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INTEGRATED BATTLEFIELD EFFECTS RESEARCH FOR THE NATIONAL TRAINING CENTER

Appendix E—Requirements Design Specification and Demonstration Report for the Exercise Coordination and Control (ECC) Demonstration System

**Science Applications International Corporation
P. O. Box 2351
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11. TITLE (Continued)

Coordination and Control (ECC) Demonstration System

19. ABSTRACT (Continued)

Demonstration of the system for combining live and notional battalions for training higher level staffs in integrated battlefield (IB) command and control:

Functional requirements analysis for IB command and control simulation Appendix D
Report on the demonstration Appendix E

Analysis and design of field simulators for nuclear and chemical warfare:

Technical and operational impacts of field simulators Appendix F
Capability of off-the-shelf paging system to communicate at Ft. Irwin Appendix G
Designs of field simulators Appendix H

Adaptation of nuclear and chemical software to other Army training models:

Feasibility of transferring ARTBASS Code from Perkin-Elmer to VAX Appendix I
Division/Corps training simulation functional analysis Appendix J
ARTBASS conversion to VAX Appendix K
Requirements specification for adding nuclear and chemical models
to ARTBASS Appendix L

This research provided the following products:

Software which models nuclear and chemical environment and effects with appropriate fidelity and timing for training and which is ready for installation on NTC computers.

A demonstrated capability for combining actions of real battalions with computer simulated notional battalions for training brigade/division commanders and staffs.

An analysis of the impacts of using field simulators at the NTC for nuclear and chemical warfare training, and the designs of the selected simulators (i.e., common control system, radiacmeters, dosimeters, chemical detectors).

Analysis of the application of nuclear and chemical models to other Army battalion training models; conversion of the ARTBASS model to operate on the VAX 11/780; incorporation of the nuclear and chemical models into ARTBASS; and demonstration of the nuclear and chemical models using ARTBASS.

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CONVERSION FACTORS FOR U.S. CUSTOMARY TO METRIC (SI) UNITS OF MEASUREMENT

To Convert From	To	Multiply By
angstrom	Meters (m)	1.000 000 x E -10
atmosphere (normal)	Kilo pascal (kPa)	1.013 25 X E +2
bar	kilo pascal (kPa)	1.000 000 X E +2
barn	meter ² (m ²)	1.000 000 X E -28
British thermal unit (thermochemical)	joule (J)	1.054 350 X E +3
cal (thermochemical)/cm ²	mega joule/m ² (MJ/m ²)	4.184 000 X E -2
calorie (thermochemical)	joule (J)	4.184 000
calorie (thermochemical)/g	joule per kilogram (J/kg)*	4.184 000 X E +3
curie	giga becquerel (Gbq) †	3.700 000 X E +1
degree Celsius	degree kelvin (K)	$t_K = t_C + 273.15$
degree (angle)	radian (rad)	1.745 329 X E -2
degree Fahrenheit	degree kelvin (K)	$t_K = (t_F + 459.67)/1.8$
electron volt	joule (J)	1.602 19 X E -19
erg	joule (J)	1.000 000 X E -7
erg/second	watt (W)	1.000 000 X E -7
foot	meter (m)	3.048 000 X E -1
foot-pound-force	joule (J)	1.355 818
gallon (U.S. liquid)	meter ³ (m ³)	3.785 412 X E -3
inch	meter (m)	2.540 000 X E -2
jerk	joule (J)	1.000 000 X E +9
joule kilogram (J/kg) (radiation dose absorbed)	gray (Gy)*	1.000 000
kilotons	terajoules	4.183
kip (1000 lbf)	newton (N)	4.448 222 X E +3
kip/inch ² (ksi)	kilo pascal (kPa)	6.894 757 X E +3
ktap	newton-second/m ² (N-s/m ²)	1.000 000 X E +2
micron	meter (m)	1.000 000 X E -6
mil	meter (m)	2.540 000 X E -5
mile (international)	meter (m)	1.609 344 X E +3
ounce	kilogram (kg)	2.834 952 X E -2
pound-force (lbf avoirdupois)	newton (N)	4.448 222
pound-force inch	newton-meter (N·m)	1.129 848 X E -1
pound-force/inch	newton/meter (N/m)	1.751 268 X E +2
pound-force/foot ²	kilo pascal (kPa)	4.788 026 X E -2
pound-force/inch ² (psi)	kilo pascal (kPa)	6.894 757
pound-mass (lbm avoirdupois)	kilogram (kg)	4.535 924 X E -1
pound-mass-foot ² (moment of inertia)	kilogram-meter ² (kg·m ²)	4.214 011 X E -2
pound-mass/foot ³	kilogram-meter ³ (kg/m ³)	1.061 846 X E +1
rad (radiation dose absorbed)	gray (Gy)*	1.000 000 X E -2
roentgen	coulomb/kilogram (C/kg)	2.579 760 X E -4
shake	second (s)	1.000 000 X E -8
slug	kilogram (kg)	1.459 390 X E -1
torr (mm Hg, 0° C)	kilo pascal (kPa)	1.333 22 X E -1

*The gray (Gy) is the accepted SI unit equivalent to the energy imparted by ionizing radiation to a mass and corresponds to one joule/kilogram.

†The becquerel (Bq) is the SI unit of radioactivity; 1 Bq = 1 event/s.

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SECTION 1 INTRODUCTION

As part of Phase III of the Defense Nuclear Agency (DNA) contract, a proof-of-concept demonstration will be given for the Integrated Battlefield Command and Control Simulation (IBCCS) system. This demonstration will show the capability of taking data from both live and simulated histories and combining them at a Division level station. This Division level station is called the Exercise Coordination and Control (ECC) station.

The demonstration will be developed based upon an National Training Center (NTC) operational training scenario. The scenario will contain two OPFOR Motorized Rifle Regiments (MRRs) and two BLUEFOR battalions. Raw data tapes from the April/May rotation will be used to drive the Exercise Monitoring and Control/Training Analysis and Feedback (EMC/TAF) software for one BLUEFOR battalion and one MRR. The Army Training Battle Simulation System (ARTBASS) will be used to provide simulated data for one BLUEFOR battalions and one OPFOR MRR. The scenario required for the demonstration will be prepared based upon the live scenario utilized for the EMC/TAF history.

The primary purpose of the demonstration will be to verify the ECC concept and show the feasibility of combining live and simulated data for the purpose of training the Brigade staff. To conduct the demonstration, software modifications will be required to both the Core Instrumentation Subsystem (CIS) 500 Player system and the battle simulation model. Software will also have to be provided for the ECC history. This document defines the required software additions and modifications.

SECTION 2 SOFTWARE REQUIREMENTS FOR ECC/TAF

2.1 Architecture of the ECC History

In order to assist in the coordination of simulation and EMC/TAF exercises, and in the preparation of After Action Reviews (AARs), a special exercise history shall be created. This history shall contain unit level data from both live and simulated battalions and from the data entered into the history by the operator through use of interactive menus. The history shall contain only unit level information for a maximum of 240 units.

For purposes of this demonstration, the ECC station shall only provide control for the definition and execution of nuclear events. For all other functions, the ECC station shall be capable of reviewing situations based upon data received from EMC/TAF and ARTBASS on real and notional units, respectively. Data logging capabilities shall also be provided at the ECC station which allows the ECC operator to record the receipt of pertinent information for later display and review.

The ECC history shall be able to occupy any one of the three available NTC history slots. A history slot shall be defined for ECC upon initialization of an ECC history. The initialization process for the ECC history shall be accomplished through both automatic and manual means. The ECC history initialization file shall contain, as a minimum, the unit information associated with the Brigade Under Training. If simulation data will be used in the history, the initialization file will also contain each defined leaf level unit, as well as the higher echelon units associated with those leaf units. The initialization file need not contain any information on the units which are defined in any EMC/TAF histories to be included in the history.

As part of the History Initialization process, the operator will define the data streams which shall be included in the ECC history. For the demonstration, one EMC/TAF and one simulation data stream shall be selected.

To initialize the ECC history, a copy of the current USVT from the selected EMC/TAF history will be modified and written to the ECC history slot. Library functions shall be written to perform the modifications and to write the data to the ECC history. Required modifications to the data contained in the EMC/TAF USVT include the following:

1. Change the Battalion Under Training's next higher echelon pointer from zero to the Brigade Under Training.

2. Update the unit number pointers (i.e., 1-75) to the new ECC USVT slot numbers.
3. Delete the units defined for the 2nd MRR from the ECC USVT. These units must remain in the EMC/TAF USVT.

The USVT shall be updated as further EMC/TAF units are created in the engagement simulation history.

To fill the USVT with appropriate data from the battle simulation model and ECC, the software will utilize the data provided in the history initialization file. This initialization file, which will be in the same format as the NTC history initialization file, must be set up so that the unit table in the simulation/ECC interface software matches the unit numbers in the USVT.

2.2 Computational Component Processing

Data shall automatically be entered into the ECC/TAF history from the simulation data base and EMC/TAF. Data may also be entered through the interactive menu capability provided with the ECC/TAF history. The data in the ECC/TAF history shall be organized in the same basic manner as an EMC/TAF history. The following processing features shall be provided by the Computational Component (CC).

2.2.1 Unit Position Data Processing - The position location of players defined in the EMC/TAF history shall be provided to the EMC/TAF history via the RDMS/CC interface. From this information, the Master Statistician calculates the center of mass of each defined player unit. For no-player units the operator enters the center of mass through interactive menu selections. The EMC/TAF history shall provide the ECC/TAF history with the center of mass for each defined player and no-player unit.

The battle simulation model shall provide the ECC/TAF history with the position of each unit defined in the simulation. Data will only be provided for leaf level units; the ECC/TAF history shall calculate the center of mass of higher echelon units, based upon the locations of the leaf units.

A Unit Position interactive menu shall be provided for manually entering the position location of ECC defined units.

2.2.2 Unit Engagement Data Processing - Unit engagement data shall be provided to the ECC/TAF history from both the EMC/TAF history and the battle simulation model. No engagement data shall be available for units defined in the ECC/TAF history. The engagement data provided to the

ECC/TAF history shall be used to generate unit engagement alerts and arrows.

2.2.3 Support Fire Processing - Indirect firing data shall be transmitted from the battle simulation model and the EMC/TAF histories to the ECC/TAF history. The EMC/TAF shall provide the NTC Indirect File Casualty Assessment System (IFCAS) Target Engagement Messages, IFCAS Casualty Messages, IFCAS Alert Messages and History Fire Support Log entries. The simulation shall provide the following information to the ECC/TAF history for each support fire mission: time, target location, firing unit, shell/fuse, number of rounds, and the number of resulting casualties. This information shall be used for generation of the ECC Fire Support Log and generation of the appropriate alerts and graphical symbology.

2.2.4 Nuclear Event Processing - The nuclear environmental data (i.e., fallout prediction, prompt effects radii and radiation fallout contours) calculated by the nuclear model shall be available for display by the ECC/TAF Interactive Display and Control Component. A maximum number of three surface bursts (i.e., fallout producing events) shall be accommodated at one time; additional ground bursts shall be executed as air bursts.

Each history, as well as the simulation, shall have its own nuclear model process. In ECC real history segments, only those nuclear events defined by the ECC controllers shall be executed. In non-ECC real segments, the nuclear models shall be controlled by the appropriate stations. The nuclear model controlled by the ECC/TAF history shall consolidate environmental effects from ECC generated events. Events which occur outside of the ECC/TAF history shall not be combined.

Unit radiation status shall be provided to the ECC history from both the EMC/TAF and ARTBASS. This data shall be used in generation of the Unit Radiation Status report.

2.2.5 Intelligence Processing - The ECC/TAF controller shall enter intelligence data received from and transmitted to the Brigade via the Intelligence interactive menu. All entries made at the Intelligence menu shall be available for display at the tactical display and shall be automatically logged in the Intelligence Log. The display of intelligence symbology shall be controlled by buttons on the BLUEFOR master menu.

2.2.6 Statistical Data Processing - The following statistical displays shall be provided at the support displays:

1. Task Organization - The superior/subordinate relationship of BLUEFOR and OPFOR live, simulated and ECC-generated units shall be maintained. The task organization shall be available for display by force, as depicted in Figure 1.
2. Fire Support Log - The Fire Support Log shall detail the results of indirect fire missions through the live and simulated history data. Figure 2 depicts the format of the report.
3. Intelligence Log - ECC console operators shall use the Intelligence interactive menu to record intelligence information passed to and received from the Brigade TOC. These data shall be available for display at the tactical display as well as in the Intelligence Log depicted in Figure 3.
4. Prescheduled Event Log - The command and control and intelligence events entered through the prescheduled events menu shall be displayed in a tabular Prescheduled Events Log as depicted in Figure 4.
5. NBC Report Log - ECC controller NBC report input to the Nuclear/ Chemical Report Log menu shall be available for display, as depicted in Figure 5.
6. Nuclear Event Log - The Nuclear Event Log, as depicted in Figure 6, shall indicate the summary information about each nuclear event which has occurred. The status field shall indicate whether the event was executed, cancelled, or not executed.
7. Unit Radiation Status - The Unit Radiation Status report, depicted in Figure 7, shall indicate the radiation status rating (RS0-RS4) for the specified unit for a specified time period.

2.3 Interactive Display and Control Processing

All interactive data display and input/output control capabilities required for operators to monitor and control the ECC shall be provided by this function. To facilitate operator training, the man-machine interface provided by this function shall be similar to that used by the NTC to support EMC/TAF operations.

The graphics tablet shall be the primary man-machine interface device. The graphics tablet layout is depicted in Figure 8.

1	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0
TASK ORGANIZATION				2-123	DD MMM YY HH:MM			
XXXXXXXXXXXXX								
XXXXXXXXXXXXX								
XXXXXXXXXXXXX								
XXXXXXXXXXXXX								
XXXXXXXXXXXXX								
XXXXXXXXXXXXX								
XXXXXXXXXXXXX								
XXXXXXXXXXXXX								
XXXXXXXXXXXXX								
XXXXXXXXXXXXX								
XXXXXXXXXXXXX								
XXXXXXXXXXXXX								

Figure 1. Task organization.

TITLE: TASK ORGANIZATION

DISPLAY TYPE: TABULAR

CONTENT:

Column Heading

Description

FIRST COLUMN

The name of a unit defined in the system data base.

SECOND COLUMN

The names of units immediately subordinate to the above listed unit.

THIRD COLUMN

The names of units immediately subordinate to the unit named in the second column.

Similarly, for COLUMNS
FOUR through SIX

DISPLAY CRITERIA:

TIME

The display shall reflect the task organization at an operator specified exercise time or, as a default at the exercise time as displayed on the Tactical Display at the time of the display request.

NOTE: The operator specified time must be a time which is included in the current exercise segment.

UNIT

The requestor specifies a unit for which task organization data is desired.

Figure 1. Task organization (concluded).

TITLE: FIRE SUPPORT LOG

DISPLAY TYPE: TABULAR

CONTENT:

Column Heading -----	Description -----
TIME	Time of mission execution.
TGTNR (IMMED)	Target number of target, "IMMED" if immediate mission with no target number assigned, or group designation if applicable.
TGT LOC	UTM grid location for mission effects/delivery.
FIRING UNIT	Name designation of unit executing mission.
SHELL/FUSE	Type of shell/fuse combination used.
ROUNDS	Number of rounds of ammunition expended in firing.
EFFECT	Description of mission effects for uninstrumented personnel and vehicles (by type), and instrumented losses by player identification.
DISPLAY CRITERIA:	
TIME	All data on fire support missions shall be displayed for the entire history at an operator specified time range or, as a default, since the beginning of the history to the exercise time as displayed on the Tactical Display at the time of the display request.

