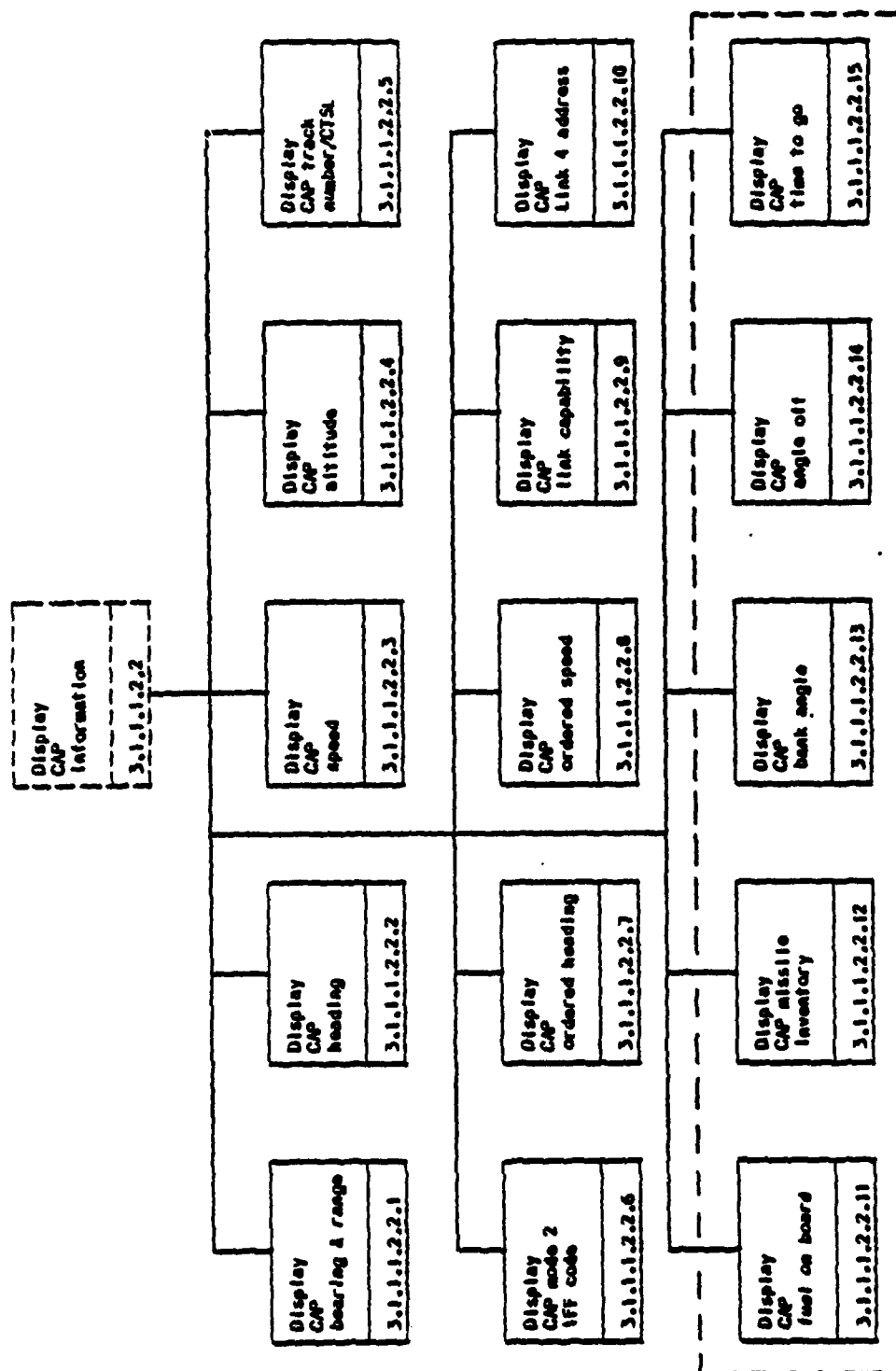
- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program but without data link
- b. display CAP ordered speed
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.2.9 DISPLAY CAP LINK CAPABILITY

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program but without data link
- b. display CAP LINK capability
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.2.10 DISPLAY CAP LINK 4 ADDRESS

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program but without data link
- b. display CAP Link 4 address
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data



3.1.1.1.2.2.11 DISPLAY CAP FUEL ON BOARD

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program but without data link
- b. display CAP fuel on board
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.2.12 DISPLAY CAP MISSILE INVENTORY

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program but without data link
- b. display CAP missile inventory
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.2.13 DISPLAY CAP BANK ANGLE

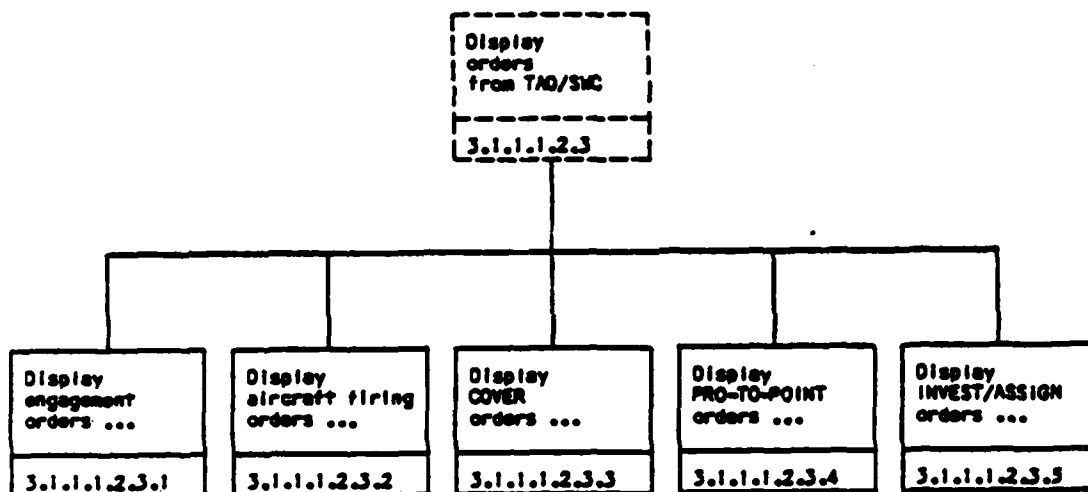
- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program but without data link
- b. display CAP bank angle
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.2.14 DISPLAY CAP ANGLE OFF

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program but without data link
- b. display CAP angle off
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.2.15 DISPLAY CAP TIME TO GO

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program but without data link
- b. display CAP time to go
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data



3.1.1.1.2.3.1 DISPLAY ENGAGEMENT ORDERS FROM TAO/SWC

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program
- b. display engagement orders
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.3.2 DISPLAY AIRCRAFT FIRING ORDERS FROM TAO/SWC

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program
- b. display aircraft firing orders (investigate, destroy, priority kill, hold fire, cease fire) in AC General DRO
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.3.3 DISPLAY COVER ORDERS FROM TAO/SWC

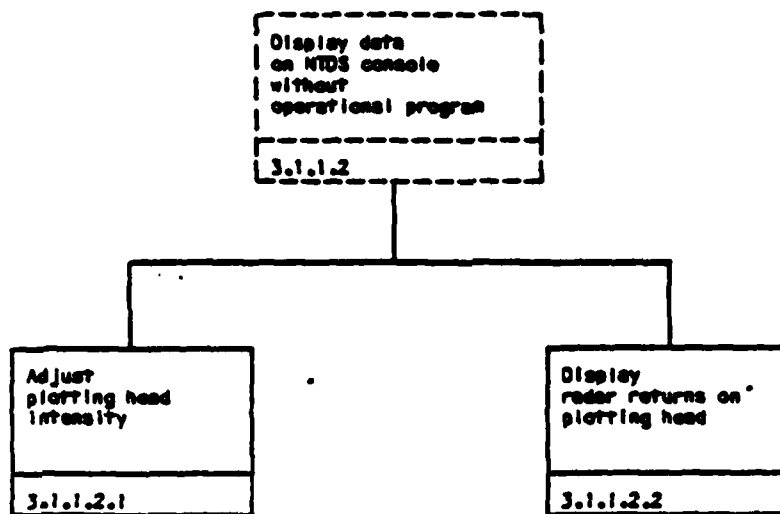
- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program
- b. display COVER orders from SWC in AC General DRO
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.3.4 DISPLAY PRO-TO-POINT ORDERS FROM TAO/SWC

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program
- b. display pro-to-point orders
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

3.1.1.1.2.3.5 DISPLAY INVESTIGATE/ASSIGN ORDERS FROM TAO/SWC

- c. Given 1. an NTDS console with operational program and data link, or
2. an NTDS console with operational program
- b. display investigate/assign orders
- s. within 1. 20 seconds, 100% of the required data, or
2. 20 seconds, 100% of the required data

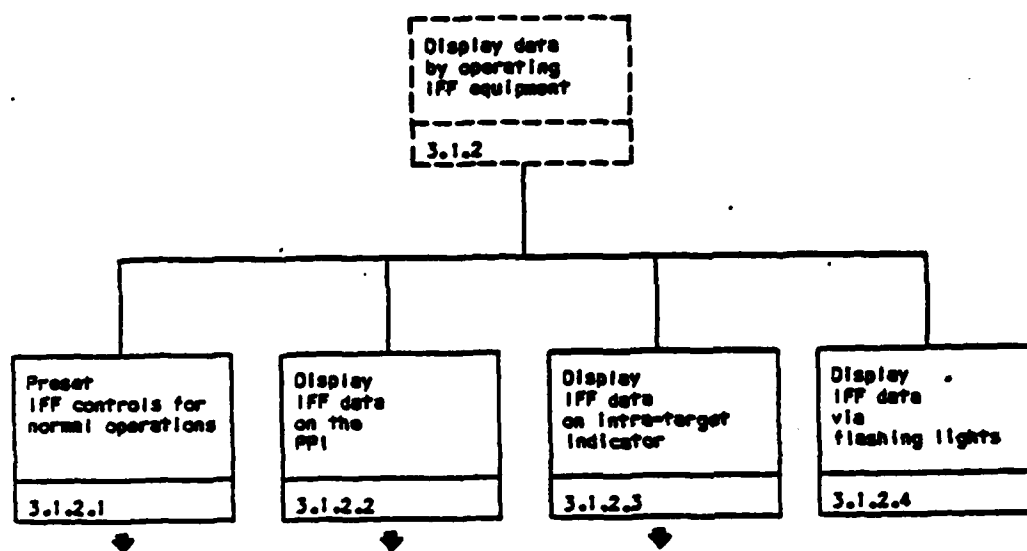


3.1.1.2.1 ADJUST PLOTTING HEAD INTENSITY

- c. Given an NTDS console without an operational program
- b. adjust plotting head intensity bright enough to reflect the grease pencil mark but without obstructing the detection of targets
- s. within one minute

3.1.1.2.2 DISPLAY RADAR RETURNS ON NTDS CONSOLE

- c. Given an NTDS console without an operational program
- b. plot radar returns on plotting head
- s. within 12 seconds, accuracy ± 10 degrees, and ± 5 miles



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3.1.2.1 PRESET THE IFF CONTROLS FOR NORMAL OPERATIONS

- c. Given the IFF equipment, AN/UPA-59A
- b. place the control switches in their correct position for normal operations
- s. 100% correct for normal operations, prior to operations

3.1.2.2 DISPLAY IFF DATA ON THE PPI

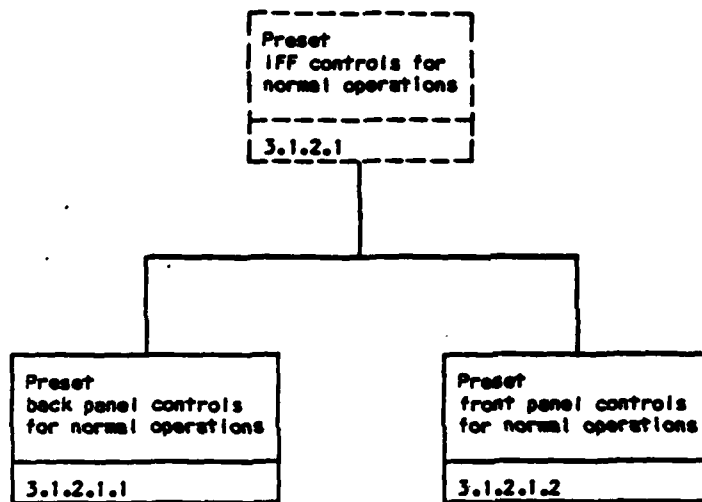
- c. Given an operating NTDS console and IFF equipment
- b. display IFF data on the PPI
- s. 100% correct for normal operations, prior to operations

3.1.2.3 DISPLAY IFF DATA ON THE INTRA-TARGET INDICATOR

- c. Given an operating NTDS console and IFF equipment
- b. display IFF data on the intra-target indicator for interpretation
- s. with 90% accuracy

3.1.2.4 DISPLAY IFF DATA VIA FLASHING LIGHTS ON IFF FRONT PANEL

- c. Given an operating NTDS console and IFF equipment
- b. display IFF emergency data via flashing lights on the IFF panel
- s. 100% correct for normal operations, prior to operations