Figure 2. Fire support log (continued).

FORCE

The fixed portion of this format occupies one line per entry with effects on subsequent lines, with uninstrumented losses followed by instrumented losses by ID, for as many lines as necessary.

The operator specifies whether the display is for the BLUEFOR or OPFOR Fire Support Log.

Figure 2. Fire support log (concluded).

	1	2	3	4	5	6	7	8
1	0	0	0	0	0	0	0	0

INTELLIGENCE LOG				DD MMM YY HH:MM - DD MMM YY HH:MM	
TIME OF	REPORTING	RECEIVING			
REPORT	UNIT	UNIT	CATEGORY	METHOD	
DDMMYYHHMM	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXX	
TYPE:XXXXXXX	DESCRIPTION:XXXXXXXXXXXXXXXXXXXX				

Figure 3. Intelligence log.

TITLE: Intelligence Log

DISPLAY TYPE: Tabular

CONTENT:

Column Heading

Description

TIME OF REPORT

Indicates the time of the report.

REPORTING UNIT

Name of the unit making the report.

RECEIVING UNIT

Name of the unit receiving the intelligence report.

CATEGORY

Specifies the category of data. COMBAT INFOR indicates combat information and PROC INTEL indicates processed intelligence.

DETECTION METHOD

For Combat Information, indicates HUMINT for human intelligence, ELINT for electromagnetic intelligence or IMINT for imagery intelligence. This field not used for processed intelligence.

TYPE

For Combat Information, indicates FORCE for force detection, OBSTACLE for obstacle detection or WEATHER for weather data.

DESCRIPTION

For force detections indicates the type and number of equipment detected; for obstacle, indicates the type of obstacle detected and for weather indicates the reported weather class. For Processed intelligence, indicates the suspected unit type and echelon.

Figure 3. Intelligence log (continued).

DISPLAY CRITERIA:

TIME

The display shall include all intelligence report data which was defined for the current exercise segment, up to the time of the display request, or for an operator defined time interval. The data will be ordered chronologically.

Figure 3. Intelligence log (concluded).

	1	2	3	4	5	6	7	8
1	0	0	0	0	0	0	0	0

PRESCHEDULED EVENT LOG - BLUEFOR				DD MMM YY HH:MM - DD MMM YY HH:MM				
TIME		ORIGIN		TYPE		CODE NAME		
DD HH:MM		NN		XXXXXXX		XXXXXXXXXXXXXXXXXX		
		[ASSOCIATED TEXT MESSAGE]						
		[ASSOCIATED TEXT MESSAGE]						
		[ASSOCIATED TEXT MESSAGE]						

Figure 4. Prescheduled event log.

TITLE: PRESCHEDULED EVENT LOG

DISPLAY TYPE: TABULAR

CONTENT:

<u>Column Heading</u>	<u>Description</u>
TIME	Time the event was to be displayed to the operator as defined via the Prescheduled Event Definition menu.
ORIGIN	Identification number of the controller station that defined the event.
TYPE	The event tactical category (i.e., Command and Control or Intelligence) as defined by the operator via the Prescheduled Event Definition menu.
CODE NAME	Designator assigned to the event as defined by the operator via the Prescheduled Event Definition menu.
TEXT	Message displayed to the controller as operator defined via the Prescheduled Event Definition menu.
DISPLAY CRITERIA:	
TIME	The events shall be displayed for an operator specified time range or, as a default, from the beginning of the history to the exercise time as displayed on the Tactical Display at the time of the display request.
FORCE	Name of force initiating event as defined by the operator via the Prescheduled Event Definition menu.

Figure 4. Prescheduled event log (concluded).

1	2	3	4	5	6	7	8
1	0	0	0	0	0	0	0

NBC REPORT LOG

DD MMM YY HH:MM - DD MMM YY HH:MM

NBC MISSION DATA

TIME DD HH:MM	TRGT POINT AANNNNNNNN	YIELD NNN	HOB XXXXXXX	WIND SPD/DIR NN/NNN	VISIBILITY NNNN	DOWNWIND DIST NN
------------------	--------------------------	--------------	----------------	------------------------	--------------------	---------------------

NBC REPORTS

TIME DD HH:MM	PRECEDENCE AAAAAAA	CLASSIFICATION AAAAAAA	FROM XXXXXXXXXXXX	TO XXXXXXXXXXXX	REPORT TYPE
	OBSERVER UTM: AANNNNNNNN				NBC-1
	DIRECTION OF ATTACK: NNN				
	DETONATION DD HH:MM				
	(ATTACK UTM: AANNNNNNNN)				
	MEANS OF DELIVERY: XXXXXXXX				NBC-2
	TYPE OF BURST: XXXXXXXX				
DD HH:MM	AAAAAAA	AAAAAAA	XXXXXXXXXXXX	XXXXXXXXXXXX	
	ATTACK UTM: AANNNNNNNN				
	ESTIMATED YIELD: NNNN				NBC-3
	(STRIKE SERIAL NUMBER: NNNN)				
	(DETONATION DD HH:MM)				
	(TYPE OF BURST: XXXXXXXX)				
DD HH:MM	AAAAAAA	AAAAAAA	XXXXXXXXXXXX	XXXXXXXXXXXX	NBC-4
	(MEANS OF DELIVERY: XXXXXXXX)				
	DETONATION DD HH:MM				
	ATTACK UTM: AANNNNNNNN				
	EFFECTIVE WINDSPEED: NNNN				NBC-5
	STRIKE SERIAL NUMBER: NNNN				
	DIRECTION TO RADIAL LINES: NNN				
DD HH:MM	AAAAAAA	AAAAAAA	XXXXXXXXXXXX	XXXXXXXXXXXX	
	READING LOCATION: AANNNNNNNN				NBC-5
	DOSE RATE: NNNN				
	DOSE RATE DD HH:MM				
DD HH:MM	AAAAAAA	AAAAAAA	XXXXXXXXXXXX	XXXXXXXXXXXX	
	STRIKE SERIAL NUMBER: LNNN				NBC-5
	H+1 DD HH:MM				
	ESTIMATED CONTOUR REFERENCE DD HH:MM				
	(DECAY RATE: NNNN)				
	(CONTOUR LINES: UUUU VVVV WWW XXXX)				

Figure 5. NBC report log.

TITLE: NBC REPORT LOG

DISPLAY TYPE: TABULAR

CONTENT:

<u>Column Heading</u>	<u>Description</u>
PRECEDENCE	Precedence of report (i.e., Flash or Immediate) as defined by the operator via the Nuclear/Chemical Report Log menu.
CLASSIFICATION	Specifies the security class.
FROM	Reporting unit as specified by the operator via the Nuclear/Chemical Report Log menu.
TO	Unit receiving the NBC report as specified by the operator via the the Nuclear/Chemical Report Log menu.
CATEGORY	Type of report (i.e., NBC-1, NBC-2 NBC-3, NBC-4, or NBC-5) logged as defined by the operator via the Nuclear/Chemical Report Log menu.
NBC-1 REPORT:	
OBSERVER UTM	Location of unit observing attack, in UTM coordinates, as defined by the operator via the Nuclear/Chemical Report Log menu.
DIRECTION OF ATTACK	Direction of attack in degrees as defined by the operator via the Nuclear/Chemical Report Log menu.
DETONATION TIME	Time of weapon detonation as defined by the operator via the Nuclear/Chemical Report Log menu.
MEANS OF DELIVERY	Means of weapon delivery as defined by the operator via the Nuclear/Chemical Report Log menu.
TYPE OF BURST	Type of burst as defined by the operator via the Nuclear/Chemical Report Log menu.

Figure 5. NBC report log (continued).

NBC-2 REPORT:

ATTACK UTM

Location of attack, in UTM coordinates, as defined by the operator via the Nuclear/Chemical Report Log menu.

ESTIMATED YIELD

Estimated yield, in KT, as defined by the operator via the Nuclear/Chemical Report Log menu.

STRIKE SERIAL NUMBER

Strike serial number assigned to event as defined by the operator via the Nuclear/Chemical Report Log menu.

DETONATION TIME

Time of weapon detonation as defined by the operator via the Nuclear/Chemical Report Log menu.

TYPE OF BURST

Type of burst as defined by the operator via the Nuclear/Chemical Report Log menu.

NBC-3 REPORT:

DETONATION TIME

Time of weapon detonation as defined by the operator via the Nuclear/Chemical Report Log menu.

ATTACK UTM

Location of attack, in UTM coordinates, as defined by the operator via the Nuclear/Chemical Report Log menu.

WINDSPEED

Effective windspeed as defined by the operator via the Nuclear/Chemical Report Log menu.

STRIKE SERIAL NUMBER

Strike serial number assigned to event as defined by the operator via the Nuclear/Chemical Report Log menu.

DIRECTION TO RADIAL LINES

Direction to radial lines as defined by the operator via the Nuclear/Chemical Report Log menu.

Figure 5. NBC report log (continued).

NBC-4 REPORT:

READING LOCATION

Location of reading, in UTM coordinates, as defined by the operator via the Nuclear/Chemical Report Log menu.

DOSE

Dose rate as defined by the operator via the Nuclear/Chemical Report Log menu.

TIME OF READING

Time of dose rate reading as defined by the operator via the Nuclear/Chemical Report Log menu.

NBC-5 REPORT:

STRIKE SERIAL NUMBER

Strike serial number assigned to event as defined by the operator via the Nuclear/Chemical Report Log menu.

H+1 TIME

H+1 time as defined by the operator via the Nuclear/Chemical Report Log menu.

ESTIMATED CONTOUR REFERENCE
TIME

Estimated contour reference as defined by the operator via the Nuclear/Chemical Report Log menu.

DECAY

Decay rate as defined by the operator via the Nuclear/Chemical Report Log menu.

LINES

1000, 300, 100, and 20 cGy/hour contour lines, in UTM coordinates as defined by the operator via the Nuclear/Chemical Report Log menu.

DISPLAY CRITERIA:

TIME

All data on NBC reports shall be displayed for the entire history from the beginning of the history to the exercise time as displayed on the Tactical Display at the time of the display request or for an operator defined time interval.

Figure 5. NBC report log (concluded).

1	1	2	3	4	5	6	7	8
0	0	0	0	0	0	0	0	0

NUCLEAR EVENT LOG

DD MMM YY HH:MM

TIME	FORCE	AGENT	TARGET	DELIVERY	STATUS
DD HH:MM	XXXXXX	XXXXXXXX	LOCATION	METHOD	XXXXXXXXXX
			XXXXXXXXXX	XXXXXXXXXX	

Figure 6. Nuclear event log.

TITLE: Nuclear Event Log

DISPLAY TYPE: Tabular

CONTENT:

<u>Column Heading</u>	<u>Description</u>
TIME	Scheduled time of burst for nuclear event as defined by operator in the interactive menu.
FORCE	Name of force initiating the nuclear event as defined by operator in the interactive menu.
TYPE	Type of nuclear burst (i.e., ground or air) as defined by operator in the interactive menu.
GROUND ZERO	Location of target in UTM coordinates for the nuclear event as defined by operator in the interactive menu.
YIELD	Weapon yield in KT as defined by operator in the interactive menu.
STATUS	The status of the nuclear event, i.e., cancelled, executed and not executed. Not executed nuclear events shall be scheduled events occurring in a null segment).
DISPLAY CRITERIA:	
TIME	All data on nuclear events shall be displayed for the entire history from the beginning of the history to the exercise time as displayed on the Tactical Display at the time of the display request.

Figure 6. Nuclear event log (concluded).

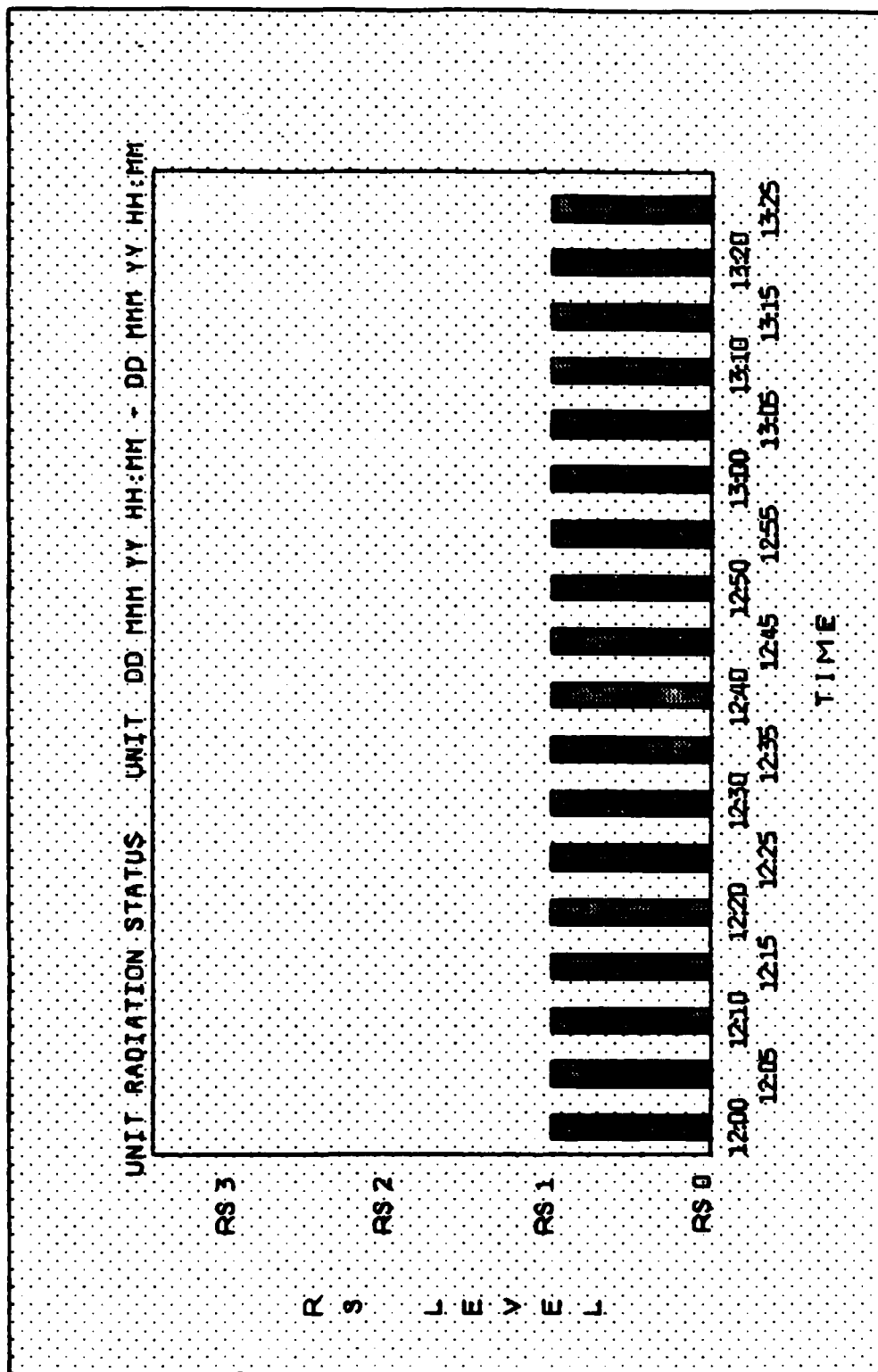


Figure 7. Unit radiation status log.

TITLE: UNIT RADIATION STATUS

DISPLAY TYPE: GRAPHICAL

CONTENT:

Column Heading

Description

RS LEVEL

The Radiation Status (RS) of leaf units based upon the radiation dose of the unit as calculated by the nuclear model as follows: RS-0 for 0 cGy, RS-1 for 1-70 cGy, RS-2 for 71-150 cGy and RS-3 for over 150 cGy.

For higher echelon units, the RS status for the attached leaf units are summed and assigned as follows:

Radiation status category of company or battalion	Number of platoons in company or number of companies in battalion					
	3	5	4	5	6	7
	Sum of RS numbers of all platoons or companies					
RS-0	0	0-1	0-1	0-2	0-3	0-3
RS-1	1-2	2-4	2-5	3-7	3-8	4-10
RS-2	3-4	5-7	6-9	8-15	9-14	11-17
RS-3	5-6	8-9	10-12	13-15	15-18	18-21

DISPLAY CRITERIA:

TIME

The display shall reflect the reports logged at an operator specified time or as a default, at the time displayed on the Tactical Display at the time of the display request.

Figure 7. Unit radiation status log (concluded).

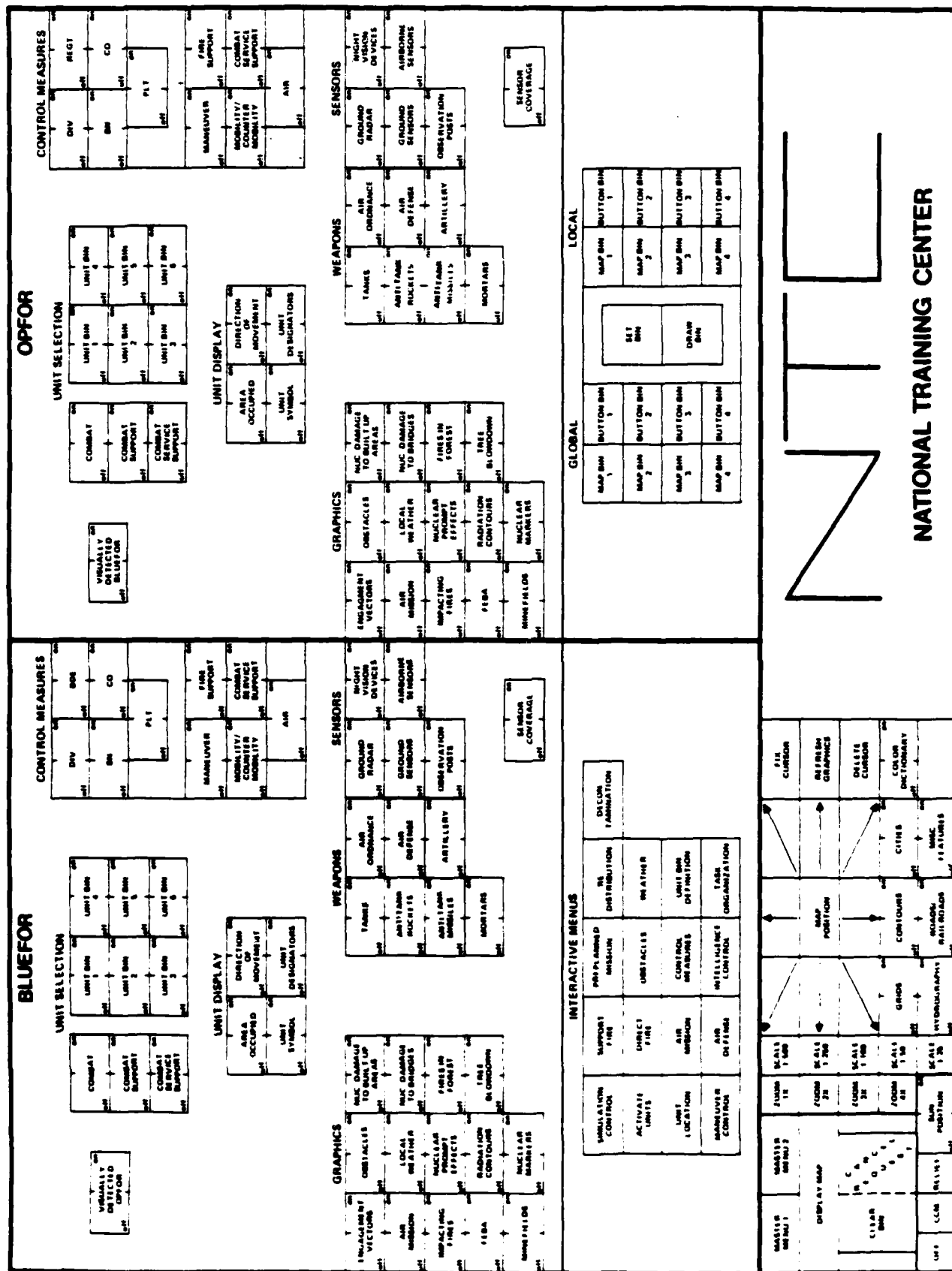


Figure 8. ECC Graphics table layout.

The following modes of operation, selectable by graphics tablet buttons, shall be provided:

1. Real-time mode
2. Historian mode
3. Edit AAR mode
4. Run AAR mode

Each of the modes shall be mutually exclusive. In the real-time mode, the station tactical display shall reflect the current real-time state of the exercise. In historian mode, historian buttons shall be provided which allow random access to different past time periods of the exercise segment. The edit AAR mode shall provide the operator with the capability of creating/editing a command file for use during an AAR. The run AAR mode shall read an AAR file and translate each command in the file into a request for execution.

2.3.1 Map Displays - The means to display and manipulate a color background of the Ft. Irwin area, upon which tactical symbology is overlaid, shall be provided in the same manner as is provided for the 500 Player CIS system.

2.3.2 Interactive Menus - The means to display master menus and interactive tactical/operational menus shall be provided. A standard interactive menu topology, which is compatible with that used by the EMC/TAF shall be utilized. This compatibility will assist in the training of operator personnel and improve the operational efficiency of data entered through either the color monitor display or the alphanumeric support display.

A standard set of display primitives, as defined in the 500 Player CIS RDS shall be employed for implementation of the menu system. The means to make selections from lists, define static symbology on the digital map, enter numeric and alphanumeric data, and terminate operations of the menu shall be provided. Cues to the operator shall be used to indicate the type of data that must be entered and shall provide feedback to the operator which indicates when a selection has been made.

The master menus shall be displayed over the entire background map display area on the tactical display. Tactical/operational menus shall be provided using both tactical and support display capabilities.

2.3.3 Master Menus - Each master menu shall be displayed in a single color. Specifically, Master Menu 1 shall be displayed in blue and Master Menu 2 shall be displayed in

red. Highlighting shall be employed to indicate when a function key is on (i.e, activated). A cursor, controlled by the graphic pen/tablet, shall be overlayed on the master menu displays to assist in function key selection.

2.3.4 Tactical/Operational Menus at Tactical Display - The following tactical/operational menus, as depicted in Figures 9 through 16, shall be provided for interactive control of the ECC/TAF history:

1. History Initialization/Termination
2. Exercise Segment Definition
3. History Segment Selection
4. Unit Definition
5. Task Organization
6. Control Measures
7. Unit Position
8. Intelligence

2.3.5 Tactical/Operational Menus at Support Display - The tactical/operational menus to be provided on the ECC/TAF support display, as depicted in Figures 17 through 20, shall include:

1. Prescheduled Event Definition
2. Nuclear/Chemical Report Log
3. Nuclear Event Definition
4. Decontamination

2.3.6 Tactical Symbolology - The following types of dynamic and static tactical symbolology shall be displayable over the background map:

1. Unit symbol in FM 21-30 format
2. Control measures
3. Unit engagement vectors
4. Prompt nuclear effects display

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	ACTION	INITIALIZE TERMINATE DELETE	Defines selection of action to be performed.
IP INITIALIZE:				
2	Alpha/ Numeric Entry	ENTER HISTORY NAME	6 spaces to be filled in from Alpha/Numeric pad.	Specifies designator to be assigned to History.
3	List	ENTER SOURCE OF DATA FOR THE 1ST BATTALION	'SIMULATION' followed by a list of EMC/TAP histories.	Specifies whether the data for the 1st ECC battalion originates from the simulation data base or one of the EMC/TAP histories.
4	List	ENTER SOURCE OF DATA FOR THE 2ND BATTALION	'SIMULATION' followed by a list of EMC/TAP histories.	Specifies whether the data for the 2nd ECC battalion originates from the simulation data base or one of the EMC/TAP histories. Entry is optional.
5	List	ENTER SOURCE OF DATA FOR THE 3RD BATTALION	'SIMULATION' followed by a list of EMC/TAP histories.	Specifies whether the data for the 3rd ECC battalion originates from the simulation data base or one of the EMC/TAP histories. Entry is optional.
6	List	--- ---	IGNORE DONE	Specifies manner of entry completion.

Figure 9. Menu: History initialization/termination/deletion.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IP TERMINATE:				
2	List	HISTORY	List consisting of the names of the available history .	Defines selection of history to be terminated.
3	List	--- ---	IGNORE DONE	Specifies manner of entry completion.
IP DELETE:				
2	List	HISTORY	List containing the names of all closed history .	Defines selection of history to be deleted.
3	List	--- ---	IGNORE DONE	Specifies manner of entry completion.

Figure 9. Menu: History initialization/termination/deletion (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	HISTORY	List consisting of the names of the available histories.	Defines selection of history for which segments will be opened. Current segment (if any) will automatically be closed.
2	List	TYPE	NULL REAL	Defines menu display options.
IP NULL:				
3	List	---	IGNORE DONE	Specifies manner of entry completion.
IP REAL:				
3	Numeric Entry	DATE	6 spaces to be filled in from Numeric pad.	Specifies day/month/year of exercise segment.
4	List	NUCLEAR/CHEMICAL OPTION	INCLUDE BOTH NUCLEAR AND CHEMICAL CAPABILITIES INCLUDE ONLY NUCLEAR CAPABILITIES INCLUDE ONLY CHEMICAL CAPABILITIES EXCLUDE BOTH NUCLEAR AND CHEMICAL CAPABILITIES	Specifies if nuclear and/or chemical capabilities are to be utilized.

Figure 10. Menu: Exercise segment definition.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF INCLUDE BOTH NUCLEAR AND CHEMICAL CAPABILITIES:				
5	List	CONTINUATION OF RADIATION AND/OR CHEMICAL CONTAMINATION	CONTINUE BOTH NUCLEAR RADIATION AND CHEMICAL CONTAMINATION FROM PREVIOUS SEGMENT	Specifies if nuclear radiation and/or chemical contamination shall be continued from previous exercise segment.
			CONTINUE ONLY NUCLEAR RADIATION FROM PREVIOUS SEGMENT	
			CONTINUE ONLY CHEMICAL CONTAMINATION FROM PREVIOUS SEGMENT	
			NO CONTINUATION FROM PREVIOUS SEGMENT	
IF CONTINUE BOTH RADIATION AND CHEMICAL CONTAMINATION, ONLY RADIATION, OR ONLY CHEMICAL CONTAMINATION FROM PREVIOUS SEGMENT:				
7	Numeric Entry	NULL SEGMENT TIME INTERVAL	5 spaces to be filled in from Numeric pad.	Specifies a length of time radiation/chemical contamination shall accumulate for preceding null segment, in the format HH:MM.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
8	Numeric Entry	BLUEFOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of BLUEFOR scenario.
9	Numeric Entry	OPFOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of OPFOR scenario.
10	Numeric Entry	INTENSITY INDEX CODE	BLUE OPPOR ----- PLANNING TIME AVAIL FIRE SUPPORT ARTILLERY MORTAR NUCLEAR CHEMICAL BIOLOGICAL SMOKE AIR DEFENSE ENGINEER EW	Specifies intensity index code where: 1 = Low 2 = Medium 3 = High
11	Alpha/Numeric Entry	KEY TRAINING OBJECTIVE CODE #	10 spaces to be filled in from Alpha/Numeric pad.	Specifies five 2 character codes.
12	Numeric Entry	VISIBILITY CODE	1 space to be filled in from Numeric pad.	Specifies visibility code where: 1 = Clear 2 = Dust 3 = Fog 4 = Rain
13	Numeric Entry	DAY/NIGHT CODE	1 space to be filled in from Numeric pad.	Specifies day/night code where: 1 = Day 0 = Night

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
14	Alpha/ Numeric Entry	Bn DESIGNATION	17 spaces to be filled in from Alpha/Numeric pad.	Specifies Battalion designation in format X-XXXXAA.
15	Numeric Entry	Bn DAY AT NTC	12 spaces to be filled in from Numeric pad.	Specifies number of days spent so far at NTC.
16	Numeric Entry	Bn TIMES THROUGH INDICATED SCENARIO	12 spaces to be filled in from Numeric pad.	Specifies number of times this unit has run through this scenario.
17	Alpha/ Numeric Entry	ASSIGNED/ATTACHED UNITS	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designation of assigned/attached units in format AAX-XXX. Up to 8 units may be identified.
18	List	TYPE OF Bn OPERATION/MISSION CODE	101 Movement to contact 102 Hasty attack 103 Deliberate attack 104 Exploitation and pursuit 105 Reconnaissance in force 106 Raid 111 Defend in sector 112 Defend from a battle area 113 Delay in sector 114 Delay forward of a specified line for a specified time 115 Disengagement 116 Counterattack	Specifies tactical mission assigned to Battalion for exercise segment.
19	List	Bn OPERATIONS MODIFIER CODE	101 Passage of lines 102 Hasty attack 103 Relief in place 104 Exploitation and pursuit 105 Road march 106 Occupation of assembly area	Specifies modification to Bn mission. Selection of modifier is optional.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
20	List	SELECT UNIT FOR ASSIGNMENT OF COMPANY MISSION CODE	List of assigned/attached units previously identified for which company operation/mission codes shall be defined.	Specifies unit for which company mission codes shall be defined. Up to 8 units may be selected, with company mission codes being requested for each selected unit. Selection of a unit is optional.
IF COMPANY MISSION CODES ARE ASSIGNED:				
21	List	COMPANY MISSION CODE	01 Movement to contact 02 Hasty attack 03 Deliberate attack 04 Exploitation and pursuit 05 Raid 11 Occupy a battle position 12 Hasty defense 13 Deliberate defense 14 Defend to retain a battle position 15 Create and defend a strongpoint (deliberate defense) 21 Patrol operations	Specifies tactical mission assigned to selected company for exercise segment. Selection of company mission code is optional.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
22	List	COMPANY OPERATIONS MODIFIER CODE	01 Passage of lines 02 Hasty attack 03 Relief in place 04 Exploitation and pursuit of modifier is optional. 05 Road march 06 Occupation of assembly area	Specifies modification to tactical mission of selected company. Selection of modifier is optional. Upon entry completion operator prompted to select next assigned/attached unit for assignment of company mission code. This procedure is repeated until all assigned/attached units have been assigned a company mission code or until the operator does not select an available assigned/attached unit for assignment of a company mission code.
23	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
24	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and EI number assignments are to be made.
25	Alpha/ Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
26	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
27	List	---	IGNORE IDONE	Specifies manner of entry completion.
IF COMPANY MISSION CODES ARE NOT ASSIGNED:				
21	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
22	List	IOC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and EI number assignments are to be made.
23	Alpha/Numeric Entry	IOC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
24	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.
25	List	---	IGNORE IDONE	Specifies manner of entry completion.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
11	Numeric Entry	VISIBILITY CODE	1 space to be filled in from Numeric pad.	Specifies visibility code where: 1 - Clear 2 - Dust 3 - Fog 4 - Rain
12	Numeric Entry	DAY/NIGHT CODE	1 space to be filled in from Numeric pad.	Specifies day/night code where: 1 - Day 0 - Night
13	Alpha/Numeric Entry	Bn DESIGNATION	7 spaces to be filled in from Alpha/Numeric pad.	Specifies Battalion designation in format X-XXXXAA.
14	Numeric Entry	Bn DAY AT WTC	2 spaces to be filled in from Numeric pad.	Specifies number of days spent so far at WTC.
15	Numeric Entry	Bn TIMES THROUGH INDICATED SCENARIO	2 spaces to be filled in from Numeric pad.	Specifies number of times this unit has run through this scenario.
16	Alpha/Numeric Entry	ASSIGNED/ATTACHED UNITS	6 spaces to be filled in from Alpha/Numeric pad.	Specifies designation of assigned/attached units in format AAX-XX. Up to 8 units may be identified.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
17	List	TYPE OF Bn OPERATION/MISSION CODE	01 Movement to contact	Specifies tactical mission assigned to Battalion for exercise segment.
			02 Hasty attack	
			03 Deliberate attack	
			04 Exploitation and pursuit	
			05 Reconnaissance in force	
			06 Raid	
			11 Defend in sector	
			12 Defend from a battle area	
			13 Delay in sector	
			14 Delay forward of a specified line for a specified time	
			15 Disengagement	
			16 Counterattack	
			01 Passage of lines	Specifies modification to Bn mission. Selection of modifier is optional.
			02 Hasty attack	
			03 Relief in place	
			04 Exploitation and pursuit	
			05 Road march	
			06 Occupation of assembly area	
18	List	Bn OPERATIONS MODIFIER CODE	List of assigned/attached units previously identified for which company operation/mission codes shall be defined.	Specifies unit for which company mission codes shall be defined. Up to 8 units may be selected, with company mission codes being requested for each selected unit. Selection of a unit is optional.
19	List	SELECT UNIT FOR ASSIGNMENT OF COMPANY MISSION CODE		
IF COMPANY MISSION CODES ARE ASSIGNED:				