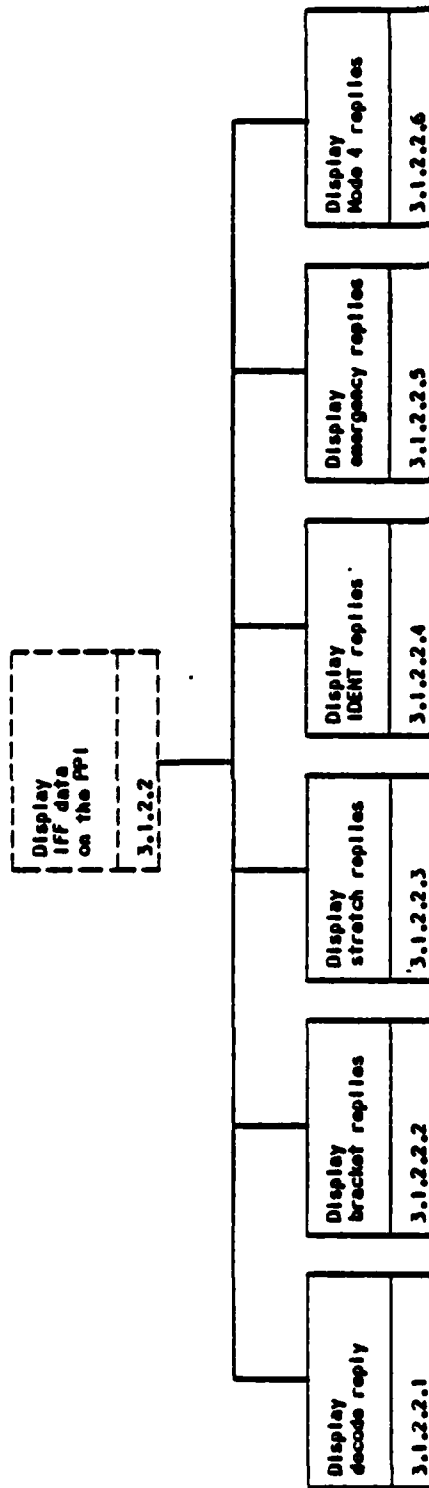
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3.1.2.1.1 PRESET THE BACK PANEL CONTROLS FOR NORMAL OPERATIONS

- c. Given the IFF back panel
- b. place the control switches in their correct position for normal operations
- s. 100% correct for normal operations, prior to operations

3.1.2.1.2 PRESET THE FRONT PANEL CONTROLS FOR NORMAL OPERATIONS

- c. Given the IFF front panel
- b. place the appropriate control switches to their position for normal operations
- s. 100% correct for normal operations, prior to operations



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3.1.2.2.1 DISPLAY THE DECODE REPLY FOR MODES 2/3

- c. Given an operating NTDS console and IFF equipment
- b. display the decode reply for Modes 2/3 to locate a specific aircraft
- s. with 90% accuracy

3.1.2.2.2 DISPLAY THE BRACKET REPLIES FOR MODES 2/3

- c. Given an operating NTDS console and IFF equipment
- b. display the bracket replies for Modes 2/3 to eliminate IFF clutter
- s. 90% of the time

3.1.2.2.3 DISPLAY THE STRETCH REPLIES FOR MODES 2/3

- c. Given an operating NTDS console and IFF equipment
- b. display the stretch replies for Modes 2/3 to locate specific aircraft
- s. with 90% accuracy

3.1.2.2.4 DISPLAY THE IDENT REPLIES FOR MODES 2/3

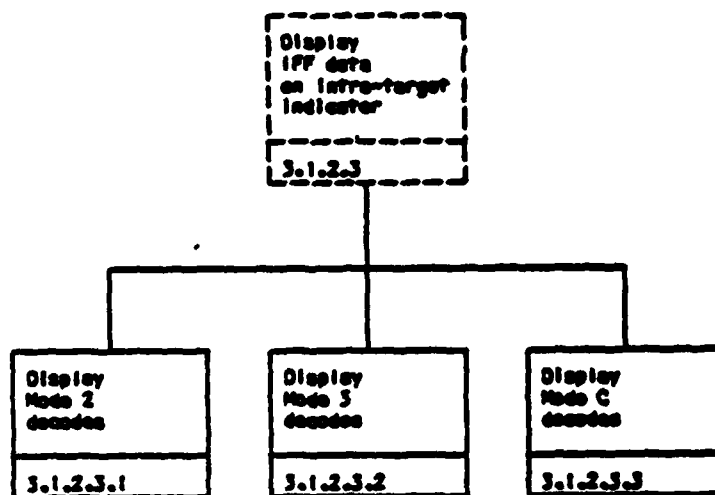
- c. Given an operating NTDS console and IFF equipment
- b. display the identification replies for Modes 2/3 to locate a specific aircraft
- s. with 90% accuracy

3.1.2.2.5 DISPLAY THE EMERGENCY REPLIES FOR MODES 2/3

- c. Given an operating NTDS console and IFF equipment
- b. display the emergency replies for Modes 2/3 when an emergency exists
- s. 100% of the time

3.1.2.2.6 DISPLAY THE MODE 4 REPLIES

- c. Given an operating NTDS console and IFF equipment
- b. display the mode 4 replies for positive identification
- s. with 100% accuracy



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3.1.2.3.1 DISPLAY MODE 2 DECODES

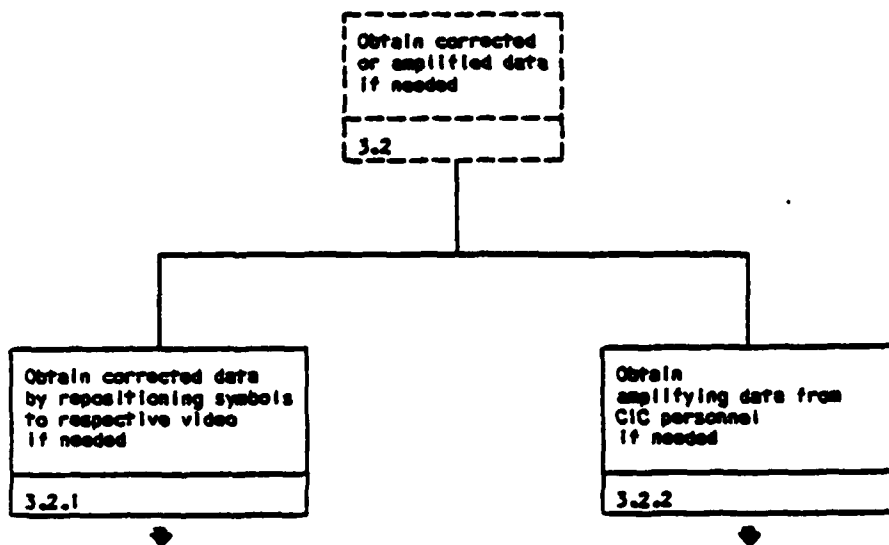
- c. Given an operating NTDS console and IFF equipment
- b. display Mode 2 decodes to identify specific aircraft
- s. with 90% accuracy

3.1.2.3.2 DISPLAY MODE 3 DECODES

- c. Given an operating NTDS console and IFF equipment
- b. display Mode 3 decodes to identify specific aircraft
- s. with 90% accuracy

3.1.2.3.3 DISPLAY MODE C DECODES

- c. Given an operating NTDS console and IFF equipment
- b. display Mode C decodes to obtain friendly aircraft height
- s. with 90% accuracy



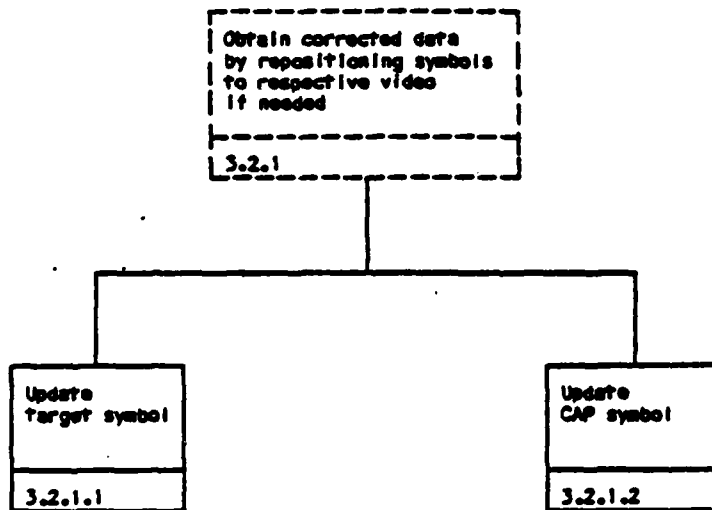
NAVTRAEQUIPCEN 78-C-0182-2

3.2.1 OBTAIN CORRECTED DATA BY REPOSITIONING SYMBOLS TO RESPECTIVE VIDEO,
IF NEEDED

- c. Given an NTDS console with an operating program and symbols that do not correspond to the video
- b. correct the video by following the procedure for repositioning symbols
- a. within 15 seconds, 100% correct

3.2.2 OBTAIN AMPLIFYING DATA FROM CIC PERSONNEL, IF NEEDED

- c. Given insufficient data regarding the tactical environment, and CIC personnel
- b. list the personnel who can supply data amplification upon request and the types of information available from each
- a. within one minute; 100% correct personnel, 90% correct types of information



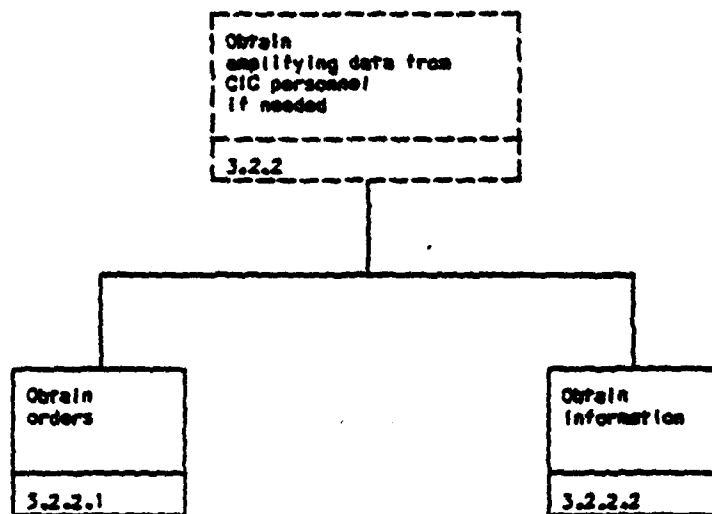
NAVTRAEQUIPCEN 78-C-0182-2

3.2.1.1 UPDATE TARGET SYMBOL (IF NEEDED)

- c. Given symbols that may not correspond to the video or insufficient data
- b. update target symbol (if needed)
- s. within 15 seconds, 100% correct

3.2.1.2 UPDATE CAP SYMBOL (IF NEEDED)

- c. Given symbols that may not correspond to the video or given insufficient data
- b. update the CAP symbol (if needed)
- s. within 15 seconds, 100% correct



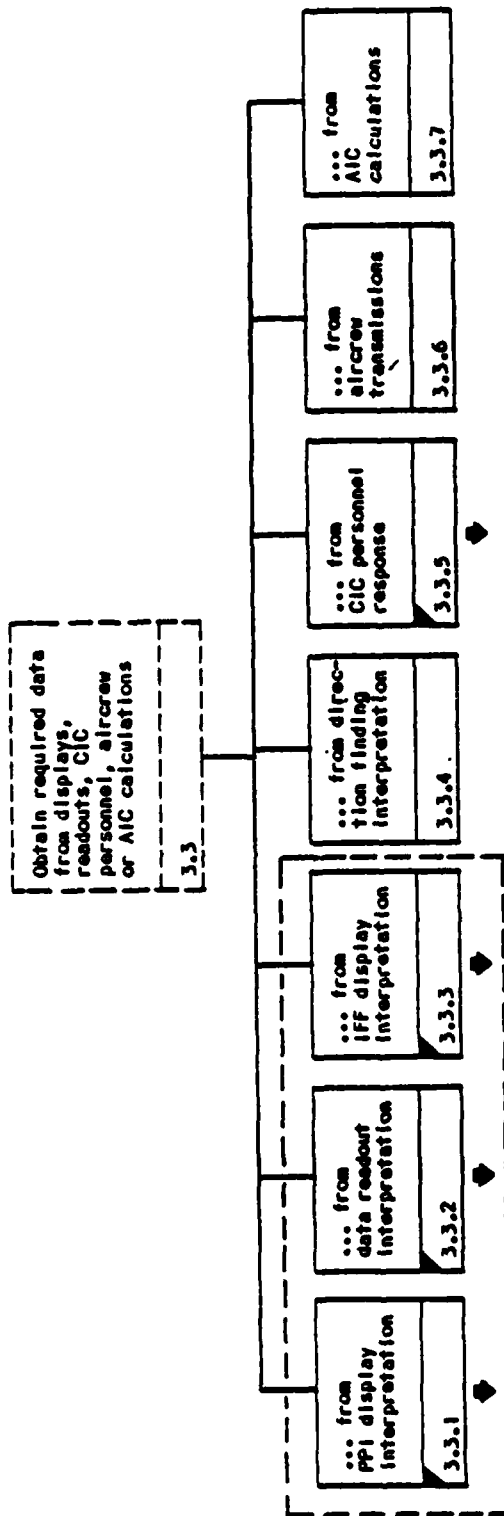
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3.2.2.1 OBTAIN ORDERS FROM CIC PERSONNEL

- c. Given insufficient data regarding the tactical environment and CIC personnel
- b. list the CIC personnel who can supply orders and the type of orders obtainable from each
- s. within 15 seconds, 100% correct personnel, 95% correct information