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
20	List	COMPANY MISSION CODE	01 Movement to contact	Specifies tactical mission assigned to selected company for exercise segment. Selection of company mission code is optional.
			02 Hasty attack	
			03 Deliberate attack	
			04 Exploitation and pursuit	
			05 Raid	
			11 Occupy a battle position	
21	List	COMPANY OPERATIONS MODIFIER CODE	12 Hasty defense	Specifies modification to tactical mission of selected company. Selection of modifier is optional. Upon entry completion operator prompted to select next assigned/attached unit for assignment of company mission code. This procedure is repeated until all assigned/attached units have been assigned a company mission code or until the operator does not select an available assigned/attached unit for assignment of a company mission code.
			13 Deliberate defense	
			14 Defend to retain a battle position	
			15 Create and defend a strongpoint (deliberate defense)	
			21 Patrol operations	
			01 Passage of lines	
			02 Hasty attack	
			03 Relief in place	
			04 Exploitation and pursuit	
			05 Road march	
22	List	STATISTICAL UNITS	06 Occupation of assembly area	Specifies units for which statistics shall be collected/maintained during the exercise segment.
			List of all BLUEFOR and OPFOR player units currently identified in system data base.	

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
23	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and SI number assignments are to be made.
24	Alpha/Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
25	Numeric Entry	SI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies SI numbers assigned to unit for later assessments. Up to 10 SI numbers may be assigned.
26	List	--- ---	IGNORE DONE	Specifies manner of entry completion.
IF COMPANY MISSION CODES ARE NOT ASSIGNED:				
20	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
21	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and SI number assignments are to be made.
22	Alpha/Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
23	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.
24	List	---	IGNORE DONE	Specifies manner of entry completion.
IF INCLUDE ONLY NUCLEAR CAPABILITIES OR IF INCLUDE ONLY CHEMICAL CAPABILITIES:				
6	List	CONTINUATION OF RADIATION/CHEMICAL CONTAMINATION	CONTINUE RADIATION/CHEMICAL CONTAMINATION FROM PREVIOUS SEGMENT NO CONTINUATION OF RADIATION/CHEMICAL CONTAMINATION FROM PREVIOUS SEGMENT	Specifies if radiation/chemical contamination shall be continued from previous segment.
IF CONTINUE RADIATION/CHEMICAL CONTAMINATION FROM PREVIOUS SEGMENT:				
7	Numeric Entry	NULL SEGMENT TIME INTERVAL	5 spaces to be filled in from Numeric pad.	Specifies a length of time radiation/chemical contamination shall continue for preceding null segment, in the format HH:MM.
8	Numeric Entry	BLUESFOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of BLUESFOR scenario.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
9	Numeric Entry	OPFOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of OPFOR scenario.
10	Numeric Entry	INTENSITY INDEX CODE	BLUE OPFOR ----- PLANNING TIME AVAIL FIRE SUPPORT ARTILLERY MORTAR NUCLEAR CHEMICAL BIOLOGICAL SMOKE AIR DEFENSE ENGINEER EW	Specifies intensity index code where: 1 = Low 2 = Medium 3 = High
11	Alpha/Numeric Entry	KEY TRAINING OBJECTIVE CODE #	10 spaces to be filled in from Alpha/Numeric pad.	Specifies five 2 character codes.
12	Numeric Entry	VISIBILITY CODE	1 space to be filled in from Numeric pad.	Specifies visibility code where: 1 = Clear 2 = Dust 3 = Fog 4 = Rain
13	Numeric Entry	DAY/NIGHT CODE	1 space to be filled in from Numeric pad.	Specifies day/night code where: 1 = Day 0 = Night
14	Alpha/Numeric Entry	Bn DESIGNATION	7 spaces to be filled in from Alpha/Numeric pad.	Specifies Battalion designation in format X-XXXXX.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
15	Numeric Entry	Bn DAY AT MTC	12 spaces to be filled in from Numeric pad.	Specifies number of days spent so far at MTC.
16	Numeric Entry	Bn TIMES THROUGH INDICATED SCENARIO	12 spaces to be filled in from Numeric pad.	Specifies number of times this unit has run through this scenario.
17	Alpha/Numeric Entry	ASSIGNED/ATTACHED UNITS	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designation of assigned/attached units in format AAX-XXX. Up to 8 units may be identified.
18	List	TYPE OF Bn OPERATION/MISSION CODE	101 Movement to contact 102 Hasty attack 103 Deliberate attack 104 Exploitation and pursuit 105 Reconnaissance in force 106 Raid 111 Defend in sector 112 Defend from a battle area 113 Delay in sector 114 Delay forward of a specified line for a specified time 115 Disengagement 116 Counterattack	Specifies tactical mission assigned to Battalion for exercise segment.
19	List	Bn OPERATIONS MODIFIER CODE	101 Passage of lines 102 Hasty attack 103 Relief in place 104 Exploitation and pursuit 105 Road march 106 Occupation of assembly area	Specifies modification to Bn mission. Selection of modifier is optional.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
20	List	SELECT UNIT FOR ASSIGNMENT OF COMPANY MISSION CODE	List of assigned/attached units previously identified for which company operation/mission codes shall be defined.	Specifies unit for which company mission codes shall be defined. Up to 8 units may be selected, with company mission codes being requested for each selected unit. Selection of a unit is optional.
IF COMPANY MISSION CODES ARE ASSIGNED:				
21	List	COMPANY MISSION CODE	01 Movement to contact 02 Hasty attack 03 Deliberate attack 04 Exploitation and pursuit 05 Raid 11 Occupy a battle position 12 Hasty defense 13 Deliberate defense 14 Defend to retain a battle position 15 Create and defend a stronghold (deliberate defense) 21 Patrol operations	Specifies tactical mission assigned to selected company for exercise segment. Selection of company mission code is optional.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
22	List	COMPANY OPERATIONS MODIFIER CODE	101 Passage of lines 102 Hasty attack 103 Relief in place 104 Exploitation and pursuit 105 Road march 106 Occupation of assembly area	Specifies modification to tactical mission of selected company. Selection of modifier is optional. Upon entry completion operator prompted to select next assigned/attached unit for assignment of company mission code. This procedure is repeated until all assigned/attached units have been assigned a company mission code or until the operator does not select an available assigned/attached unit for assignment of a company mission code.
23	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
24	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and EI number assignments are to be made.
25	Alpha/ Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
26	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
27	List	---	IGNORE DONE	Specifies manner of entry completion.
IIP COMPANY MISSION ICODES ARE NOT ASSIGNED:				
21	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
22	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which IOC assessor ID and EI number assignments are to be made.
23	Alpha/ Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to per- form assessment of BLUEFOR unit selected above.
24	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.
25	List	---	IGNORE DONE	Specifies manner of entry completion.
IIF NO CONTINUATION OF RADIATION/ CHEMICAL CONTAMINATION FROM PREVIOUS SEGMENT:				

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
7	Numeric Entry	BLUEFOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of BLUEFOR scenario.
8	Numeric Entry	OPFOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of OPFOR scenario.
9	Numeric Entry	INTENSITY INDEX CODE	BLUE OPFOR ----- PLANNING TIME AVAIL FIRE SUPPORT ARTILLERY MORTAR NUCLEAR CHEMICAL BIOLOGICAL SMOKE AIR DEFENSE ENGINEER EW 1 = Low 2 = Medium 3 = High	Specifies intensity index code where:
10	Alpha/Numeric Entry	KEY TRAINING OBJECTIVE CODE #	10 spaces to be filled in from Alpha/Numeric pad.	Specifies five 2 character codes.
11	Numeric Entry	VISIBILITY CODE	1 space to be filled in from Numeric pad.	Specifies visibility code where: 1 = Clear 2 = Dust 3 = Fog 4 = Rain
12	Numeric Entry	DAY/NIGHT CODE	1 space to be filled in from Numeric pad.	Specifies day/night code where: 1 = Day 0 = Night

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
13	Alpha/ Numeric Entry	Bn DESIGNATION	7 spaces to be filled in from Alpha/Numeric pad.	Specifies Battalion designation in format X-XXXXA.
14	Numeric Entry	Bn DAY AT NTC	2 spaces to be filled in from Numeric pad.	Specifies number of days spent so far at NTC.
15	Numeric Entry	Bn TIMES THROUGH INDICATED SCENARIO	2 spaces to be filled in from Numeric pad.	Specifies number of times this unit has run through this scenario.
16	Alpha/ Numeric Entry	ASSIGNED/ATTACHED UNITS	6 spaces to be filled in from Alpha/Numeric pad.	Specifies designation of assigned/attached units in format AAX-XX. Up to 8 units may be identified.
17	List	TYPE OF Bn OPERATION/MISSION CODE	01 Movement to contact 02 Hasty attack 03 Deliberate attack 04 Exploitation and pursuit 05 Reconnaissance in force 06 Raid 11 Defend in sector 12 Defend from a battle area 13 Delay in sector 14 Delay forward of a specified line for a specified time 15 Disengagement 16 Counterattack	Specifies tactical mission assigned to Battalion for exercise segment.
18	List	Bn OPERATIONS MODIFIER CODE	01 Passage of lines 02 Hasty attack 03 Relief in place 04 Exploitation and pursuit 05 Road march 06 Occupation of assembly area	Specifies modification to Bn mission. Selection of modifier is optional.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
19	List	SELECT UNIT FOR ASSIGNMENT OF COMPANY MISSION CODE	List of assigned/attached units previously identified for which company operation/mission codes shall be defined.	Specifies unit for which company mission codes shall be defined. Up to 8 units may be selected, with company mission codes being requested for each selected unit. Selection of a unit is optional.
IF COMPANY MISSION CODES ARE ASSIGNED:				
20	List	COMPANY MISSION CODE	01 Movement to contact 02 Hasty attack 03 Deliberate attack 04 Exploitation and pursuit 05 Raid 11 Occupy a battle position 12 Hasty defense 13 Deliberate defense 14 Defend to retain a battle position 15 Create and defend a strongpoint (deliberate defense) 21 Patrol operations	Specifies tactical mission assigned to selected company for exercise segment. Selection of company mission code is optional. Specifies tactical mission assigned to selected company for exercise segment. Selection of company mission code is optional.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
21	List	COMPANY OPERATIONS MODIFIER CODE	01 Passage of lines 02 Hasty attack 03 Relief in place 04 Exploitation and pursuit 05 Road march 06 Occupation of assembly area	Specifies modification to tactical mission of selected company. Selection of modifier is optional. Upon entry completion operator prompted to select next assigned/attached unit for assignment of company mission code. This procedure is repeated until all assigned/attached units have been assigned a company mission code or until the operator does not select an available assigned/attached unit for assignment of a company mission code.
22	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
23	List	IOC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which IOC assessor ID and EI number assignments are to be made.
24	Alpha/Numeric Entry	IOC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
25	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
26	List	---	IGNORE DONE	Specifies manner of entry completion.
IF COMPANY MISSION CODES ARE NOT ASSIGNED:				
20	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
21	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and EI number assignments are to be made.
22	Alpha/Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
23	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.
24	List	---	IGNORE DONE	Specifies manner of entry completion.
IF EXCLUDE BOTH NUCLEAR AND CHEMICAL CAPABILITIES:				

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
6	Numeric Entry	BLUEFOR SCENARIO #	12 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of BLUEFOR scenario.
7	Numeric Entry	OPFOR SCENARIO #	12 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of OPFOR scenario.
8	Numeric Entry	INTENSITY INDEX CODE	BLUE OPFOR ----- PLANNING TIME AVAIL FIRE SUPPORT ARTILLERY MORTAR NUCLEAR CHEMICAL BIOLOGICAL SMOKE AIR DEFENSE ENGINEER EW	Specifies intensity index code where: 1 = Low 2 = Medium 3 = High
9	Alpha/Numeric Entry	KEY TRAINING OBJECTIVE CODE #	10 spaces to be filled in from Alpha/Numeric pad.	Specifies five 2 character codes.
10	Numeric Entry	VISIBILITY CODE	1 space to be filled in from Numeric pad.	Specifies visibility code where: 1 = Clear 2 = Dust 3 = Fog 4 = Rain
11	Numeric Entry	DAY/NIGHT CODE	1 space to be filled in from Numeric pad.	Specifies day/night code where: 1 = Day 0 = Night

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
12	Alpha/ Numeric Entry	Bn DESIGNATION	7 spaces to be filled in from Alpha/Numeric pad.	Specifies Battalion designation in format X-XXXXAA.
13	Numeric Entry	Bn DAY AT NTC	2 spaces to be filled in from Numeric pad.	Specifies number of days spent so far at NTC.
14	Numeric Entry	Bn TIMES THROUGH INDICATED SCENARIO	2 spaces to be filled in from Numeric pad.	Specifies number of times this unit has run through this scenario.
15	Alpha/ Numeric Entry	ASSIGNED/ATTACHED UNITS	6 spaces to be filled in from Alpha/Numeric pad.	Specifies designation of assigned/attached units in format AA1-XX. Up to 8 units may be identified.
16	List	TYPE OF Bn OPERATION/MISSION CODE	01 Movement to contact 02 Hasty attack 03 Deliberate attack 04 Exploitation and pursuit 05 Reconnaissance in force 06 Raid 11 Defend in sector 12 Defend from a battle area 13 Delay in sector 14 Delay forward of a specified line for a specified time 15 Disengagement 16 Counterattack	Specifies tactical mission assigned to Battalion for exercise segment.
17	List	Bn OPERATIONS MODIFIER CODE	01 Passage of lines 02 Hasty attack 03 Relief in place 04 Exploitation and pursuit 05 Road march 06 Occupation of assembly area	Specifies modification to Bn mission. Selection of modifier is optional.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
18	List	SELECT UNIT FOR ASSIGNMENT OF COMPANY MISSION CODE	List of assigned/attached units previously identified for which company operation/mission codes shall be defined.	Specifies unit for which company mission codes shall be defined. Up to 8 units may be selected, with company mission codes being requested for each selected unit. Selection of a unit is optional.
19	List	COMPANY MISSION CODE	01 Movement to contact	Specifies tactical mission assigned to selected company for exercise segment. Selection of company mission code is optional.
			02 Hasty attack	
			03 Deliberate attack	
			04 Exploitation and pursuit	
			05 Raid	
			11 Occupy a battle position	
			12 Hasty defense	
			13 Deliberate defense	
			14 Defend to retain a battle position	
			15 Create and defend a strongpoint (deliberate defense)	
			21 Patrol operations	

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
20	List	COMPANY OPERATIONS MODIFIER CODE	01 Passage of lines 02 Hasty attack 03 Relief in place 04 Exploitation and pursuit 05 Road march 06 Occupation of assembly area	Specifies modification to tactical mission of selected company. Selection of modifier is optional. Upon entry completion operator prompted to select next assigned/attached unit for assignment of company mission code. This procedure is repeated until all assigned/attached units have been assigned a company mission code or until the operator does not select an available assigned/attached unit for assignment of a company mission code.
21	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
22	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and EI number assignments are to be made.
23	Alpha/ Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
24	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
25	List	---	IGNORE IDONE	Specifies manner of entry completion.
IF COMPANY MISSION CODES ARE NOT ASSIGNED:				
19	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
20	List	IOC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which IOC assessor ID and EI number assignments are to be made.
21	Alpha/ Numeric Entry	IOC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of IOC to perform assessment of BLUEFOR unit selected above.
22	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.
23	List	---	IGNORE IDONE	Specifies manner of entry completion.

Figure 10. Menu: Exercise segment definition (concluded).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	LIST	HISTORY	List containing the names of the available histories.	Defines selection of history.
2	LIST	SEGMENTS	List of segments comprising history selected above.	Defines selection of segment to be viewed/ monitored.
3	LIST	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 11. Menu: History segment selection.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	ACTION	CREATE UNIT SYMBOL CHANGE UNIT SYMBOL	Defines selection of action to be performed.
IF CREATE UNIT:				
2	List	FORCE	BLUEFOR OPFOR	Specifies menu selection option.
IF BLUEFOR:				
3	Alpha/Numeric Entry	DESIGNATOR (LINE ORGANIZATION)	15 spaces to be filled in from alpha/numeric pad.	Specifies designator and line organization for the unit.
4	List	TASK ORGANIZATION	"NONE" followed by list of units in accordance with the force selected above.	Specifies initial task organization.
5	List	UNIT SYMBOL	MECH INFANTRY ARMOR INFANTRY AIR DEFENSE ARTILLERY SELF-PROPELLED ARTILLERY ANTITANK ELECTRONIC WARFARE ARMY AVIATION AIRBORNE INFANTRY AIR CAVALRY CHEMICAL DEFENSE ARMORED CAVALRY ENGINEER MEDICAL SIGNAL TRANSPORTATION SUPPLY AND SERVICE	Specifies type of unit symbol.

Figure 12. Menu: Unit definition.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
6	List	LOCATION	SPECIFY INITIAL LOCATION NO INITIAL LOCATION	Allows operator to select initial location of the unit.
IP SPECIFY INITIAL LOCATION:				
7	Area	SELECT LOCATION	---	Cursor position on map defines unit location.
8	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IP NO INITIAL LOCATION:				
8	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IP OPFOR:				
3	Alpha/ Numeric Entry	DESIGNATOR (LINE ORGANIZATION)	15 spaces to be filled in from alpha/numeric pad.	Specifies designator and line organization for the unit.
4	List	TASK ORGANIZATION	"NONE" followed by list of units in accordance with the force selected above.	Specifies initial task organization.
5	List	UNIT SYMBOL	MOTORIZED RIFLE REGIMENT ARMOR INFANTRY AIR DEFENSE ARTILLERY SELF-PROPELLED ARTILLERY ANTITANK ELECTRONIC WARFARE	Specifies type of unit symbol.

Figure 12. Menu: Unit definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
			ARMY AVIATION AIRBORNE INFANTRY AIR CAVALRY CHEMICAL DEFENSE ARMORED CAVALRY ENGINEER MEDICAL SIGNAL TRANSPORTATION SUPPLY AND SERVICE	
6	List	LOCATION	SPECIFY INITIAL LOCATION NO INITIAL LOCATION	Allows operator to select initial location of the unit.
IP SPECIFY INITIAL LOCATION:				
7	Area	SELECT LOCATION	---	Cursor position on map defines unit location.
8	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IP NO INITIAL LOCATION:				
7	List	---	IGNORE REPEAT	Specifies manner of entry completion.
IP CHANGE UNIT SYMBOL:				
2	List	FORCE	BLUEFOR OPFOR	Defines menu display options.

Figure 12. Menu: Unit definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IIF BLUEFOR:				
3	List	UNIT	List of all displayable BLUEFOR units previously created by the operator.	Defines unit for which symbol will be changed.
4	List	UNIT SYMBOL	MECH INFANTRY ARMOR INFANTRY ARTILLERY SELF-PROPELLED ARTILLERY ANTITANK ELECTRONIC WARFARE AIR DEFENSE ARMY AVIATION AIRBORNE INFANTRY AIR CAVALRY CHEMICAL DEFENSE ARMORED CAVALRY ENGINEER MEDICAL SIGNAL TRANSPORTATION SUPPLY AND SERVICE	Specifies new unit symbol.
5	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IIF OPFOR:				
3	List	UNIT	List of all displayable OPFOR units previously created by the operator.	Defines unit for which symbol will be changed.

Figure 12. Menu: Unit definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
4	List	UNIT SYMBOL	MOTORIZED RIFLE ARMOR INFANTRY AIR DEFENSE ARTILLERY SELF-PROPELLED ARTILLERY ANTITANK ELECTRONIC WARFARE ARMY AVIATION AIRBORNE INFANTRY AIR CAVALRY CHEMICAL DEFENSE ARMORED CAVALRY ENGINEER MEDICAL SIGNAL TRANSPORTATION SUPPLY AND SERVICE	Specifies new unit symbol.
5	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 12. Menu: Unit definition (concluded).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	FORCE	BLUEFOR OPFOR	Defines menu display options.
2	List	TYPE	ECC-GENERATED SIMULATION	Specifies type of unit.
3	List	UNIT	List of BLUEFOR or OPFOR, ECC-GENERATED or SIMULATION, units, (in accordance with FORCE and TYPE above).	Defines selection of unit whose task organization shall be modified.
4	List	TASK ORGANIZATION	"NONE" followed by a list of all BLUEFOR or OPFOR, ECC-GENERATED or SIMULATION, units previously created by the operator. IGNORE REPEAT DONE	Defines selection of new task organization for specified unit.
5	List	---		Specifies manner of entry completion.

Figure 13. Menu: Task organization.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	ACTION	ADD DELETE	Defines action to be performed.
2	List	FORCE	BLUEFOR OPFOR WHITE	Defines menu display options.
IF BLUEFOR/ OPFOR ADD:				
3	List	TACTICAL CATEGORY	MANEUVER FIRE SUPPORT INTELLIGENCE MOBILITY/COUNTERMOBILITY COMBAT SERVICE SUPPORT AIR DEFENSE	Defines selection of functional tactical category of control measure. Note that one tactical category may be selected.
4	List	ECHELON	IF BLUEFOR: PLT CO BN BDE IF OPFOR: PLT CO BN REGT	Defines selection of echelon of control measure.
5	List	TYPE	POINT LINE AREA	Defines selection of type of control measure.

Figure 14. Menu: Control measures.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF POINT: 6	List	CONTROL MEASURE	CHECKPOINT COORDINATION POINT START POINT RELEASE POINT PASSAGE POINT POINT OF DEPARTURE REMOTE SENSOR PREPLANNED TARGET RADIOLOGICAL MARKER	Defines selection of point to be created.
IF CHECK POINT, COOR- DINATION POINT, START POINT, RELEASE POINT, PASSAGE POINT, POINT OF DEPAR- TURE, REMOTE SENSOR, PRE- PLANNED TAR- GET.				
7	Alpha/ Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator to be assigned to control measure. Entry of a name is optional.
8	Area	CHOOSE POINT ON MAP	---	Cursor position on map defines selected point.
9	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IP RADIOLOGICAL MARKER:				
	7	NUMERIC ENTRY	DOSE RATE	Specifies dose rate of contamination in marked area.
	8	ALPHA/NUMERIC ENTRY	MARKER DATE	Specifies date marker was placed in the field, in the format DDMMYY.
	9	NUMERIC ENTRY	MARKER TIME	Specifies time marker was placed in the field, in the format HHMM.
	10	ALPHA/NUMERIC ENTRY	BURST DATE	Specifies date nuclear blast occurred, in the format DDMMYY.
	11	NUMERIC ENTRY	BURST TIME	Specifies time nuclear blast occurred, in the format HHMM.
IP CHEMICAL MARKER:	12	Area	CHOOSE POINT ON MAP	Cursor position on map defines selected point.
	13	List	--- --- IGNORE REPEAT DONE	Specifies manner of entry completion.
	7	List	AGENT	Specifies type of agent employed.
			PERSISTENT NERVE PERSISTENT BLISTER NONPERSISTENT NERVE NONPERSISTENT BLOOD	

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
8	Alpha/ Numeric Entry	MARKER DATE	7 spaces to be filled in from Alpha/Numeric pad.	Specifies date marker was placed in the field, in the format DDMMYY.
9	Numeric Entry	MARKER TIME	5 spaces to be filled in from Numeric pad.	Specifies time marker was placed in the field, in the format HHMM.
10	Area	CHOOSE POINT ON MAP	---	Cursor position on map defines selected point.
11	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF LINE:				
6	List	CONTROL MEASURE	BASIC LINE AXIS OF ADVANCE PHASE LINE TANK DITCH CONCERTINA DIRECTION OF ATTACK/ROUTE BOUNDARY LINE TRACE OF FEBA FEBA LIMIT OF ADVANCE LINE OF DEPARTURE LD/LC PROBABLE LINE OF DEPLOYMENT FSCL RESTRICTIVE FIRE LINE COORDINATED FIRE LINE MAIN SUPPLY ROUTE PASSAGE LANE	Defines selection of line to be created.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF BASIC LINE, TANK DITCH, PHASE LINE, AXIS OF ADVANCE, CONCERTINA, OR MAIN SUPPLY ROUTE:	7 List	STATUS	CURRENT PROPOSED	Defines status of control measure.
	8 Alpha/Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator to be assigned to control measure. Entry of name is optional.
	9 Area	CHOOSE TWO TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected point.
	10 List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF DIRECTION OF ATTACK/ROUTE:	7 List	STATUS	CURRENT PROPOSED	Defines status of control measure.
	8 Alpha/Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator to be assigned to control measure. Entry of name is optional.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
9	Area	CHOOSE TWO TO TWELVE POINTS ON MAP. LAST POSITION INDICATES DIRECTION.	---	Cursor positions on map define selected points. Last position indicates direction.
10	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF BOUNDARY LINE:				
7	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
8	List	UNIT DESIGNATION	A list of all BLUEFOR or OPFOR player units previously created by the operator.	Defines selection of unit designation associated with this control measure. Selection of unit designation is optional.
9	Area	CHOOSE TWO TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
10	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF TRACE OF FEBA, LIMIT OF ADVANCE, LINE OF DEPARTURE:	7	List	STATUS CURRENT PROPOSED	Defines status of control measure.
	8	Area	CHOOSE TWO TO TWELVE POINTS ON MAP --- ---	Cursor positions on map define selected points.
	9	List	--- --- IGNORE REPEAT DONE	Specifies manner of entry completion.
IF LD/LC, FEBA, PASSAGE LANE, PROBABLE LINE OF DEPLOYMENT:	7	Area	CHOOSE TWO TO TWELVE POINTS ON MAP --- ---	Cursor positions on map define selected points.
	8	List	--- --- IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF FSCL, RPL, CPL:	7	Alpha/ Numeric Entry	DATE TIME GROUP	11 spaces to be filled in from Alpha/Numeric pad.
	8	List	UNIT DESIGNATION	Defines selection of unit designation associated with the control measure. Selection of unit designation is optional.
	9	Area	CHOOSE UP TO TWELVE POINTS ON MAP	Cursor positions on map define selected points.
	10	List	--- --- IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF AREA: 6	List	CONTROL MEASURE	BASIC AREA AREA OF OPERATION ASSEMBLY AREA ATTACK POSITION DROP ZONE FIRE SUPPORT BASE LANDING ZONE FARP OBJECTIVE PATROL BASE PICKUP ZONE SCATTERABLE MINEFIELD SUPPORT AREA GROUP OF TARGETS RESTRICTIVE FIRE AREA NO FIRE AREA CONTAMINATED AREA BATTLE POSITION MINEFIELD GAP/BRIDGE	Defines area control measure to be created.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF BASIC AREA, CONTAMINATED AREA, AREA OF OPERATION, ATTACK POSITION, DROP ZONE, FIRE SUPPORT BASE, LANDING ZONE, OBJECTIVE, PATROL BASE, PICKUP ZONE, SUPPORT AREA, BATTLE POSITION:				
7	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
8	Alpha/Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator or name assigned to control measure. Entry of name is optional.
9	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
10	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF ASSEMBLY AREA:				
7	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
8	List	UNIT DESIGNATION	A list of all BLUEFOR or OPFOR player units previously created by the operator.	Defines selection of unit designation associated with this control measure. Selection of unit designation is optional.
9	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
10	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF FARP:				
7	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
8	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
9	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF GROUP OF TARGETS:	7 List	STATUS	CURRENT PROPOSED	Defines status of control measure.
	8 Alpha/Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator or name assigned to control measure. Entry of name is optional.
	9 Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
	10 List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF RPA:	7 List	STATUS	CURRENT PROPOSED	Defines status of control measure.
	8 List	UNIT DESIGNATION	A list of all BLUEFOR or OPFOR player units previously created by the operator.	Defines selection of unit designation associated with this control measure. Selection of unit designation is optional.
	9 Alpha/Numeric Entry	STARTING TIME	6 spaces to be filled in from Alpha/Numeric pad.	Specifies time the RPA becomes effective; in the format DDHHMM.
	10 Alpha/Numeric Entry	ENDING TIME	6 spaces to be filled in from Alpha/Numeric pad.	Specifies time the RPA terminates; in the format DDHHMM.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
11	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
12	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF NO FIRE AREA:				
7	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
8	List	UNIT DESIGNATION	A list of all BLUEFOR or OPFOR player units previously created by the operator.	Defines selection of unit designation associated with this control measure.
9	Alpha/ Numeric Entry	DATE TIME GROUP	11 spaces to be filled in from Alpha/Numeric pad.	Specifies time of effect.
10	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
11	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF SCATTERABLE MINEFIELD:				
7	List	STATUS	CURRENT PROPOSED	Defines selection of area to be created.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
8	Alpha/ Numeric Entry	DATE TIME GROUP	11 spaces to be filled in from Alpha/Numeric pad.	Specifies day, time, and month of mine self- destruct.
9	List	MINE TYPE	ANTITANK ANTIPERSONNEL MIXED	Determines mine symbols to be entered within boundaries.
10	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
11	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF GAP/ BRIDGE:				
7	Area	CHOOSE UP TO SIX POINTS FOR FIRST SIDE OF GAP/BRIDGE	---	Specifies first side of gap/bridge.
8	Area	CHOOSE UP TO SIX POINTS FOR SECOND SIDE OF GAP/BRIDGE	---	Specifies second side of gap/bridge.
9	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF MINEFIELD:				
7	List	STATUS	CURRENT PROPOSED	Defines status of area to be created.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
8	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define area.
9	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF BLUEFOR/ OPFOR DELETE:				
3	List	TACTICAL CATEGORY	MANEUVER FIRE SUPPORT INTELLIGENCE MOBILITY/COUNTERMOBILITY COMBAT SERVICE SUPPORT AIR DEFENSE	Defines selection of functional tactical category of control measure to be deleted. Only one selection available.
4	List	ECHELON	IF BLUEFOR: PLT CO BN BDE IF OPFOR: PLT CO BN REGT	Defines selection of echelon of control measure to be deleted.
5	List	CONTROL MEASURE ID	List of control measure IDs, of all BLUEFOR/OPFOR control measures in system (in accordance with TACTICAL CATEGORY and ECHELON selections made above).	Defines selection of control measures to be deleted. Multiple selections may be made.
6	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF WHITE ADD:				
3	List	TYPE	POINT LINE AREA	Defines selection of type of control measure.
IF POINT:				
4	List	CONTROL MEASURE	CHECKPOINT COORDINATION POINT START POINT RELEASE POINT PASSAGE POINT POINT OF DEPARTURE REMOTE SENSOR PREPLANNED TARGET RADIOLOGICAL MARKER	Defines selection of point to be created.
IF CHECK POINT, COORDINATION POINT, START POINT, RELEASE POINT, PASSAGE POINT, POINT, POINT OF DEPARTURE, REMOTE SENSOR, PREPLANNED TARGET:				
5	Alpha/Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator to be assigned to control measure. Entry of a name is optional.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
6	Area	CHOOSE POINT ON MAP	---	Cursor position on map defines selected point.
7	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF RADIOLOGICAL MARKER:				
5	Numeric Entry	DOSE RATE	4 spaces to be filled in from Numeric pad.	Specifies dose rate of contamination in marked area.
6	Alpha/Numeric Entry	MARKER DATE	7 spaces to be filled in from Alpha/Numeric pad.	Specifies date marker was placed in the field; in the format DDMMYY.
7	Numeric Entry	MARKER TIME	5 spaces to be filled in from Numeric pad.	Specifies time marker was placed in the field; in the format HH:MM.
8	Alpha/Numeric Entry	BURST DATE	7 spaces to be filled in from Alpha/Numeric pad.	Specifies date nuclear blast occurred; in the format DDMMYY.
9	Numeric Entry	BURST TIME	5 spaces to be filled in from Numeric pad.	Specifies time nuclear blast occurred; in the format HH:MM.
10	Area	CHOOSE POINT ON MAP	---	Cursor position on map defines selected point.
11	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IP CHEMICAL MARKER:				
	5 List	AGENT	PERSISTENT NERVE PERSISTENT BLISTER NONPERSISTENT NERVE NONPERSISTENT BLOOD	Specifies type of agent employed.
	6 Alpha/ Numeric Entry	MARKER DATE	7 spaces to be filled in from Alpha/Numeric pad.	Specifies date marker was placed in the field; in the format DDMMYY.
	7 Numeric Entry	MARKER TIME	5 spaces to be filled in from Numeric pad.	Specifies time marker was placed in the field; in the format HHMM.
	8 Area	CHOOSE POINT ON MAP	---	Cursor position on map defines selected point.
9 List		---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF LINE:				
4	List	CONTROL MEASURE	BASIC LINE AXIS OF ADVANCE PHASE LINE TANK DITCH CONCERTINA DIRECTION OF ATTACK/ROUTE BOUNDARY LINE TRACE OF FEBA FEBA LIMIT OF ADVANCE LINE OF DEPARTURE LD/LC PROBABLE LINE OF DEPLOYMENT PSCIL RESTRICTIVE FIRE LINE COORDINATED FIRE LINE MAIN SUPPLY ROUTE PASSAGE LANE	Defines selection of line to be created.
IF BASIC LINE, TANK DITCH, PHASE LINE, AXIS OF ADVANCE, CONCERTINA, MAIN SUPPLY ROUTE:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
6	Alpha/Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator to be assigned to control measure. Entry of the name is optional.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
7	Area	CHOOSE TWO TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected point.
8	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF DIRECTION OF ATTACK/ROUTE:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
6	Alpha/Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator to be assigned to control measure. Entry of name is optional.
7	Area	CHOOSE TWO TO TWELVE POINTS ON MAP. LAST POSITION INDICATES DIRECTION.	---	Cursor positions on map define selected points. Last position indicates direction.
8	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF BOUNDARY LINE:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
6	List	UNIT DESIGNATION	A list of all white player units previously created by the operator.	Defines selection of unit designation associated with this control measure. Selection of unit designation is optional.
7	Area	CHOOSE TWO TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
8	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF TRACE OF FEBA, LIMIT OF ADVANCE, LINE OF DEPARTURE:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
6	Area	CHOOSE TWO TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
7	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF LD/LC, FEBA, PASSAGE LANE, PROBABLE LINE OF DEPLOYMENT:				