3.2.2.2 OBTAIN AMPLIFYING INFORMATION FROM CIC PERSONNEL

- c. Given insufficient data regarding the tactical environment and CIC personnel
- b. list the CIC personnel who can supply information and the type of information available from each
- s. within 15 seconds, 100% correct personnel, 90% correct type of information



3.3.1 OBTAIN REQUIRED DATA FROM PPI DISPLAY INTERPRETATION

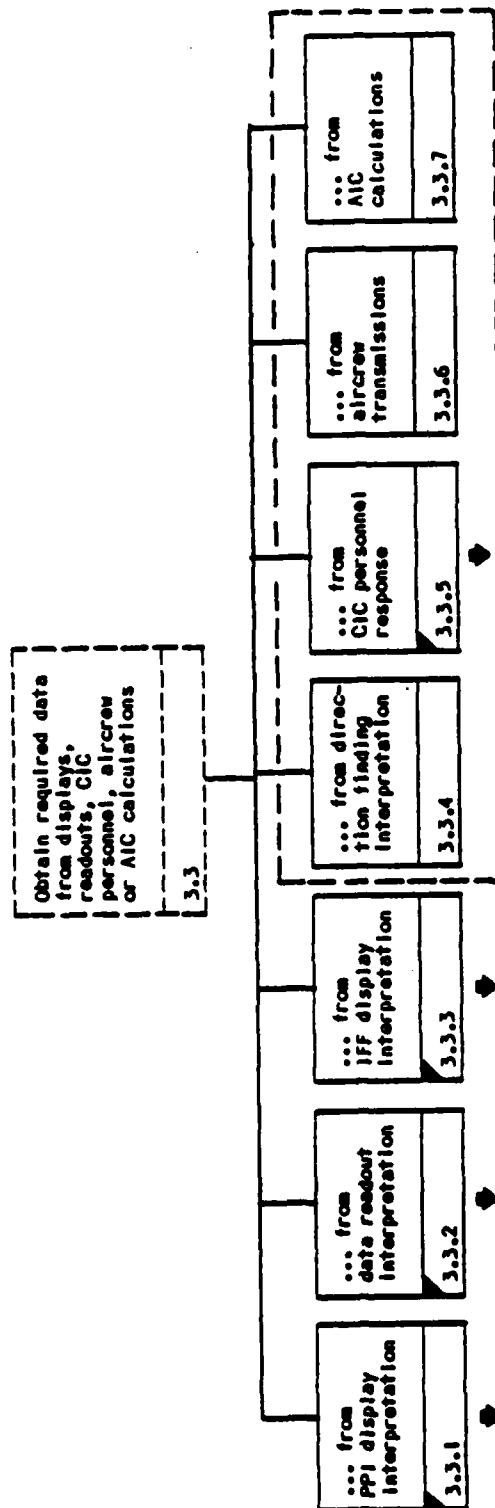
- c. Given an operating PPI display and
 1. operating NTDS program, or
 2. nonoperative NTDS program
- b. point out the sources and state the meanings of all returns on the display supplying required data
- s. within one minute, 100% of sources, 90% of meanings

3.3.2 OBTAIN REQUIRED DATA FROM DATA READOUT INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. point out the DROs which supply required information and state the meanings of each DRO
- s. within one minute, 100% of sources, 90% of meanings

3.3.3 OBTAIN REQUIRED DATA FROM IFF INTERPRETATION

- c. Given an operating PPI display and IFF equipment
- b. point out and state the meanings of all IFF returns on the display supplying required data
- s. within one minute, 100% of meanings



3.3.4 OBTAIN REQUIRED DATA FROM DIRECTION FINDING INTERPRETATION

- c. Given an operating PPI display and direction finder equipment
- b. point out and state the meanings of all direction finder equipment returns supplying required data;
- s. within 30 seconds, 100% of meanings

3.3.5 OBTAIN REQUIRED DATA FROM CIC PERSONNEL RESPONSE INTERPRETATION

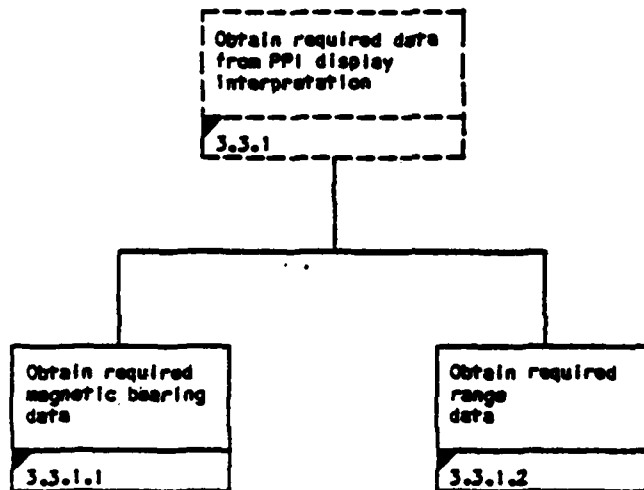
- c. Given CIC personnel code or jargon response to an information request
- b. state the functional meaning of each response
- s. within 15 seconds of the response, 90% accurate

3.3.6 OBTAIN REQUIRED DATA FROM AIRCREW TRANSMISSIONS

- c. Given aircrew message transmission
- b. state the functional meaning of the transmission
- s. within 15 seconds of the response, 90% accurate

3.3.7 OBTAIN REQUIRED DATA FROM AIC CALCULATIONS

- c. Given data, from various sources, which is not appropriate for use without calculations
- b. write down the answer resulting from the calculations required to obtain data in necessary final format
- s. within 30 seconds, 90% accurate answers (90% of the answers 90% or more accurate)



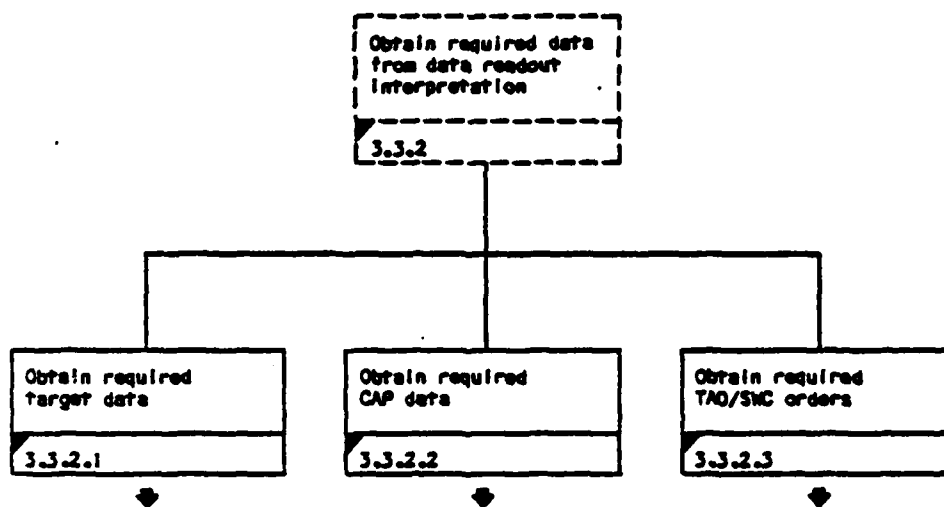
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3.3.1.1 OBTAIN REQUIRED MAGNETIC BEARING DATA FROM PPI DISPLAY
INTERPRETATION

- c. Given an operating PPI display and (1) operating NTDS program or (2) non-operative NTDS program
- b. state the magnetic bearing information obtained from an interpretation of the PPI display
- s. within one minute, 100% correct

3.3.1.2 OBTAIN REQUIRED RANGE DATA FROM PPI DISPLAY INTERPRETATION

- c. Given an operating PPI display and (1) operating NTDS program or (2) non-operative NTDS program
- b. state the range information obtained from an interpretation of the PPI display
- s. within one minute, 100% correct



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3.3.2.1 OBTAIN REQUIRED TARGET DATA FROM DRO INTERPRETATION

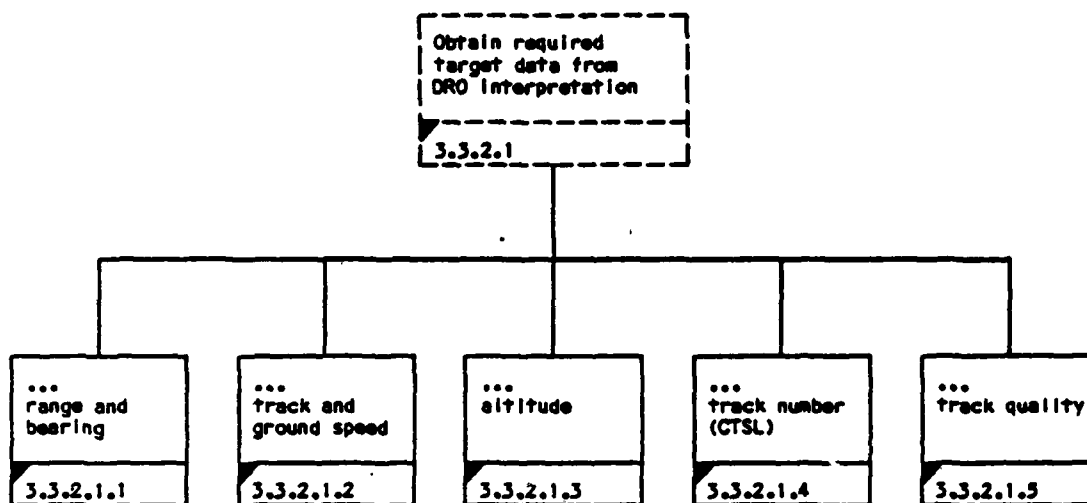
- c. Given operating AC mode console with complement of DROs
- b. state the meaning of target information displayed on the DROs
- s. within one minute, 90% of meanings

3.3.2.2 OBTAIN REQUIRED CAP DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the meaning of the CAP information displayed on the DRO
- s. within one minute, 90% of meanings

3.3.2.3 OBTAIN REQUIRED TAO/SWC ORDER DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the meaning of the TAO/SWC information displayed on the DROs
- s. within one minute, 90% meanings



3.3.2.1.1 OBTAIN REQUIRED TARGET RANGE AND BEARING DATA FROM DRO
INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state target range and bearing interpreted from the DRO display
- s. 100% correct

3.3.2.1.2 OBTAIN REQUIRED TARGET TRACK AND GROUND SPEED DATA FROM DRO
INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the target track and ground speed interpreted from the DRO display
- s. 100% correct

3.3.2.1.3 OBTAIN REQUIRED TARGET ALTITUDE DATA FROM DRO INTERPRETATION

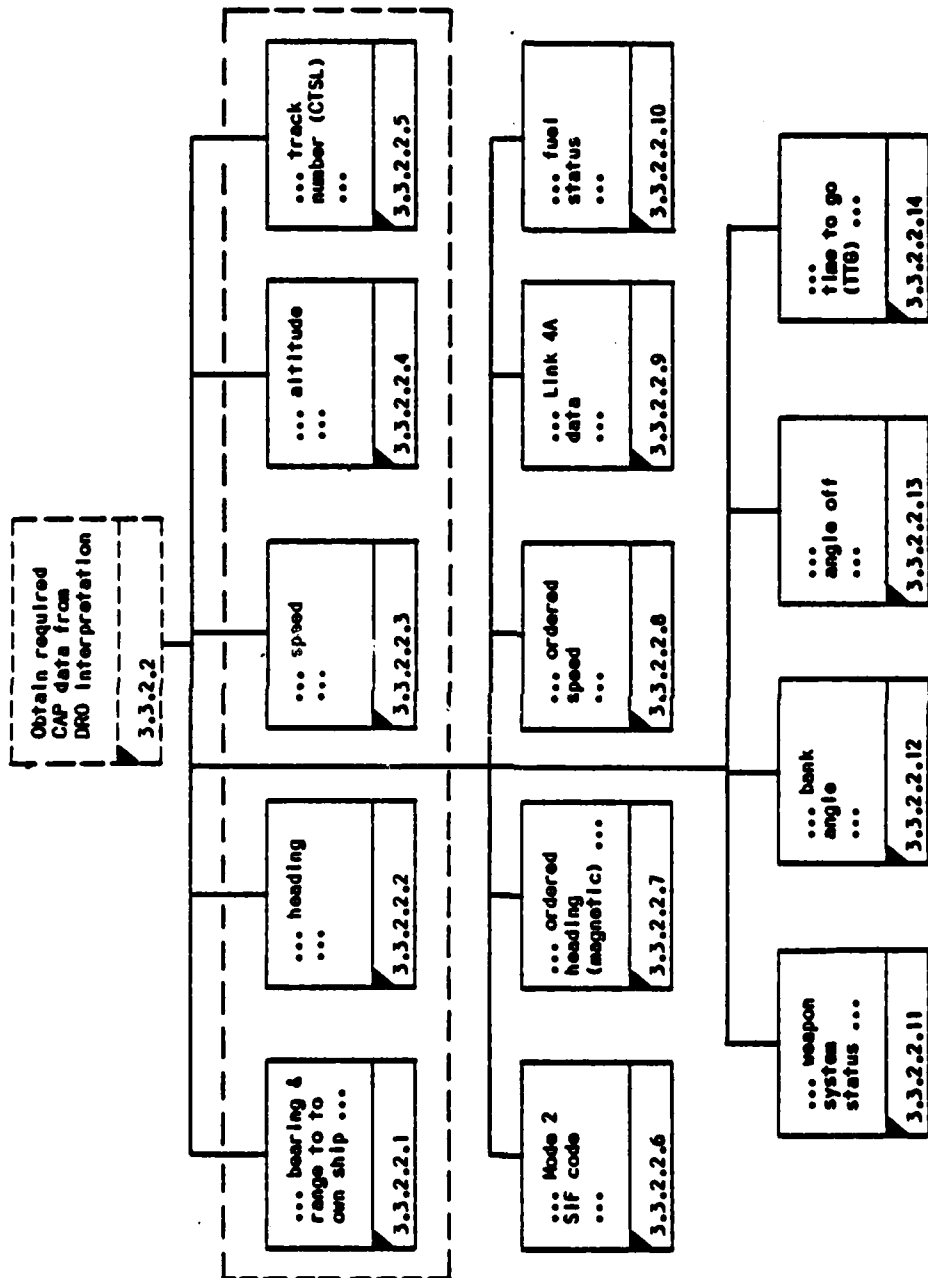
- c. Given operating AC mode console with complement of DROs
- b. state the target altitude interpreted from the DRO display
- s. 100% correct