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
5	Area	CHOOSE TWO TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF PSCL, RPL, CPL:				
5	Alpha/Numeric Entry	DATE TIME GROUP	11 spaces to be filled in from Alpha Numeric pad.	Specifies time the line becomes effective.
6	List	UNIT DESIGNATION	A list of all white player units previously created by the operator.	Defines selection of unit designation associated with the control measure. Selection of unit designation is optional.
7	Area	CHOOSE TWO TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF AREA:				
4	List	CONTROL MEASURE	BASIC AREA AREA OF OPERATION ASSEMBLY AREA ATTACK POSITION DROP ZONE FIRE SUPPORT BASE LANDING ZONE PARP	Defines area control measure to be created.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF BASIC AREA, CONTAMINATED AREA, AREA OF OPERATION, ATTACK POSITION, DROP ZONE, FIRE SUPPORT BASE, LANDING ZONE, OBJECTIVE, PATROL BASE, PICKUP ZONE, SUPPORT AREA, BATTLE POSITION:	5	List	OBJECTIVE PATROL BASE PICKUP ZONE SCATTERABLE MINEFIELD SUPPORT AREA GROUP OF TARGETS RESTRICTIVE FIRE AREA NO FIRE AREA CONTAMINATED AREA BATTLE POSITION MINEFIELD GAP/BRIDGE	Defines status of control measure.
			CURRENT PROPOSED	
		STATUS		

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
6	Alpha/ Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator name assigned to control measure. Entry of name is optional.
7	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
8	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF ASSEMBLY AREA:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
6	List	UNIT DESIGNATION	A list of all white player units previously created by the operator.	Defines selection of unit designation associated with this control measure. Selection of unit designation is optional.
7	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
8	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF PARP:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
6	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
7	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF GROUP OF TARGETS:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
6	Alpha/ Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator or name assigned to control measure. Entry of name is optional.
7	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
8	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF RPA:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
6	List	UNIT DESIGNATION	A list of all white player units previously created by the operator.	Defines selection of unit designation associated with this control measure. Selection of unit designation is optional.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
7	Alpha/ Numeric Entry	STARTING TIME	6 spaces to be filled in from Alpha/Numeric pad.	Specifies time the RPA becomes effective; in the format DDHHMM.
8	Alpha/ Numeric Entry	ENDING TIME	6 spaces to be filled in from Alpha/Numeric pad.	Specifies time the RPA terminates; in the format DDHHMM.
9	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
10	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF NO FIRE AREA:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
6	List	UNIT DESIGNATION	A list of all white player units previously created by the operator.	Defines selection of unit designation associated with this control measure.
7	Alpha/ Numeric Entry	DATE TIME GROUP	11 spaces to be filled in from Alpha/Numeric pad.	Specifies time of effect.
8	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
9	List	-- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF SCATTERABLE MINEFIELD:				
	5 List	STATUS	CURRENT PROPOSED	Defines selection of area to be created.
	6 Alpha/Numeric Entry	DATE TIME GROUP	11 spaces to be filled in from Alpha/Numeric pad.	Specifies day, time, and month of mine self-destruct.
	7 List	MINE TYPE	ANTITANK ANTIPERSONNEL MIXED	Determines mine symbols to be entered within boundaries.
8 Area		CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
9 List		---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF GAP/BRIDGE:				
	5 Area	CHOOSE UP TO SIX POINTS FOR FIRST SIDE OF GAP/BRIDGE	---	Cursor positions on map specify first side of gap/bridge.
	6 Area	CHOOSE UP TO SIX POINTS FOR SECOND SIDE OF GAP/BRIDGE	---	Cursor positions on map specify second side of gap/bridge.
7 List		---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF MINEFIELD:	5 List	STATUS	CURRENT PROPOSED	Defines selection of area to be created.
	6 Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define area.
	7 List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF WHITE DELETE:	3 List	CONTROL MEASURE ID	List of control measure IDs of all white control measures.	Defines selection of control measure to be deleted. Multiple selections may be made.
	4 List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (concluded).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	FORCE	BLUEFOR OPFOR	Defines menu display option.
2	List	UNIT	List of BLUEFOR or OPFOR ECC-generated units (in accordance with FORCE selection made above).	Defines selection of unit to be positioned.
3	Area	SELECT POSITION ON MAP	---	Cursor position on map defines unit position.
4	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 15. Menu: Unit position.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	ACTION	ADD DELETE	Defines action to be performed.
IF ADD:				
2	List	REPORTING UNIT	List of all BLUEFOR units.	Defines unit reporting intelligence data.
3	List	RECEIVING UNIT	List of all BLUEFOR units.	Defines unit receiving intelligence data.
4	Alpha/ Numeric Entry	TIME OF REPORT	11 spaces to be filled in from Alpha/Numeric pad.	Specifies time of intel report.
5	List	CATEGORY	COMBAT INFORMATION PROCESSED INTELLIGENCE	Defines menu display options.
IF COMBAT INFORMATION:				
6	List	DETECTION METHOD	HUMAN ELECTROMAGNETIC IMAGERY	Defines method used for collecting intelligence data.
7	List	TYPE	FORCE DETECTION OBSTACLE DETECTION WEATHER DATA	Defines type of combat information.

Figure 16. Menu: Intelligence.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF FORCE DETECTION:				
8	List	EQUIPMENT/TROOPS	TANK ANTITANK APC TRUCK INDIRECT FIRE AIR DEFENSE HELICOPTER HIGH PERFORMANCE AIRCRAFT SENSORS FOOT SOLDIER	Specifies type of equipment or troops detected.
9	Numeric Entry	NUMBER	2 spaces to be filled in from numeric pad.	Specifies number of pieces of equipment/troops detected.
10	Area	ENTER POINT ON MAP	---	Specifies location of detected force equipment.
11	List	---	IGNORE REPEAT	Specifies manner of entry completion.
IF OBSTACLE DETECTION:				
8	List	TYPE	GENERAL MASS CONCERTINA FIXED WALL DITCH MINEFIELD CRATER FIELD	Specifies type of detected obstacle.
9	Area	CHOOSE UP TO 12 POINTS ON MAP	---	Cursor positions define reported location of obstacle.

Figure 16. Menu: Intelligence (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
10	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
			CLEAR OVERCAST HAZE RAIN FOG OR DUST	Specifies type of weather reported.
			ENTER POINT ON MAP	Defines origin of weather report.
9	AREA	---	IGNORE REPEAT DONE	Defines method of entry completion.
10	List	---		
6	List	SUSPECTED UNIT TYPE	MECH INFANTRY ARMOR INFANTRY AIR DEFENSE ARTILLERY SELF-PROPELLED ARTILLERY ANTITANK ELECTRONIC WARFARE ARMY AVIATION AIRBORNE INFANTRY AIR CAVALRY CHEMICAL DEFENSE ARMORED CAVALRY ENGINEER MEDICAL SIGNAL TRANSPORTATION SUPPLY AND SERVICE	Specifies type of suspected unit.

Figure 16. Menu: Intelligence (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
7	List	SUSPECTED ECHELON	REGIMENT BATTALION COMPANY PLATOON	Specifies suspected echelon of unit. Entry is optional.
8	AREA	SUSPECTED UNIT LOCATION	---	Cursor location indicates suspected location of unit.
9	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IP DELETE:				
2	List	INTELLIGENCE ITEM	List of all intelligence data previously entered by operator.	Specifies intelligence data to be deleted. Intelligence items identified by reporting unit, receiving unit and time of report.
3	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 16. Menu: Intelligence (concluded).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	FORCE	BLUEFOR OPFOR	Defines force initiating event.
2	List	TACTICAL CATEGORY	COMMAND AND CONTROL INTELLIGENCE	Defines prescheduled event operation.
3	List	ACTION	DEFINE EDIT CANCEL	Defines menu display options.
IF DEFINE OR EDIT:				
4	Alpha/Numeric Entry	CODE NAME	16 spaces to be filled in from alpha/numeric keypad.	Specifies designator or name assigned to event.
5	Alpha/Numeric Entry	MESSAGE	Maximum 3 lines of 80 characters each to be filled in from alpha/numeric keypad.	Prompt to be displayed to controller.
6	Alpha/Numeric Entry	EVENT TIME	11 spaces to be filled in from the alpha/numeric keypad.	Specifies time the event is to occur.
7	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF DELETE:				
4	Alpha/Numeric Entry	CODE NAME	16 spaces to be filled in from the alpha/numeric keypad.	Specifies event to be deleted.

Figure 17. Menu: Prescheduled event definition.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
5	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 17. Menu: Prescheduled event definition (concluded).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	FORCE	BLUEFOR OPFOR	Defines force receiving report.
2	List	CATEGORY	NBC-1 REPORT NBC-2 REPORT NBC-3 REPORT NBC-4 REPORT NBC-5 REPORT	Specifies the type of log item to be entered.
3	Alpha/ Numeric Entry	TIME OF REPORT	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies time of the NBC report.
4	List	PRECEDENCE	FLASH IMMEDIATE	Specifies precedence of the report.
5	List	SENDING UNIT	List of BLUEFOR or OPFOR units in accordance with selection above.	Specifies unit that generated the report.
6	List	RECEIVING UNIT	List of BLUEFOR or OPFOR units in accordance with selection above.	Specifies unit that received the report.
IP NBC-1: 7	Alpha/ Numeric Entry	OBSERVER LOCATION	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies location of unit observing attack, in UTM coordinates.
8	Alpha/ Numeric Entry	DIRECTION OF ATTACK	3 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported direction of attack in degrees. Entry is optional.
9	Alpha/ Numeric Entry	TIME OF BURST	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported time of detonation.

Figure 18. Menu: Nuclear/chemical report log.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
10	Alpha/ Numeric Entry	DELIVERY METHOD	8 spaces to be filled in from the Alpha/Numeric pad.	Specifies the reported means of delivery.
11	List	TYPE OF BURST	GROUND AIR	Specifies the reported type of burst.
12	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IP NBC-2: 7	Alpha/ Numeric Entry	GROUND ZERO	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies the reported location of the burst, in UTM coordinates.
8	Alpha/ Numeric Entry	YIELD	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported yield.
9	Alpha/ Numeric Entry	STRIKE SERIAL NUMBER	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported strike serial number. Entry is optional.
10	Alpha/ Numeric Entry	TIME OF BURST	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported burst time. Entry is optional.
11	List	TYPE OF BURST	GROUND AIR	Specifies the reported type of burst. Entry is optional.
12	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IP NBC-3: 7	Alpha/ Numeric Entry	TIME OF BURST	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported burst time. Entry is optional.

Figure 18. Menu: Nuclear/chemical report log (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
8	Alpha/ Numeric Entry	GROUND ZERO	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported location of a burst, in UTM coordinates.
9	Alpha/ Numeric Entry	WINDSPEED	3 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported windspeed.
10	Alpha/ Numeric Entry	STRIKE SERIAL NUMBER	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported strike serial number.
11	Alpha/ Numeric Entry	DIRECTION TO RADIAL LINES	3 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported direction to radial lines.
12	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IP NBC-4: 7	Alpha/ Numeric Entry	READING LOCATION	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies location of reading in UTM coordinates.
8	Alpha/ Numeric Entry	DOSE RATE	4 spaces to be filled in	Specifies reported dose rate.
9	Alpha/ Numeric Entry	TIME OF READING	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported time of dose rate reading.
10	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 18. Menu: Nuclear/chemical report log (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF NBC-5: 7	Alpha/ Numeric Entry	STRIKE SERIAL NUMBER	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies strike serial number.
8	Alpha/ Numeric Entry	H+1 TIME GROUP	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported H+1 time.
9	Alpha/ Numeric Entry	CONTOUR TIME GROUP	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies estimated contour reference.
10	Alpha/ Numeric Entry	DECAY RATE	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported decay rate. Entry is optional.
11	Alpha/ Numeric Entry	1000 CGY/HR CONTOUR LINE	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies 1000 cGy/hour contour line. Entry is optional.
12	Alpha/ Numeric Entry	300 CGY/HR CONTOUR LINE	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies 300 cGy/hour contour line. Entry is optional.
13	Alpha/ Numeric Entry	100 CGY/HR CONTOUR LINE	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies 100 cGy/hour contour line. Entry is optional.
14	Alpha/ Numeric Entry	20 CGY/HR CONTOUR LINE	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies 20 cGy/hour contour line. Entry is optional.
15	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 18. Menu: Nuclear/chemical report log (concluded).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	FORCE	BLUEFOR OPFOR	Defines force initiating the nuclear event.
2	List	ACTION	DEFINE NUCLEAR MISSION EDIT NUCLEAR MISSION CANCEL NUCLEAR MISSION	Defines menu display options. Only 10 nuclear events may be defined; 3 of which may produce fallout. If additional events are entered they will not be processed.
IF DEFINE NUCLEAR MISSION:				
3	Alpha/ Numeric Entry	TIME	DD MON YR _ _ _ _ (current date displayed for edit (if required) followed by 4 spaces to be filled in with HH:MM values).	Specifies execution date and time of nuclear event.
4	Alpha/ Numeric Entry	TARGET POINT	10 spaces to be filled in from alpha/numeric pad.	Specifies UTM coordinate of target.
5	Numeric Entry	YIELD	0.2 KT 1 KT 2 KT 3 KT 5 KT 8 KT 10 KT 20 KT 50 KT 100 KT	Specifies the yield of the weapon package.

Figure 19. Menu: Nuclear event definition.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
6	Numeric Entry	HEIGHT OF BURST	GROUND AIR	Specifies whether the burst will produce fallout. Only 3 ground bursts may be entered. If more than 3 are entered, only the first 3 will be executed.
7	Alpha/Numeric Entry	WIND SPEED	3 spaces to be filled in from numeric pad.	Specifies the wind speed in KM/HR. Default set to 20 KM/HR.
8	List	WIND DIRECTION	3 spaces to be filled in from numeric pad.	Specifies the wind direction in degrees (valid range 1 to 360).
9	Numeric Entry	VISIBILITY	4 spaces to be filled in from numeric pad.	Specifies the visibility in kilometers.
10	Numeric Entry	DOWNWIND DISTANCE TO ZONE 1	2 spaces to be filled in from numeric pad.	Specifies the Downwind distance to zone 1, in kilometers. Used to create fallout prediction display.
11	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 19. Menu: Nuclear event definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IP EDIT NUCLEAR MISSION:				
3	List	NUCLEAR MISSION	List of nuclear missions previously defined.	Defines selection of nuclear mission to be updated/modified. Missions shall be identified by time, yield, and ground zero.
				NOTE: Upon selection of mission, all parameters describing the nuclear mission are displayed for review.
IF CANCEL NUCLEAR MISSION:				
3	List	NUCLEAR MISSION	List of nuclear missions previously defined.	Defines selection of nuclear mission to be cancelled. Missions shall be identified by time, yield, and ground zero.
4	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 19. Menu: Nuclear event definition (concluded).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	FORCE	BLUEFOR OPFOR	Defines menu display options.
2	List	TYPE	NUCLEAR CHEMICAL	Defines type of decontamination.
IP NUCLEAR:				
3	List	UNIT	List of nuclear contaminated units in accordance with force selected above.	Specifies unit that was decontaminated.
4	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IP CHEMICAL:				
3	List	UNIT	List of chemically contaminated units in accordance with force selected above.	Specifies unit that was decontaminated.
4	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 20. Menu: Decontamination.

5. Unit Contamination Indicators
6. Fallout prediction
7. Downwind hazard
8. Reported intelligence

Figure 21 depicts the set of symbology which shall be used by the ECC/TAF history. Two distinct methods to control unit display shall be available at the ECC station. First, the ECC controller shall have the capability of displaying selected units from the live and/or the simulated battalions through a matrix similar to that used for the 500 player EMC/TAF system. This matrix shall, however, control the display of three separate BLUEFOR battalions and three Motorized Rifle Regiments. The buttons shall control the units which have been defined in a particular data stream. For example, all BLUEFOR units defined in a particular live history might be controlled by the 1st BN buttons and all BLUEFOR units defined in the simulation might be controlled by the 2nd BN buttons. The matrix shall consider the task organization of a particular stream of data, but task organization shall not be possible between data streams.

In addition to the echelon matrix buttons, two additional buttons shall be available to serve as filters for the above-mentioned matrix buttons. These buttons shall be the REAL button and the NOTIONAL button. The REAL and NOTIONAL buttons shall each control display of units in a particular data stream in accordance with operator selection of the echelon matrix buttons. The REAL button shall filter display of all real EMC/TAF units and the NOTIONAL button shall filter display of all battle simulation units. When both the REAL and NOTIONAL buttons are on, all defined units selected for display by the operator via the echelon matrix buttons shall be displayed. When the REAL button is turned off, all defined EMC/TAF units selected for display via the echelon matrix buttons will no longer be displayed. Display of the simulation units shall not be affected by the REAL button. The NOTIONAL button shall work in the same manner; however, the NOTIONAL button filters the display of the simulation defined units. With the NOTIONAL button turned on, all units selected for display via the echelon matrix buttons shall be displayed. When the NOTIONAL button is turned off, all simulation defined units shall no longer be displayed.

The ECC controller shall also have the capability of entering and manually controlling ECC-generated units which are not participants in either the live or simulated exercises. These units shall be for display purposes only and shall be controlled by a single button on the master menu.

UNIT SYMBOLS

	AIR DEFENSE		MECHANIZED INFANTRY		MEDICAL
	ARMOR		ANTITANK		SIGNAL (COMMUNICATIONS)
	ARTILLERY		INFANTRY		TRANSPORTATION
	SELF-PROPELLED ARTILLERY		CHEMICAL DEFENSE		ARMY AVIATION
	AIRBORNE INFANTRY		ARMORED CAVALRY		ELECTRONIC WARFARE
	AIR CAVALRY		ENGINEER		SUPPLY AND SERVICE

MISCELLANEOUS SYMBOLS

	CBT	}	COMBAT TRAINS	MECH INF TASK FORCE
	CBT			ARMOR TASK FORCE
	FLD	}	FIELD TRAINS	MECH INF TASK FORCE
	FLD			ARMOR TASK FORCE
	FIELD HEADQUARTERS			

ECHELON SYMBOLS

PLATOON • • •
 COMPANY |
 BATTALION | |
 REGIMENT | | |

TASK FORCE/
 COMPANY TEAM

BRIGADE X
 DIVISION X X
 CORPS X X X

e.g.



MECH INF TASK FORCE

Contamination symbols

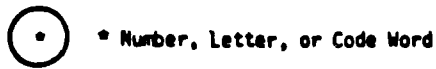
• nuclear contamination

Figure 21. ECC symbology.

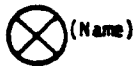
CONTROL MEASURES

POINTS

1. Checkpoint



2. Coordination Point



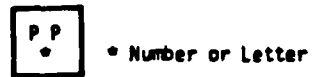
3. Start Point (SP)



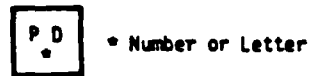
4. Release Point (RP)



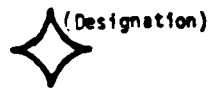
5. Passage Point (PP)



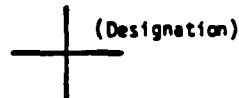
6. Point of Departure (PD)



7. Remote Sensor (REMS)



8. Preplanned Target

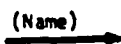


LINES

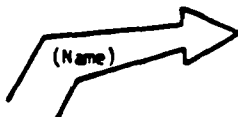
1. Basic Line



2. Direction of Attack or Route



3. Axis of Advance (AA)



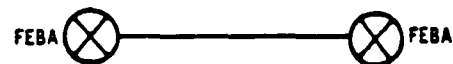
4. Boundary Line



5. Forward Edge of the Main Battle Area (FEBA)



6. Actual Trace of FEBA



7. Line of Departure is Line of Contact (LD/LC)



8. Limit of Advance (LOA)

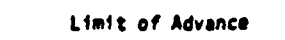


Figure 21. ECC symbology (continued).

CONTROL MEASURES

LINES

9. Line of Departure (LD)

LD ————— LD

10. Phase Line (PL)

PL ————— PL
(Name) (Name)

11. Fire Support Coordination Line (FSCL)

FSCL (Unit Designation)
050030Z APR

12. Restrictive Fire Line (RFL)

RFL (Unit Designation)
170030Z APR

13. Tank Ditch

(No.) 

14. Coordinated Fire Line (CFL)

CFL (Unit Designation)
120030Z APR

15. Probable Line of Deployment

PLD-----PLD

16. Main Supply Route (MSR)

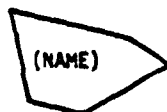
MSR (Name)

AREAS

1. Basic Area



2. Area of Operation (AO)



3. Assembly Area (AA)



4. Attack Position



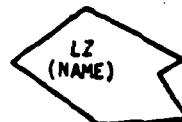
5. Drop Zone (DZ)



6. Fire Support Base (FSB)



7. Landing Zone (LZ)



8. Forward Arming and Refueling Point (FARP)



Figure 21. ECC symbology (continued).

CONTROL MEASURES AREAS

9. Objective



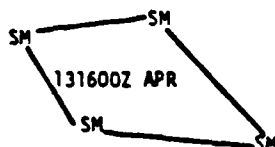
10. Patrol Base



11. Pickup Zone (PZ)



12. Scatterable Minefield (SM)

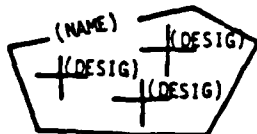


- DTG designates self-destruction time.
- Symbols for types of mines (anti-tank, anti-personnel) are entered within boundaries.

13. Support Area



14. Group of Targets



15. Restrictive Fire Area (RFA)



16. No Fire Area (NFA)



17. Contaminated Area



18. Battle Position



19. Minefield

- Gap
- Passage Lane

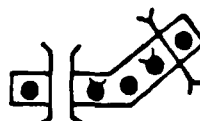


Figure 21. ECC symbology (continued).

ENGAGEMENT VECTORS

	UNIT ENGAGEMENT
	INDIRECT FIRE IMPACT POINT
	MORTAR FIRE IMPACT POINT
	SMOKE MISSION IMPACT POINT

INTELLIGENCE

	TANK		TOW SAGGER		HELICOPTER
	APC BMP BRDM		155 MM GUN 152 MM HOWITZER 122 MM HOWITZER		FIGHTER
	TRUCK		MANPACK		Remote Sensor (REMS)

INCLUDE number detected next to symbol (e.g., 3)

	Detected unit		Weather type
---	---------------	---	--------------

Figure 21. ECC symbology (continued).

FIELD CONDITIONS

OBSTACLES

Minefield



Crater



General Mass



Concertina



Fixed Wall



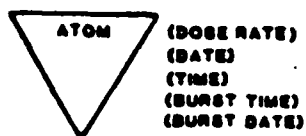
Ditch



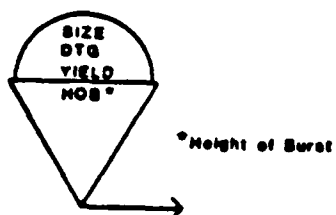
Figure 21. ECC symbology (continued).

NUCLEAR

1. Radiological Marker



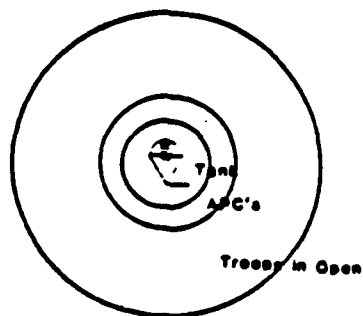
2. Nuclear Explosion



3. Radiation Contours



4. Prompt Effects Display



5. Fallout Prediction

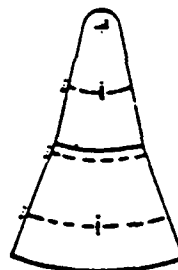


Figure 21. ECC symbology (concluded).

Unit contamination indicators shall be displayed whenever a unit's radiation dose reaches 70 cGy. The contamination indicator shall consist of a solid white circle indicating nuclear contamination. This indicator shall be displayed on the left of the unit symbol display, as shown in Figure 21.

The display of symbology other than units shall be controlled by appropriate buttons on the master menu.

2.3.7 Unit Status Displays - The following unit status displays, as defined above, shall be provided:

1. Task Organization
2. Fire Support Log
3. Intelligence Log
4. Prescheduled Event Log
5. NBC Report Log
6. Decontamination Log
7. Unit Radiation Status

2.3.8 Alerts and Free Format Messages - Alert messages are fixed format messages which shall be generated when key events are encountered that should be brought to the immediate attention of the controller. The definition of alert message fields adhere to the following conventions:

- Items which are displayed in [...] are variable depending on the situation and status surrounding the alert message.
- Items which are displayed in <...> indicate this field may be repeated.
- All data items in CAPITAL LETTERS shall be supplied whenever the alert message is displayed.
- [Time] shall be expressed in hours:minutes:seconds. Although not displayed, each time shall have a date (day) associated with it.
- [Unit Identification] is composed of the unit's force designation (B=BLUEFOR, R=OPFOR and W=observer/controller).

The following subsections define specific alert message formats.