3.3.2.1.4 OBTAIN REQUIRED TARGET TRACK NUMBER (CTSL) FROM DRO
INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the target track numbers (CTSL) interpreted from the DRO display
- s. 100% correct

3.3.2.1.5 OBTAIN REQUIRED TARGET TRACK QUALITY DATA FROM DRO
INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the track quality interpreted from the DRO display
- s. 100% correct



3.3.2.2.1 OBTAIN REQUIRED CAP BEARING AND RANGE TO OWN SHIP DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP bearing and range to own ship interpreted from the DRO display
- s. 100% correct

3.3.2.2.2 OBTAIN REQUIRED CAP HEADING DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP heading interpreted from the DRO display
- s. 100% correct

3.3.2.2.3 OBTAIN REQUIRED CAP SPEED DATA FROM DRO INTERPRETATION

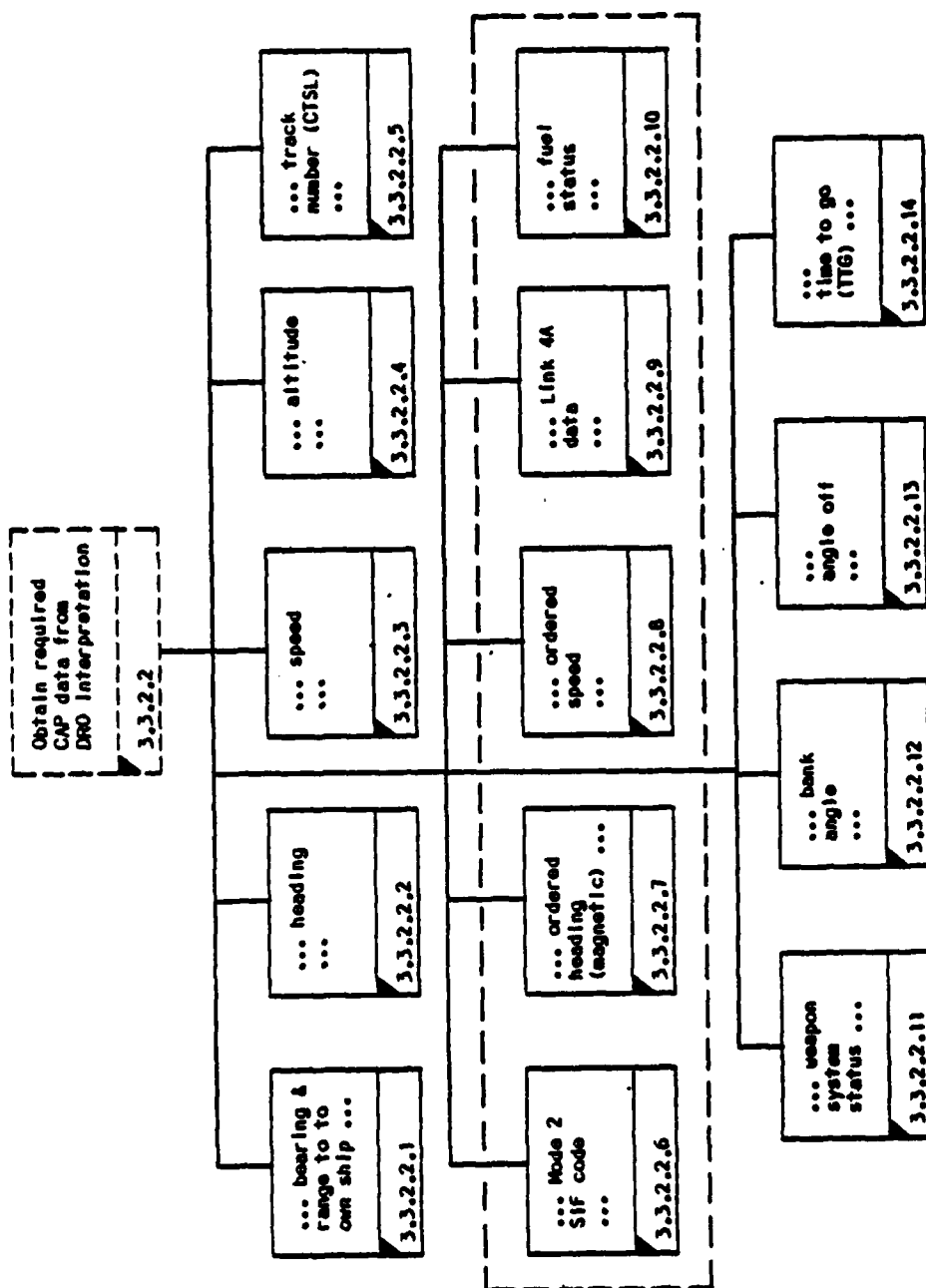
- c. Given operating AC mode console with complement of DROs
- b. state the CAP speed interpreted from the DRO display
- s. 100% correct

3.3.2.2.4 OBTAIN REQUIRED CAP ALTITUDE DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP altitude interpreted from the DRO display
- s. 100% correct

3.3.2.2.5 OBTAIN REQUIRED CAP TRACK NUMBER (CTSL) FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP track number (CTSL) interpreted from the DRO display
- s. 100% correct



3.3.2.2.6 OBTAIN REQUIRED MODE 2 SIF CODE FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP mode 2 SIF code interpreted from the DRO display
- s. 100% correct

3.3.2.2.7 OBTAIN REQUIRED ORDERED HEADING (MAGNETIC) DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP ordered heading (magnetic) interpreted from the DRO display
- s. 100% correct

3.3.2.2.8 OBTAIN REQUIRED CAP ORDERED SPEED DATA FROM DRO INTERPRETATION

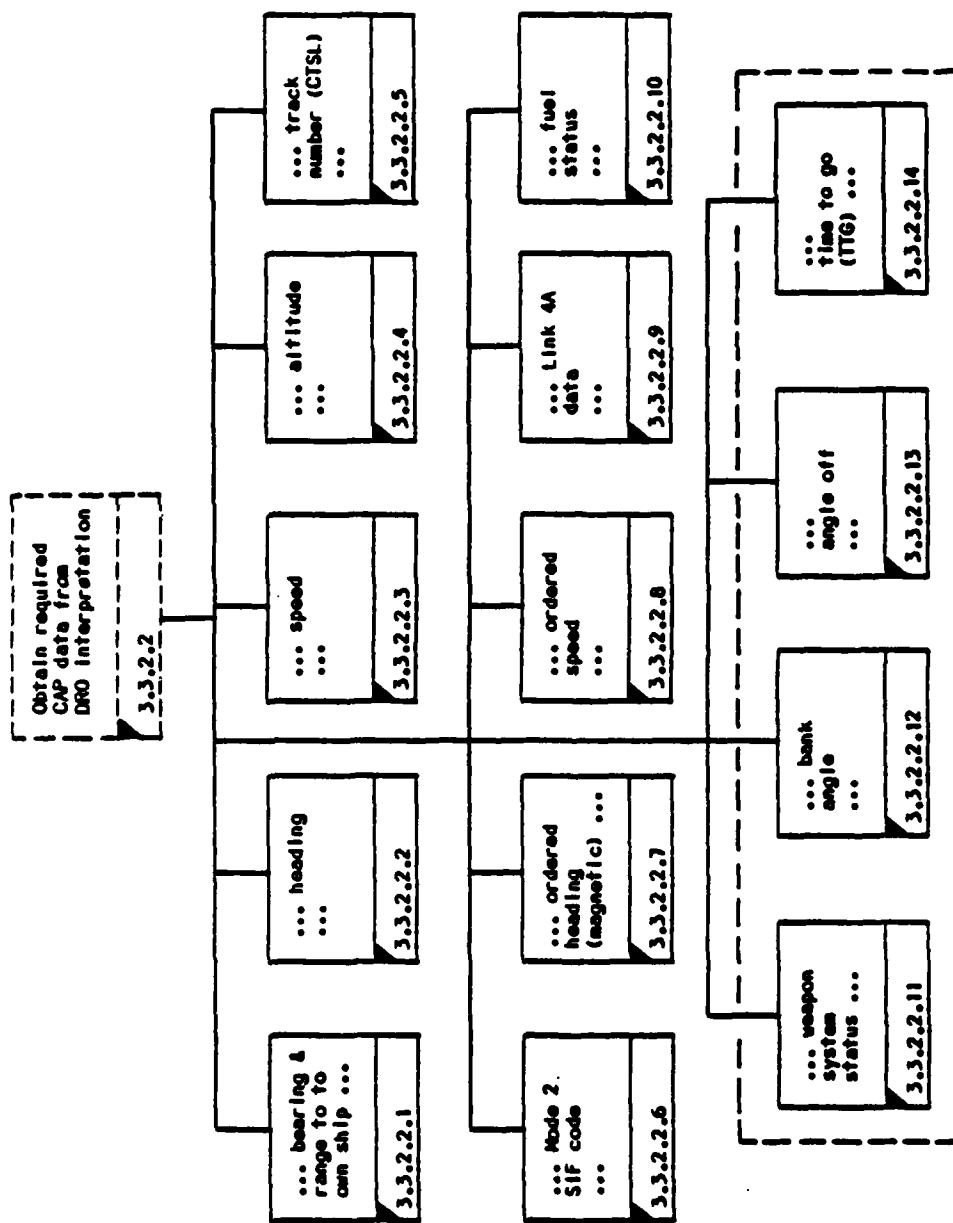
- c. Given operating AC mode console with complement of DROs
- b. state the CAP ordered speed
- s. 100% correct

3.3.2.2.9 OBTAIN REQUIRED LINK 4A DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP link information interpreted from the DRO display
- s. 100% correct

3.3.2.2.10 OBTAIN REQUIRED CAP FUEL STATUS DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP fuel status
- s. 100% correct



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3.3.2.2.11 OBTAIN REQUIRED CAP WEAPON SYSTEM STATUS FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP weapon system status
- s. 100% correct

3.3.2.2.12 OBTAIN REQUIRED BANK ANGLE DATA FROM DRO INTERPRETATION

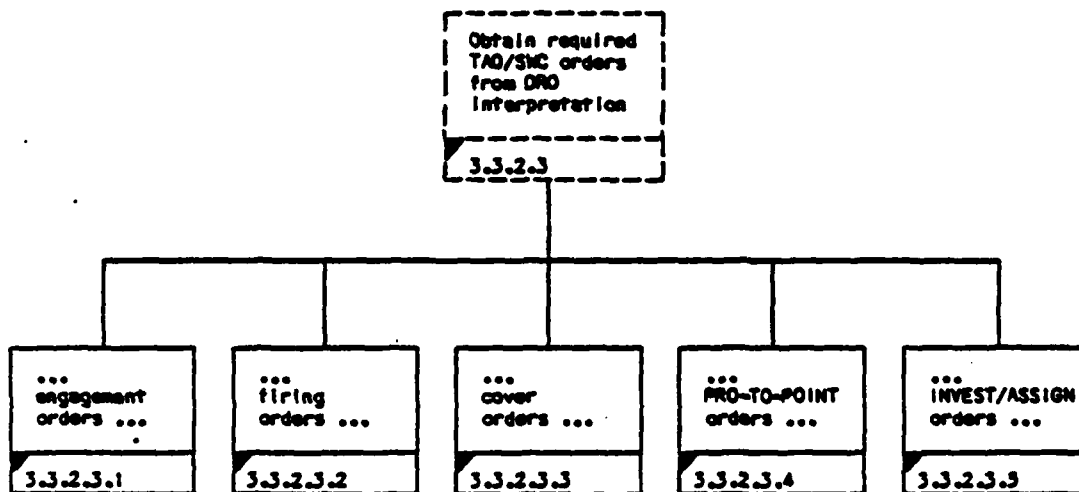
- c. Given operating AC mode console with complement of DROs
- b. state the CAP bank angle interpreted from the DRO display
- s. 100% correct

3.3.2.2.13 OBTAIN REQUIRED ANGLE-OFF DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP angle-off interpreted from the DRO display
- s. 100% correct

3.3.2.2.14 OBTAIN REQUIRED TIME TO GO (TTG) DATA FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the CAP time to go (TTG) interpreted from the DRO display
- s. 100% correct



3.3.2.3.1 OBTAIN REQUIRED TAO/SWC ENGAGEMENT ORDERS FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the engagement orders interpreted from the DRO display
- s. 100% correct

3.3.2.3.2 OBTAIN REQUIRED TAO/SWC FIRING ORDERS FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the firing orders interpreted from the DRO display
- s. 100% correct

3.3.2.3.3 OBTAIN REQUIRED TAO/SWC COVER ORDERS FROM DRO INTERPRETATION

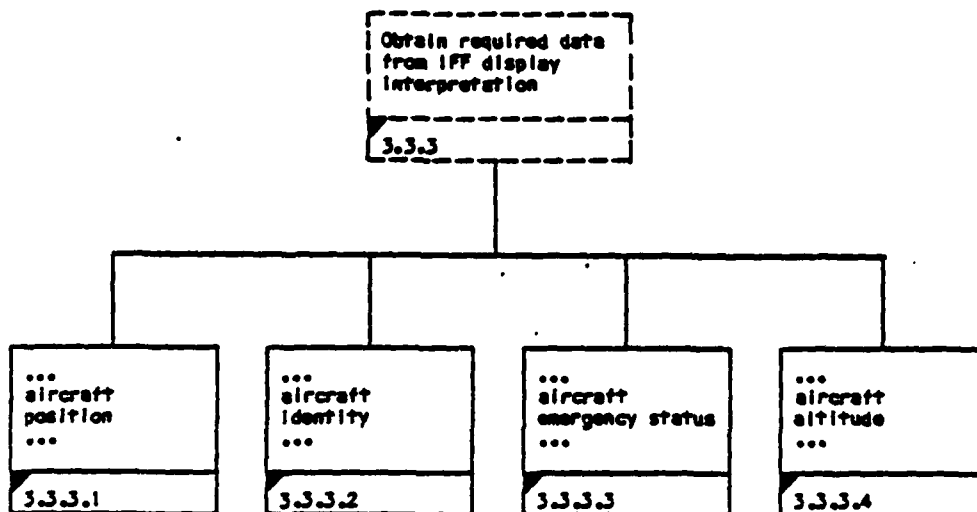
- c. Given operating AC mode console with complement of DROs
- b. state the cover orders interpreted from the AC General DRO display
- s. 100% correct

3.3.2.3.4 OBTAIN REQUIRED TAO/SWC PRO-TO-POINT ORDERS FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the pro-to-point orders interpreted from the DRO display
- s. 100% correct

3.3.2.3.5 OBTAIN REQUIRED TAO/SWC INVESTIGATE/ASSIGN ORDERS FROM DRO INTERPRETATION

- c. Given operating AC mode console with complement of DROs
- b. state the invest/assign orders interpreted from the DRO display
- s. 100% correct



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3.3.3.1 OBTAIN REQUIRED AIRCRAFT POSITION DATA FROM IFF INTERPRETATION

- c. Given an operating PPI display and IFF equipment
- b. obtain aircraft position from an interpretation of the IFF display
- s. within one minute, 100% accuracy

3.3.3.2 OBTAIN REQUIRED AIRCRAFT IDENTITY DATA FROM IFF INTERPETATION

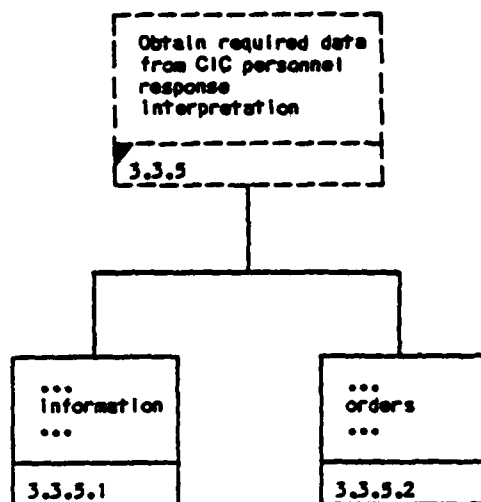
- c. Given an operating PPI display and IFF equipment
- b. obtain aircraft identity from an interpretation of the IFF display
- s. within one minute, 100% accuracy

3.3.3.3 OBTAIN REQUIRED AIRCRAFT EMERGENCY STATUS DATA FROM IFF INTERPRETATION

- c. Given an operating PPI display and IFF equipment
- b. obtain aircraft emergency status from an interpretation of the IFF display
- s. within one minute, 100% accuracy

3.3.3.4 OBTAIN REQUIRED AIRCRAFT ALTITUDE DATA FROM IFF INTERPRETATION

- c. Given an operating PPI display and IFF equipment
- b. obtain aircraft altitude from an interpretation of the IFF display
- s. within one minute, 100% accuracy



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3.3.5.1 OBTAIN REQUIRED INFORMATION FROM CIC PERSONNEL RESPONSE
INTERPRETATION

- c. Given information by CIC personnel in response to a request
- b. state the meaning of the information
- s. within 15 seconds, 90% correct

3.3.5.2 OBTAIN REQUIRED ORDERS FROM CIC PERSONNEL RESPONSE INTERPRETATION

- c. Given an order by CIC personnel (TAO/SWC) in response to a request
- b. state the meaning of the order
- s. within 15 seconds, 100% correct

TABLE D1. ALTERNATE NUMBERS TABLE - TERMINAL OBJECTIVE 3.0 HIERARCHY

Objective Number	Objective and/or Reference
3.3.1	See 1.2.1
3.3.1.1	See 1.2.1.2
3.3.1.2	See 1.2.1.3
3.3.2	See 1.2.2
3.3.2.1	See 1.2.2.1
3.3.2.1.1	See 1.2.2.1.1
3.3.2.1.2	See 1.2.2.1.2
3.3.2.1.3	See 1.2.2.1.3
3.3.2.1.4	See 1.2.2.1.4
3.3.2.1.5	See 1.2.2.1.5
3.3.2.2	See 1.2.2.2
3.3.2.2.1	See 1.2.2.2.1
3.3.2.2.2	See 1.2.2.2.2
3.3.2.2.3	See 1.2.2.2.3
3.3.2.2.4	See 1.2.2.2.4
3.3.2.2.5	See 1.2.2.2.5
3.3.2.2.6	See 1.2.2.2.6
3.3.2.2.7	See 1.2.2.2.7
3.3.2.2.8	See 1.2.2.2.8
3.3.2.2.9	See 1.2.2.2.9
3.3.2.2.10	See 1.2.2.2.10
3.3.2.2.11	See 1.2.2.2.11
3.3.2.2.12	See 1.2.2.2.12
3.3.2.2.13	See 1.2.2.2.13
3.3.2.2.14	See 1.2.2.2.14
3.3.2.3	See 1.2.2.3
3.3.2.3.1	See 1.2.2.3.1
3.3.2.3.2	See 1.2.2.3.2
3.3.2.3.3	See 1.2.2.3.3
3.3.2.3.4	See 1.2.2.3.4
3.3.2.3.5	See 1.2.2.3.5
3.3.3	See 1.2.3
3.3.3.1	See 1.2.3.1
3.3.3.2	See 1.2.3.2
3.3.3.3	See 1.2.3.3
3.3.3.4	See 1.2.3.4
3.3.3.6	See 1.2.3.6
3.3.5	See 1.2.6

APPENDIX E

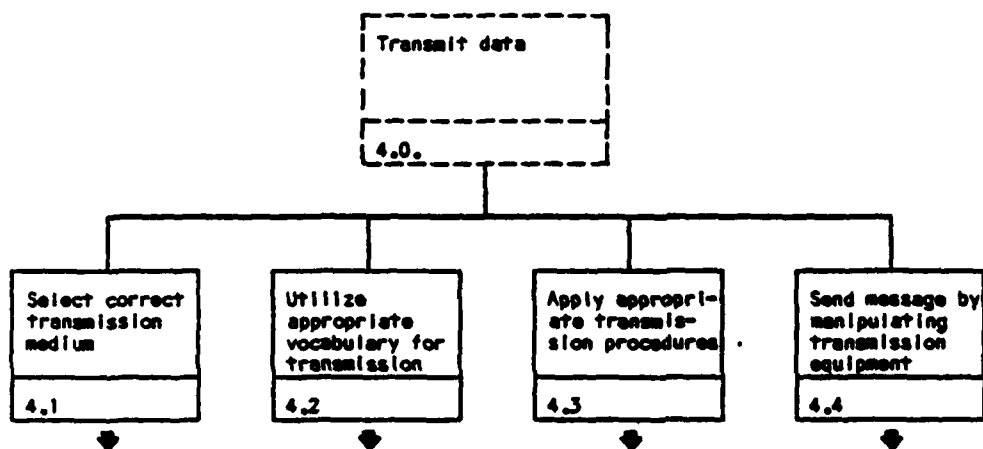
TERMINAL OBJECTIVE 4.0

The fourth Terminal Objective is:

4.0 TRANSMIT DATA

- c. Given the information required for transmission, the CAP mission phase classification, transmission equipment, and transmission rules and guidelines
- b. transmit the required information according to the rules and guidelines for transmission method selection and use, and for timeliness and accuracy
- s. on the correct transmission equipment, 100% following the rules for use, 100% following the rules for timeliness, 90% following the rules for accuracy

Hierarchy diagrams and objectives sheets which follow present the subordinate objectives.



4.1 SELECT CORRECT TRANSMISSION MEDIUM

- c. Given a situation, data to be sent, a message destination, and a list of alternative transmission media
- b. name the most appropriate transmission medium
- s. within 15 seconds, 100% correct

4.2 UTILIZE APPROPRIATE VOCABULARY FOR TRANSMISSION

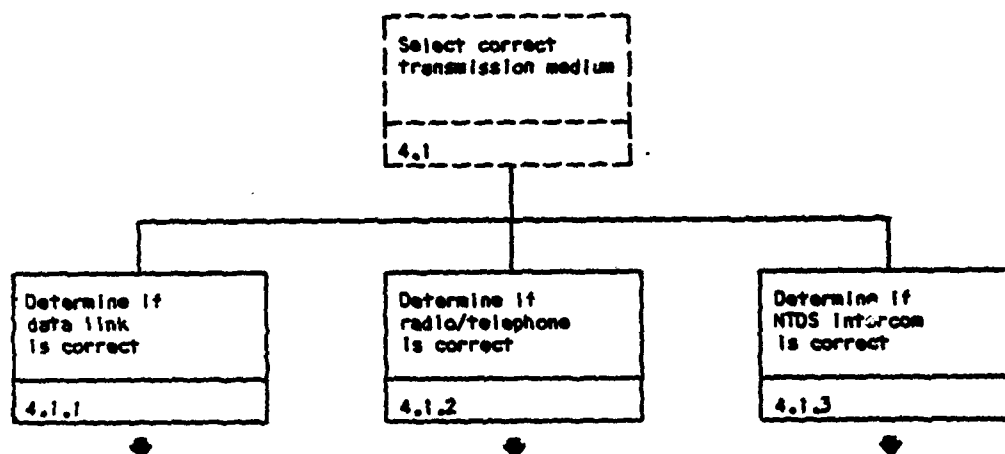
- c. Given data to be transmitted, a chosen medium, a tactical situation, and a message destination
- b. state the correct words and operation codes to make up the transmission vocabulary
- s. 100% correct codes, 90% correct words

4.3 APPLY APPROPRIATE TRANSMISSION PROCEDURES

- c. Given data to be sent, a chosen medium, a message destination, and a tactical environment
- b. send data using transmission procedures appropriate to the situation;
- s. 100% correct use of the procedures

4.4 SEND A MESSAGE BY MANIPULATING TRANSMISSION EQUIPMENT

- c. Given a chosen medium (data link, radio/telephone, or NTDS intercom), a message to be sent, a message destination
- b. send a message by manipulating the transmission equipment
- s. 100% accurate



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4.1.1 DETERMINE IF DATA LINK IS THE CORRECT TRANSMISSION MEDIUM

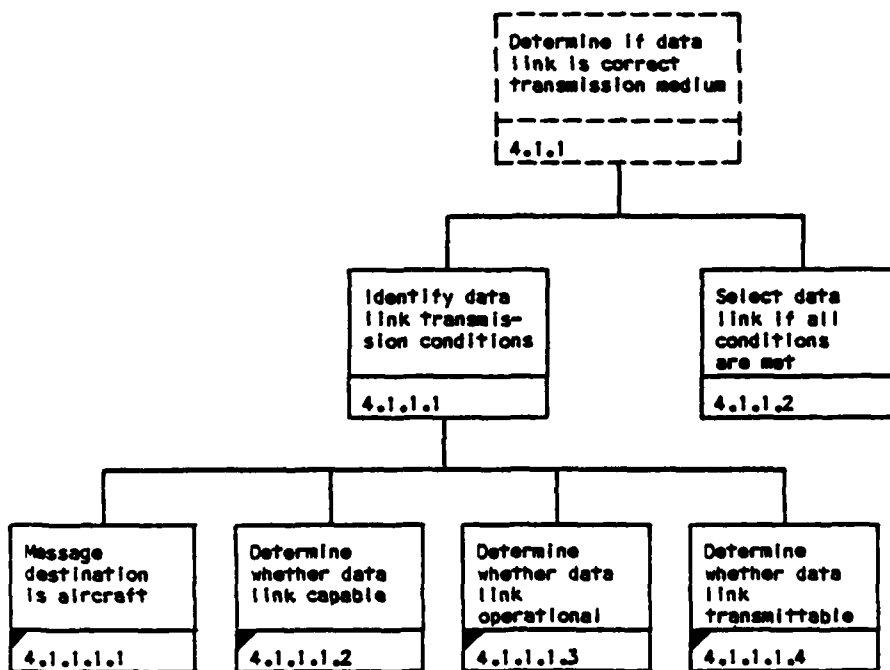
- c. Given a situation, data to be sent, and a message destination
- b. name the situations for which data link is the appropriate transmission method
- s. within 30 seconds, 90% correct

4.1.2 DETERMINE IF RADIO/TELEPHONE IS THE CORRECT TRANSMISSION MEDIUM

- c. Given an operational R/T, a situation, data to be sent, and a message destination
- b. name the situations for which radio/telephone is the appropriate transmission medium
- s. within 30 seconds, 90% correct

4.1.3 DETERMINE IF NTDS INTERCOM IS THE CORRECT TRANSMISSION MEDIUM

- c. Given a situation, data to be sent, a message destination
- b. name the situations for which NTDS intercom is the appropriate transmission medium
- s. within 30 seconds, 90% correct



4.1.1.1 IDENTIFY DATA LINK TRANSMISSION CONDITIONS

- c. Given a list of conditions relating to message data, message destination, data link operability and a tactical situation
- b. identify the individual conditions that support data link as a transmission medium
- s. 90% correct

4.1.1.1.1 DETERMINE THAT THE MESSAGE DESTINATION IS THE AIRCRAFT

- c. Given a tactical situation and message data
- b. state whether the aircraft is the appropriate message destination
- s. 100% correct

4.1.1.1.2 DETERMINE WHETHER THE AIRCRAFT HAS DATA LINK CAPABILITY

- c. Given a tactical situation, a CAP aircraft and information on aircraft status
- b. state whether the aircraft has data link capability
- s. 100% correct

4.1.1.1.3 DETERMINE WHETHER DATA LINK SYSTEM IS OPERATIONAL

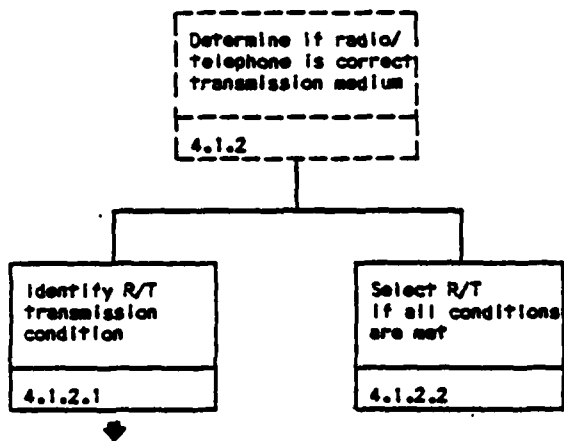
- c. Given an NTDS console
- b. state whether data link system is operational
- s. 90% correct

4.1.1.1.4 DETERMINE WHETHER DATA IS DATA LINK TRANSMITTABLE

- c. Given message data
- b. state whether the data can be transmitted via data link
- s. 90% correct

4.1.1.2 SELECT DATA LINK IF ALL CONDITIONS ARE MET

- c. Given a tactical situation, message data, message destination and an NTDS console
- b. state whether all conditions are met for selecting data link as the appropriate transmission medium
- s. 90% correct



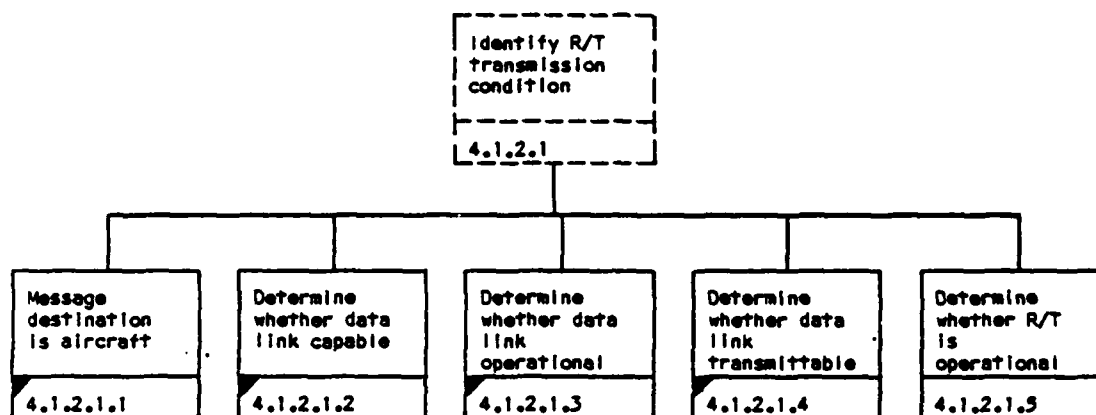
NAVTRAEQUIPCEN 78-C-0182-2

4.1.2.1 IDENTIFY R/T TRANSMISSION CONDITIONS

- c. Given an operational R/T and a list of conditions relating to message data, message destination, data link operability and a tactical situation
- b. identify the individual conditions that support R/T as a transmission medium
- s. 90% correct

4.1.2.2 SELECT R/T IF ALL CONDITIONS ARE MET

- c. Given a tactical situation, message data, message destination and an NTDS console
- b. state whether all conditions are met for selecting R/T as the appropriate transmission medium
- s. 90% correct



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4.1.2.1.1 DETERMINE THAT THE MESSAGE DESTINATION IS THE AIRCRAFT

- c. Given a tactical situation and message data
- b. state whether the aircraft is the appropriate message destination
- s. 100% correct

4.1.2.1.2 DETERMINE WHETHER THE AIRCRAFT HAS DATA LINK CAPABILITY

- c. Given a tactical situation, a CAP aircraft and information on aircraft status
- b. state whether the aircraft has data link capability
- s. 100% correct

4.1.2.1.3 DETERMINE WHETHER DATA LINK SYSTEM IS OPERATIONAL

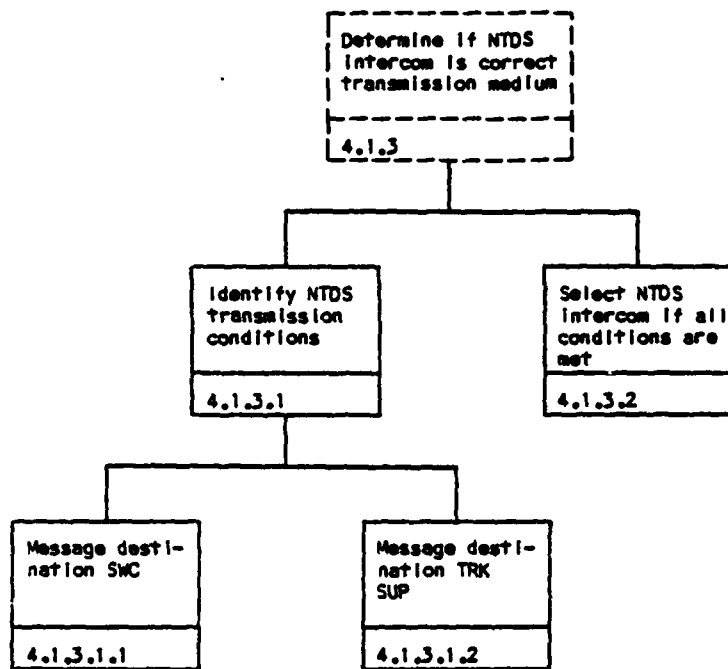
- c. Given an NTDS console
- b. state whether data link system is operational
- s. 90% correct

4.1.2.1.4 DETERMINE WHETHER DATA IS DATA LINK TRANSMITTABLE

- c. Given message data
- b. state whether the data can be transmitted via data link
- s. 90% correct

4.1.2.1.5 DETERMINE WHETHER R/T IS OPERATIONAL

- c. Given a message destination and R/T equipment
- b. state whether R/T channel to CAP is functioning
- s. 100% correct



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4.1.3.1 IDENTIFY NTDS INTERCOM TRANSMISSION CONDITIONS

- c. Given a list of conditions relating to message data, message destination and a tactical situation
- b. identify the individual conditions that support NTDS intercom as a transmission medium
- s. 90% correct

4.1.3.1.1 DETERMINE THAT THE MESSAGE DESTINATION IS THE SWC

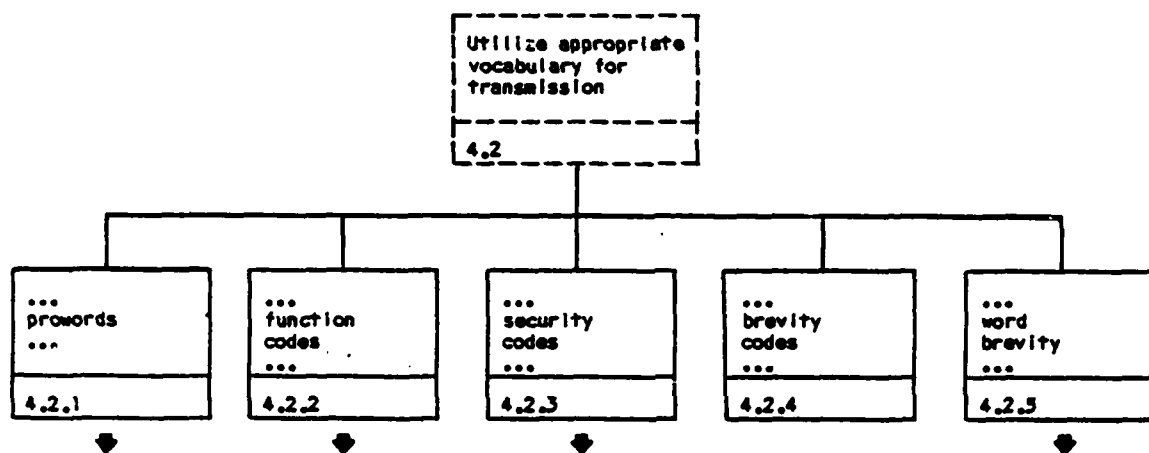
- c. Given message data and a tactical situation
- b. state whether the message destination is the SWC
- s. 100% correct

4.1.3.1.2 DETERMINE THAT THE MESSAGE DESTINATION IS THE TRACK SUPERVISOR

- c. Given message data and a tactical situation
- b. state whether the message destination is the track supervisor
- s. 100% correct

4.1.3.2 SELECT NTDS INTERCOM IF ALL CONDITIONS ARE MET

- c. Given a tactical situation, message data and message destination
- b. state whether all conditions are met for selecting NTDS intercom as the appropriate transmission medium
- s. 90% correct



4.2.1 UTILIZE APPROPRIATE PROWORDS FOR TRANSMISSION

- c. Given data to be transmitted, a chosen medium, a tactical situation, and a message destination
- b. state the prowords which apply to this message
- s. with 100% accuracy

4.2.2 UTILIZE CORRECT FUNCTION CODES FOR TRANSMISSION

- c. Given data to be transmitted, a chosen medium, a tactical situation, and a message destination
- b. state the correct order and details (number, letters) of function codes which apply to sending this message
- s. with 100% accuracy

4.2.3 UTILIZE APPROPRIATE SECURITY CODES FOR TRANSMISSION

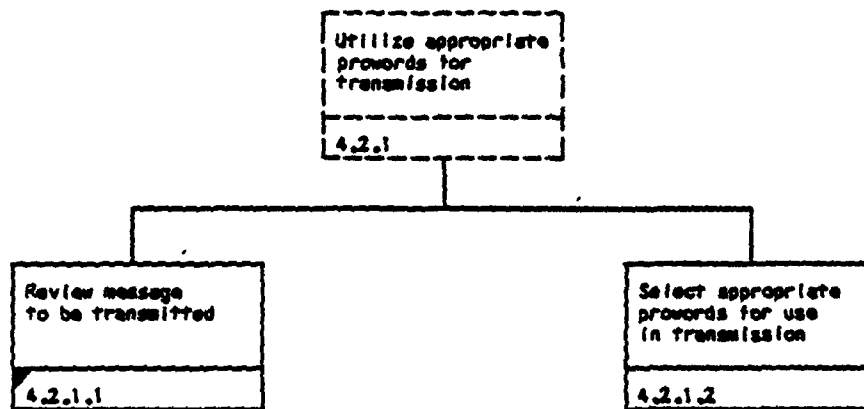
- c. Given data to be transmitted, a chosen medium, a tactical situation, and a message destination
- b. state the security codes which apply to this message
- s. with 100% accuracy

4.2.4 UTILIZE APPROPRIATE BREVIDY CODES FOR TRANSMISSION

- c. Given data to be transmitted, a chosen medium, a tactical situation, and a message destination
- b. state the brevity code words which apply to this message
- c. with 100% accuracy

4.2.5 UTILIZE APPROPRIATE WORD BREVIDY FOR TRANSMISSION

- c. Given data to be transmitted, a chosen medium, a tactical situation, and a message destination
- b. state the words of the message as briefly as possible
- s. never exceeding the applicable brevity standards

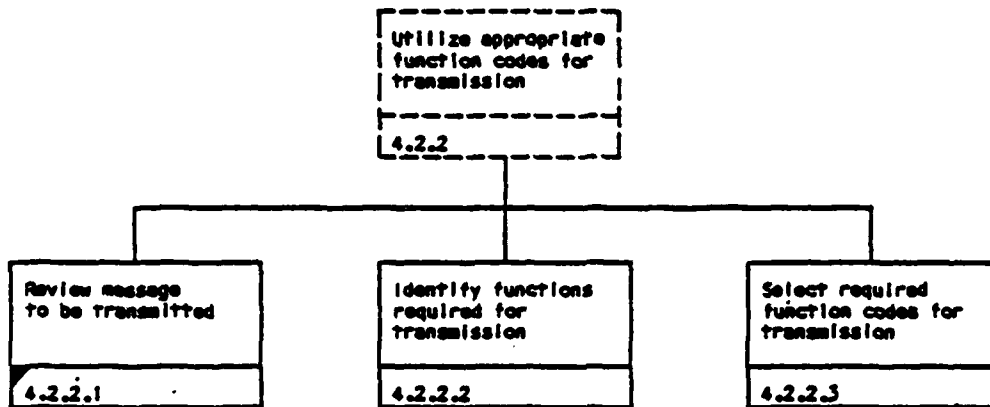


4.2.1.1 REVIEW MESSAGE TO BE TRANSMITTED

- c. Given a message to be transmitted
- b. list the message content elements
- s. 100% correct

4.2.1.2 SELECT APPROPRIATE PROWORDS FOR USE IN TRANSMISSION

- c. Given message data to be transmitted
- b. state the appropriate prowords for the message data
- s. 90% correct



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4.2.2.1 REVIEW MESSAGE TO BE TRANSMITTED

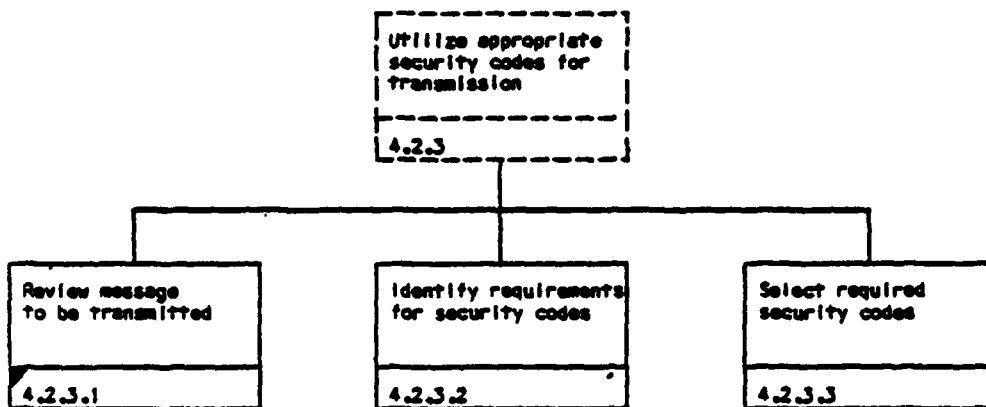
- c. Given a message to be transmitted
- b. list the message content elements
- s. 100% correct

4.2.2.2 IDENTIFY FUNCTIONS REQUIRED FOR TRANSMISSION

- c. Given message data to be transmitted
- b. state the functions required for transmission
- s. 90% correct

4.2.2.3 SELECT REQUIRED FUNCTION CODES FOR TRANSMISSION

- c. Given message transmission functions
- b. state the required function codes for transmission
- s. 90% correct



4.2.3.1 REVIEW MESSAGE TO BE TRANSMITTED

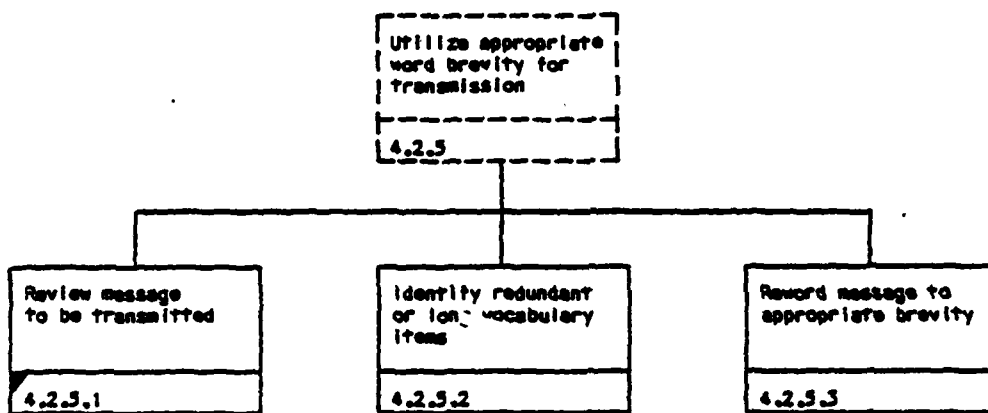
- c. Given a message to be transmitted
- b. list the message content elements
- s. 100% correct

4.2.3.2 IDENTIFY REQUIREMENTS FOR SECURITY CODES IN A TRANSMISSION

- c. given message data to be transmitted
- b. state whether security codes are required in message transmission
- s. 100% correct

4.2.3.3 SELECT REQUIRED SECURITY CODES FROM APPROPRIATE PUBLICATIONS

- c. Given message data to be transmitted and appropriate security code publications
- b. state the required security codes
- s. 100% correct



4.2.5.1 REVIEW MESSAGE TO BE TRANSMITTED

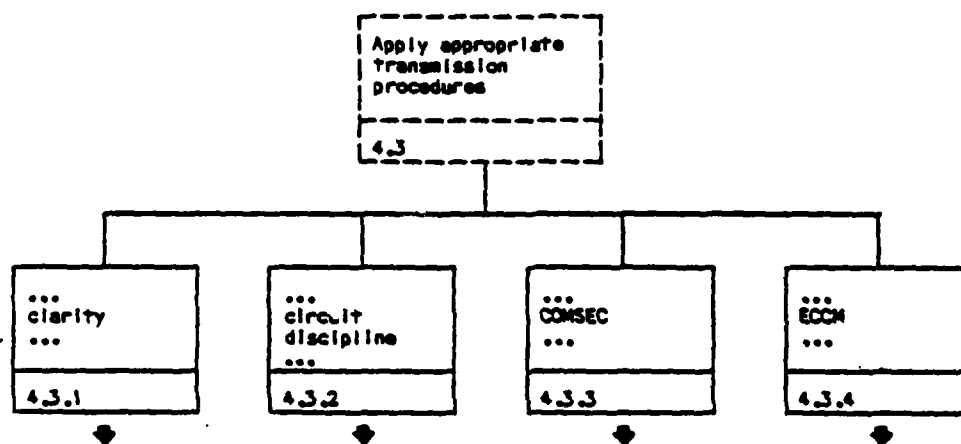
- c. Given a message to be transmitted
- b. list the message content elements
- s. 100% correct

4.2.5.2 IDENTIFY REDUNDANT OR UNNECESSARILY LONG VOCABULARY ITEMS

- c. Given a message to be transmitted
- b. identify vocabulary items which are redundant or unnecessarily long
- s. 90% correct

4.2.5.3 REWORD MESSAGE TO APPROPRIATE BREVITY

- c. Given a message to be transmitted
- b. restate the message
- s. 90% correct in terms of appropriate brevity



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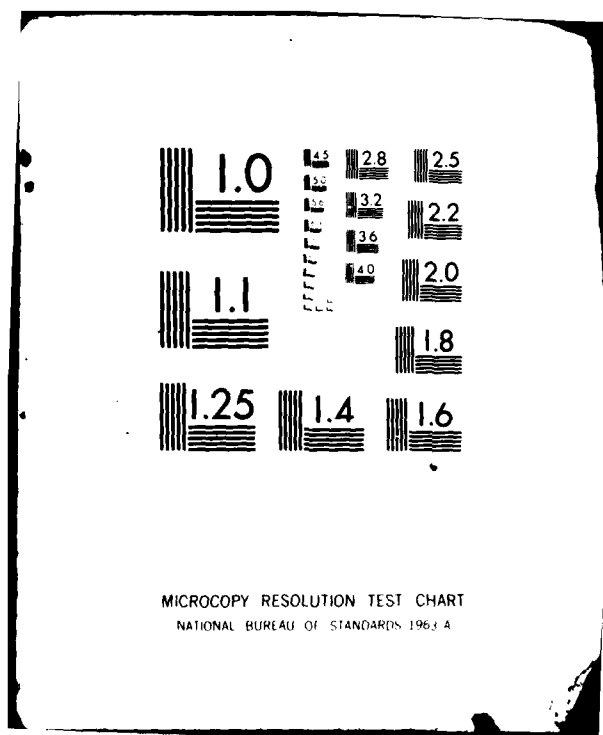
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OBJECTIVES HIERARCHY FOR AIR INTERCEPT CONTROLLER PROTOTYPE TRA--ETC(U)
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4.3.1 APPLY APPROPRIATE CLARITY PROCEDURES FOR TRANSMISSION

- c. Given data to be sent, a chosen medium, a message destination, and a tactical environment
- b. send data using appropriate clarity procedures
- s. with 100% correct use of the procedures

4.3.2 APPLY APPROPRIATE CIRCUIT DISCIPLINE FOR TRANSMISSION

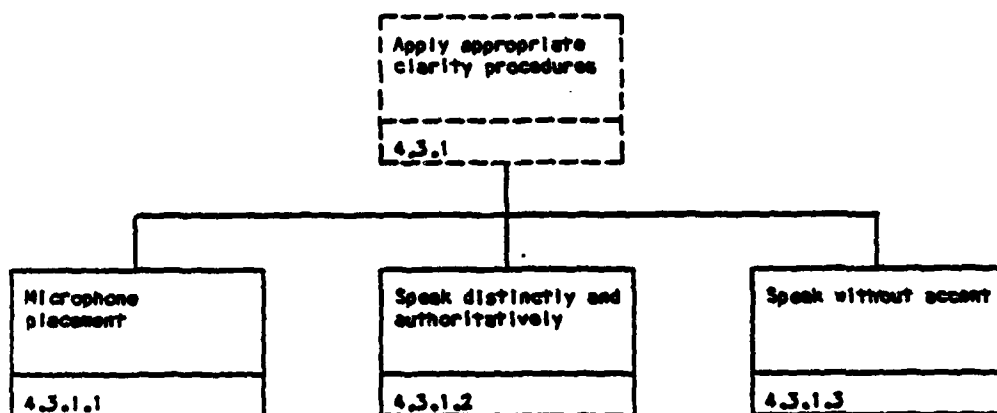
- c. Given data to be sent, a chosen medium, a message destination, and a tactical environment
- b. send data using appropriate circuit discipline procedures
- s. with 100% correct circuit discipline

4.3.3 APPLY APPROPRIATE COMMUNICATIONS SECURITY (COMSEC) PROCEDURES

- c. Given data to be sent, a chosen medium, a message destination, and a tactical environment
- b. send data using appropriate COMSEC procedures
- s. with 100% correct communication security

4.3.4 APPLY APPROPRIATE ELECTRONIC COUNTER-COUNTER MEASURE (ECCM) PROCEDURES

- c. Given data to be sent, a chosen medium, a message destination
- b. send data using appropriate ECCM procedures
- s. with 100% correct use of electronic counter-counter measures



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4.3.1.1 USE CORRECT MICROPHONE PLACEMENT WITH RESPECT TO THE MOUTH

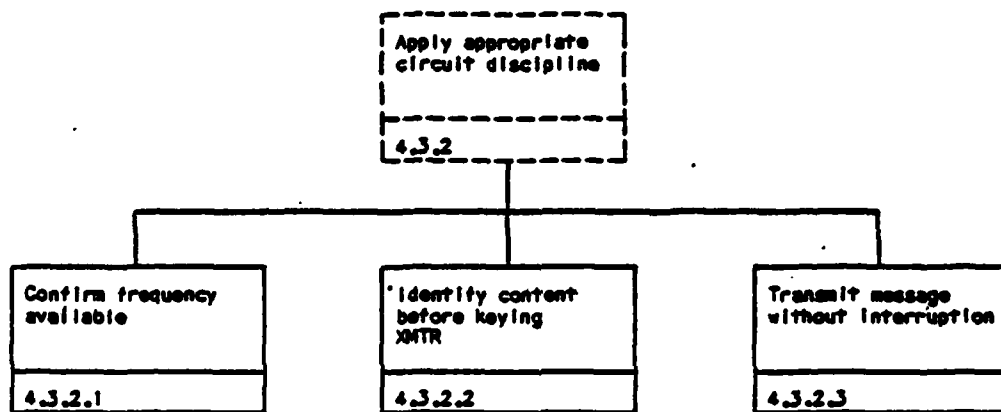
- c. Given an A/C communications headset
- b. place the microphone for message transmission
- s. 100% correct placement with respect to the mouth and the microphone specifications

4.3.1.2 SPEAK DISTINCTLY AND AUTHORITATIVELY

- c. Given an AIC communications system and a message to be transmitted
- b. transmit the message
- s. such that all words are spoken distinctly and the message is spoken authoritatively, as judged by an AIC instructor

4.3.1.3 SPEAK WITHOUT USING A NOTICEABLE ACCENT

- c. Given an AIC communications system and a message to be transmitted
- b. transmit the message
- s. so that any accent does not affect the intelligibility of the message



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4.3.2.1 CONFIRM TRANSMISSION FREQUENCY AVAILABILITY PRIOR TO TRANSMITTING

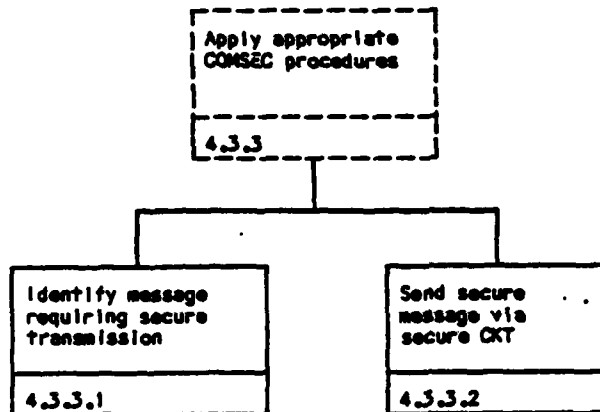
- c. Given an AIC communications system and a message to be transmitted
- b. state whether the assigned transmission frequency is available
- s. prior to transmission, 100% correct

4.3.2.2 IDENTIFY MESSAGE CONTENT BEFORE KEYING TRANSMITTER

- c. Given an AIC communications system and a message to be transmitted
- b. list the message content elements
- s. prior to beginning the transmission, 100% correct

4.3.2.3 TRANSMIT COMPLETE MESSAGE WITHOUT INTERRUPTION

- c. Given an AIC communications system and messages to be transmitted
- b. transmit each message
- s. without interruptions within each message



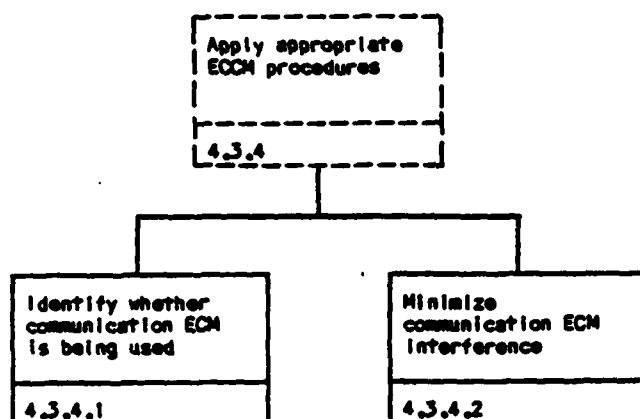
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4.3.3.1 IDENTIFY MESSAGE REQUIRING SECURE TRANSMISSION

- c. Given messages for transmission
- b. identify those messages which require secure transmission
- s. 100% correct

4.3.3.2 SEND SECURE MESSAGE VIA SECURE CIRCUIT

- c. Given message for transmission and an AIC communications system
- b. transmit the message via an appropriate circuit
- s. 100% correct

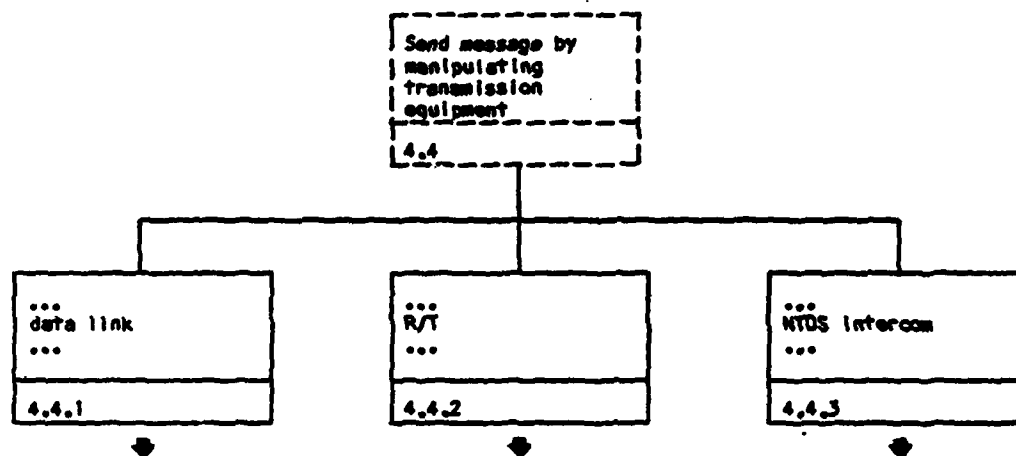


4.3.4.1 IDENTIFY WHETHER COMMUNICATIONS ECM IS BEING USED

- c. Given a tactical situation, a message to be transmitted, a message destination, an AIC communications system and a responsive message destination
- b. state whether communications ECM is being employed
- s. 90% correct

4.3.4.2 TRANSMIT SO AS TO MINIMIZE COMMUNICATIONS ECM INTERFERENCE

- c. Given a tactical situation, a message to be transmitted and an AIC communications system
- b. use transmission procedures which minimize the effect of ECM
- s. 90% successfully avoiding ECM



4.4.1 SEND A MESSAGE BY MANIPULATING DATA LINK EQUIPMENT

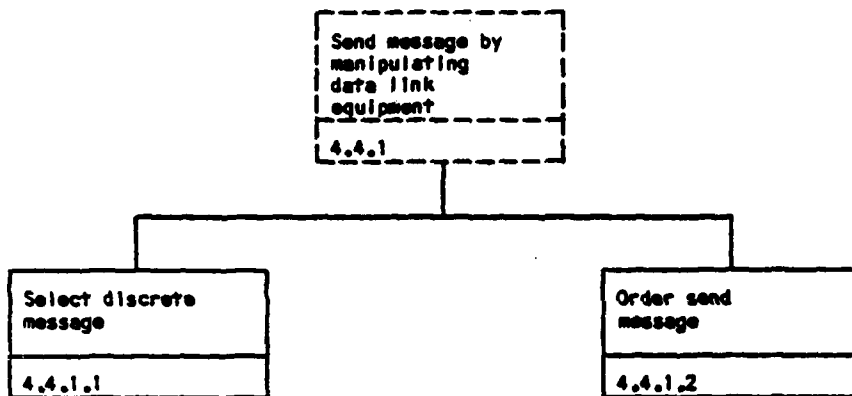
- c. Given an operating data link system, a message to be sent, and a message destination
- b. send a message utilizing data link equipment
- s. 100% accurate manipulation; 90% accurate input

4.4.2 SEND A MESSAGE BY MANIPULATING RADIO/TELEPHONE EQUIPMENT

- c. Given an operating radio/telephone, a message to be sent, and a message destination
- b. send a message utilizing radio/telephone equipment
- s. 100% accurate manipulation; 90% accurate input

4.4.3 SEND A MESSAGE BY MANIPULATING NTDS INTERCOM EQUIPMENT

- c. Given an operating NTDS intercom, a message to be sent, and a message destination
- b. send a message utilizing NTDS intercom equipment
- s. 100% accurate manipulation; 90% accurate input



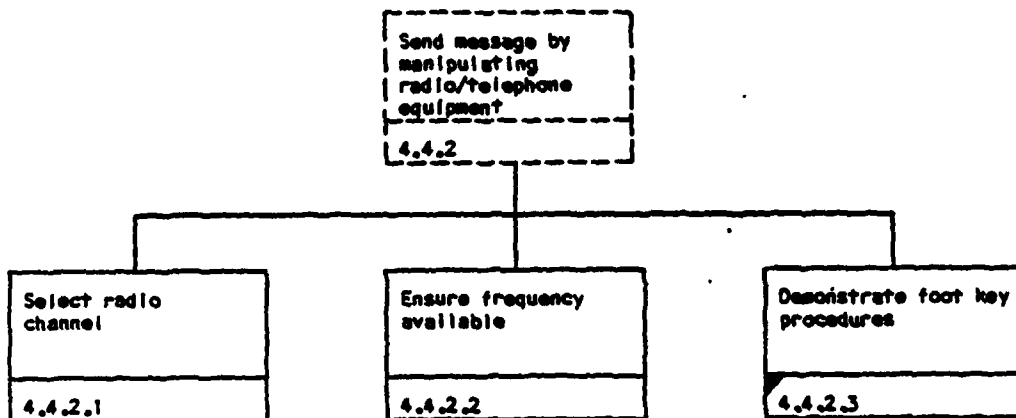
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4.4.1.1 SELECT DISCRETE MESSAGE AND ORDER SEND IT

- c. Given a message to be transmitted via data link, a message destination and a data link equipped NTDS console
- b. select discrete message
- s. 100% correct

4.4.1.2 ORDER SEND MESSAGE

- c. Given a selected discrete message, a message destination, and a data link equipped NTDS console
- b. order send the message
- s. 100% correct



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4.4.2.1 SELECT THE CORRECT RADIO CHANNEL

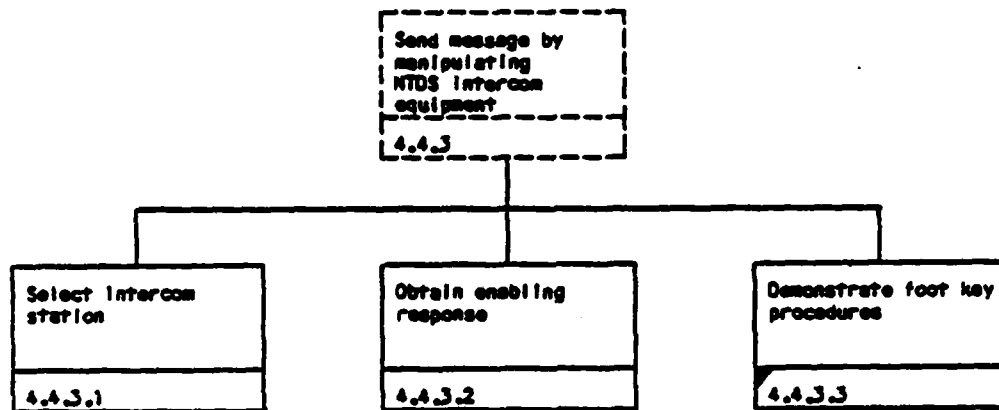
- c. Given an R/T system and an assigned radio channel
- b. activate the channel selector feature to the appropriate radio channel
- s. 100% correct

4.4.2.2 ENSURE THE CORRECT FREQUENCY IS AVAILABLE

- c. Given an R/T system and an assigned frequency
- b. state whether the assigned frequency is available for R/T transmission
- s. 100% correct

4.4.2.3 DEMONSTRATE CORRECT FOOT KEY ACTIVATION PROCEDURES

- c. Given a communications system and a message to be transmitted
- b. activate and deactivate the foot key at the appropriate times during message transmission
- s. 100% correct



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4.4.3.1 SELECT THE APPROPRIATE NTDS INTERCOM STATION

- c. Given an NTDS intercom system and a message destination
- b. activate the station selection feature to the appropriate setting
- s. 100% correct

4.4.3.2 OBTAIN AN ENABLING RESPONSE FROM SELECTED NTDS INTERCOM STATION

- c. Given an NTDS intercom system, a selected station and a message to be transmitted
- b. indicate when you have received an enabling response
- s. 100% correct

4.4.3.3 DEMONSTRATE CORRECT FOOT KEY ACTIVATION PROCEDURES

- c. Given a communications system and a message to be transmitted
- b. activate and deactivate the foot key at the appropriate times during message transmission
- s. 100% correct

TABLE E1. ALTERNATE NUMBERS TABLE - TERMINAL OBJECTIVE 4.0 HIERARCHY

Objective Number	Objective and/or Reference
4.1.1.1.1	DETERMINE THAT THE MESSAGE DESTINATION IS THE AIRCRAFT c. Given a tactical situation and message data b. state whether the aircraft is the appropriate message destination s. 100% correct Alternate numbers: 4.1.2.1.1
4.1.1.1.2	DETERMINE WHETHER THE AIRCRAFT HAS DATA LINK CAPABILITY c. Given a tactical situation, a CAP aircraft and information on aircraft status b. state whether the aircraft has data link capability s. 100% correct Alternate numbers: 4.1.2.1.2
4.1.1.1.3	DETERMINE WHETHER DATA LINK SYSTEM IS OPERATIONAL c. Given an NTDS console b. state whether data link system is operational s. 90% correct Alternate numbers: 4.1.2.1.3
4.1.1.1.4	DETERMINE WHETHER DATA IS DATA LINK TRANSMITTABLE c. Given message data b. state whether the data can be transmitted via data link s. 90% correct Alternate numbers: 4.1.2.1.4
4.1.2.1.1	See 4.1.1.1.1
4.1.2.1.2	See 4.1.1.1.2
4.1.2.1.3	See 4.1.1.1.3
4.1.2.1.4	See 4.1.1.1.4
4.2.1.1	REVIEW MESSAGE TO BE TRANSMITTED c. Given a message to be transmitted b. list the message content elements s. 100% correct Alternate numbers: 4.2.2.1, 4.2.3.1, 4.2.4.1
4.2.2.1	See 4.2.1.1, 4.2.3.1, 4.2.4.1
4.2.3.1	See 4.2.1.1, 4.2.2.1, 4.2.4.1
4.2.4.1	See 4.2.1.1, 4.2.2.1, 4.2.3.1

TABLE E1. ALTERNATE NUMBERS TABLE - TERMINAL OBJECTIVE 4.0 HIERARCHY (Cont)

Objective Number	Objective and/or Reference
4.4.2.3	DEMONSTRATE CORRECT FOOT KEY ACTIVATION PROCEDURES c. Given a communications system and a message to be transmitted b. activate and deactivate the foot key at the appropriate times during message transmission s. 100% correct Alternate numbers: 4.4.3.3
4.4.3.3	See 4.4.2.3

Advance Systems Division
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