2.3.8.1 Unit Engagements - These messages shall provide data which inform the operator that a live EMC/TAF or a simulated unit engagement has occurred. The general format of the message shall be as follows:

[Time] : [Firer Unit ID] : ENGAGED : [Fire Unit ID]

e.g.,

10:24:14 : 1/A/3-77 : ENGAGED : 2/1/1-44

2.3.8.2 Indirect Firings - These messages shall be provided to inform the operator of the status of an impending indirect fire mission. In the event the firer is found to be out of range of its target, an alert message shall be displayed identifying the mission and its scheduled execution time. The format of the message shall be as follows:

[Time] : [Firing Unit;Tgt_#/Coord;Time of Execution] :
OUT OF RANGE

e.g.,

10:24:00 : A/4-37;AJ002/NJ34566139;10:25:00 :
OUT OF RANGE

For all missions determined to be within valid range, a message describing the mission and its scheduled execution time shall be displayed. For EMC/TAF missions this alert shall be provided 30 seconds prior to the scheduled mission; for battle simulation missions the alert shall be provided after the execution. The format of the message shall be as follows:

[Time] : [Firing Unit] : [Weapon] : [Shell/Fuse] :
[Tgt_#/Coord] : [Time of Execution]

e.g.,

10:24:30 : A/4-37 : 155MM : ILLUM/PD : AJ002/NJ34566139
: 10:25:00

2.3.8.3 Nuclear Events - For each nuclear event scheduled to occur, a message describing the time the event is to occur, the target location, the height of burst and the yield shall be displayed. The message shall be displayed 30 minutes and 5 minutes prior to the event. The format of the message shall be as follows:

[Time] : [Forcel] : NUCLEAR EVENT SCHEDULED TO OCCUR
AT : [Time of Burst] : [Ground Zero] : [Height of
Burst] : [Yield]

e.g.,

12:00:10 : BLUEFOR : NUCLEAR EVENT SCHEDULED TO OCCUR
AT : 12:30:10 : NJ34566130 : Ground : 20KT

In the event the operator chooses to cancel a scheduled nuclear event, a message identifying the nuclear event shall be displayed. The format of the message shall be as follows:

[Time] : NUCLEAR EVENT [Event ID] : CANCELLED
e.g.,
11:50:25 : NUCLEAR EVENT 12:30:10/20KT/NJ34566130 :
CANCELLED

Casualty recommendation alerts shall be generated for those units who are affected by the blast or radiation. The format of the message shall be as follows:

[Time] : [Unit] : PROMPT NUCLEAR EFFECTS
PARTICIPANT CASUALTIES : OPEN [NNN%] APC [NNN%]
TNK [NNN%] WHEELED VEHICLE [NNN%] FOXHOLE [NNN%]
EARTH SHELTER [NNN%]
EQUIPMENT CASUALTIES : IN USE [NNN%] OFF [NNN%]
DISCONNECTED ANTENNAE [NNN%] SHIELDED [NNN%]

[Time] : [Unit] : ACCUMULATED EFFECTS PARTICIPANT
CASUALTIES : OPEN [NNN%/NNN%] APC [NNN%/NNN%]
TNK [NNN%/NNN%] WHEELED VEHICLE [NNN%/NNN%]
FOXHOLE [NNN%/NNN%] EARTH SHELTER [NNN%/NNN%]

All nuclear event alerts shall be provided directly from the ECC/TAF history; this data shall not be provided from the EMC/TAF history or the simulation.

2.3.8.4 Prescheduled Events - The prescheduled events entered by the ECC operator through the prescheduled events menu shall be displayed at the operator specified time. The format for these cueing prompts shall be as follows:

[Time] : [Message Originator] : [Message Type] :
[Message Code Name] [Textual Message, up to 80 characters
per line with a maximum of three lines of text]
e.g.,
10:24:35 : 132 : CC : BCOMOVE B Company Commander to move
his command post at 12:00:00.

2.3.8.5 Free Format Messages - The means to enter free format messages into the data base of an open exercise segment, during real-time and historian mode operations, shall also be available. Free format messages shall be entered through the alphanumeric terminal and stored in the data base in accordance with either an operator specified time or the exercise time as displayed on the tactical display at the time of message entry.

The Division role players may enter free format messages to tag various key events performed by the brigade. This data includes exercise status elements that are not

currently available via field or simulated automated storage capabilities. For example, reports generated by the brigade may be entered as required. In addition, time-tagged events to be displayed as a cueing device shall be entered as free format messages.

Free format messages shall consist of no more than three lines of text with 80 characters per line. Header information (unit ID, controller ID and message subject, etc.) should, as a matter of standard operating procedure, be included as part of the free format message.

IDCC shall provide the means to filter (for display purposes only) alert messages by tactical and operational categories. Within these categories, messages shall be ordered chronologically.

1. Tactical Categories

- Maneuver
- Fire Support
- Intelligence
- Mobility/Counter mobility
- Combat Service Support
- Air Defense
- Command, Control and Communications

2. Operational Categories

- System Status
- Video Data Log
- COMMO Data Log
- Digital Data Log

3. Operator Station ID

2.3.9 AAR Processing - The same AAR capabilities specified in the Requirements Design Specificatino for the 500 Player CIS system shall be provided at the ECC stations. These features shall be used to create AARs for the brigade and CPX battalion TOCs from the ECC/TAF history.

SECTION 3 SOFTWARE REQUIREMENTS FOR EMC/TAF

All requirements specified in the Core Instrumentation Subsystem Requirements Design Specification (RDS) (NTC-1221-18) dated 24 May 1982 with Live Fire Supplement dated 1 December 1982 and the Requirements Design Specification for the Addition of Nuclear and Chemical Capabilities to the National Training Center (NTC) Core Instrumentation Subsystem (CIS) dated 13 April 1984 shall be met in the EMC/TAF software used for the ECC demonstration. Movement and engagement data for the EMC/TAF history shall be provided through the use of raw data tapes from the NTC exercise conducted during the period 23 April 1984 through 5 May 1984. The EMC/TAF software shall provide the following data to the ECC/TAF histories:

1. Unit Definitions (USVT and Unit ID stream data messages)
2. Unit Task Organizations (USVT and Unit Redesignation stream data messages)
3. Unit Locations (Ground Unit position location stream data messages)
4. Unit Engagement Data (Unit Engagement stream data messages)
5. Indirect Firing Data (IFCAS Target Engagement, IFCAS Alert stream data messages and History Fire Support Log)
6. Unit Radiation Status

In addition, the EMC/TAF software must provide for the capability of executing nuclear events which have been defined at the ECC station.

SECTION 4

SOFTWARE REQUIREMENTS FOR THE BATTLE SIMULATION MODEL

For the demonstration, the ARTBASS model will be used to simulate battlefield events which occur for a single BLUEFOR battalion and an OPFOR motorized rifle regiment. The following ARTBASS menus, and associated processing, as detailed in the "Requirements Design Specification for the Addition of Nuclear and Chemical capabilities to the Army Training Battle Simulation System (ARTBASS)" shall be provided for the demonstration:

1. Simulation Control (except for Post-Exercise Summary capabilities)
2. Unit Activations/Deactivations
3. Unit Location
4. Maneuver Control
5. Support Fire
6. Direct Fire
7. Air Mission
8. Obstacle (i.e., minefield, tank ditch)
9. Control Measures

The remainder of the menus (Weather, Alert Routing, Task Organization) shall not be required for the demonstration.

The simulation model shall provide the following data to the ECC history for the generation of appropriate alerts and graphics at the ECC station:

1. Air and Ground Unit Locations: Time, Unit ID, UTM Coordinates
2. Unit Engagements: Time, Firing Unit ID, Fire Unit ID
3. Indirect Firing Data: Time, Firing Unit, Target Location for out of range missions; Time, Firing Unit, Weapon, Ammunition, Target Location for fired missions.

4. Unit Radiation Status: Time, Unit ID, Radiation Level

In addition, ARTBASS software shall process and execute nuclear events defined at the ECC station.

Equipment status, personnel status, and supply status data shall not be required for the demonstration.

ATTACHMENT 1
DEMONSTRATION REPORT FOR THE
INTEGRATED BATTLEFIELD COMMAND
AND CONTROL SIMULATION

1.0 INTRODUCTION

In accordance with Phase III of the Defense Nuclear Agency (DNA) contract, the Integrated Battlefield Command and Control Simulation (IBCCS) system concept demonstration was held on 19 November 1984 at the NTC Software Development Facility in La Jolla. Presented before DNA and Training Doctrine (TRADOC) representatives was a proof-of-concept demonstration in which data from both live and simulated histories was combined to form a single, coordinated battle at a Division-level ECC (Exercise, Coordination and Control) station.

The demonstration was developed based upon a National Training Center (NTC) operational training scenario. Raw data tapes from the 15 April 1984 rotation were used to drive the Exercise Monitoring and Control/Training Analysis and Feedback (EMC/TAF) software for one BLUEFOR battalion and one OPFOR Motorized Rifle Regiment (MRR). The Army Training Battle Simulation System (ARTBASS) was used to provide simulated data for one BLUEFOR and one OPFOR MRR. The ECC scenario combined the EMC/TAF units and the ARTBASS units resulting in two OPFOR Motorized Rifle Regiments (MRRs) and two BLUEFOR battalions.

The primary purpose of the November demonstration was to verify the ECC concept and show the feasibility of combining live and simulated data for the purpose of training the Brigade staff. The demonstration consisted of two parts: a closed history based upon a scenario developed for the demonstration and a participatory portion which provided for utilization of menus and collection of data in real-time. This document summarizes the ECC scenario and capabilities which demonstrated the NTC Integrated Battlefield Training concept.

2.0 ECC SCENARIO

2.1 Review of ECC Control

In order to assist in the coordination of simulation and EMC/TAF exercises, and in the preparation of AARs, a special exercise history was created. This history contained unit level data from both live and simulated battalions and from the data entered into the history by the operator through use of interactive menus.

For purposes of this demonstration, the ECC station only provided control for the definition and execution of nuclear events and ECC unit definition and location. For all other functions, the ECC station reviewed situations based upon data received from EMC/TAF and ARTBASS on real and notional units, respectively. Data logging capabilities were also provided at the ECC station allowing the ECC operator to record the receipt of pertinent information for later display and review.

2.2 ECC Scenario Overview

Based on the 15 April 1984 NTC EMC/TAF operational training scenario, the following describes the overall operational plan developed for the ECC demonstration:

15APR84

54th Mech Div defends in sector with two brigades abreast: 2nd Bde (ARTBASS) in the north; 1st Bde (ES) in the south. Bdes allow no penetration of PL BOSUN. 3rd Bde (ECC) remains Div reserve; occupies battle positions to the rear of 1st and 2nd Bdes. 1-23 Cav (ECC) screens Div southern flank.

172 MRR (ARTBASS) in the north, conducts the main attack at 250100 Apr 84 with 3 MRBs. The regiment's immediate objective is NK 2901. The 52 MRR, (ES) conducts the supporting attack in the south, attacks at 250100 Apr 84 with 3 MRBs. The regiment's immediate objective is vic NK 3593. The subsequent objective is NK 2901.

250100 Apr 84

Enemy (OPFOR) nuclear weapon (surface burst) detonated north of MECH DIV coordinates TBD.

BLUEFOR receive NBC-2 and 3 reports from DIV HQ.

ENEMY (OPFOR) conducts attack. Nuclear weapon release received by 2nd Bde. STRIKWARN issued by DIV. Weapon planned and used (.2KT air burst) on OPFOR vicinity TBD to blunt 172 MRR attack in 2nd Bde sector.

Figure 22 is a Ft. Irwin map illustrating the initial location of all defined units (EMC/TAF, ARTBASS, and ECC) and appropriate control measures displayed at the ECC station.

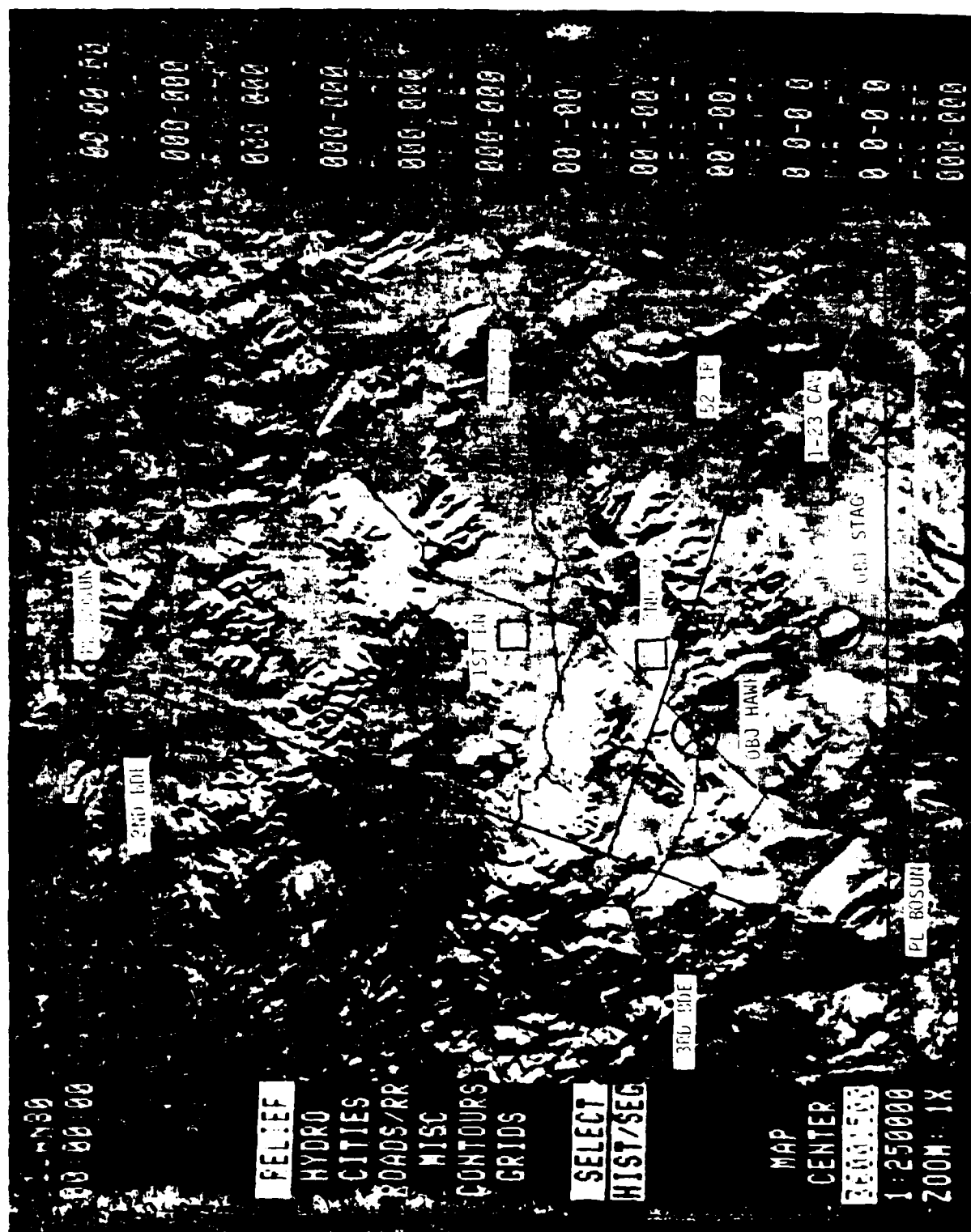


Figure 22. ECC situation display.

3.0 DEMONSTRATION OF ECC CAPABILITIES

The following paragraphs describe operations included in the the history for the demonstration.

3.1 History Initialization

The initialization process involved defining all unit information for ECC (notional), EMC/TAF (real) and ARTBASS (simulated) units as shown in Figure 23. The EMC/TAF unit information as defined by NTC operators for the 15 Apr 1984 history was the same used in the ECC history with the exception that the BLUEFOR Battalion was line organized to the ECC Brigade Under Training. The simulated unit information was created and defined in accordance with the demonstration scenario with the simulated BLUEFOR Battalion also line organized to the ECC Brigade Under Training.

3.2 Unit Engagement Processing

Unit engagement data was collected from the EMC/TAF history and the ARTBASS scenario and shown at the ECC controller station.

3.3 Support Fire Processing

Conventional indirect fire engagements, as defined for the ARTBASS scenario and EMC/TAF history, were displayed at the ECC station and appropriate alerts were provided. In addition, nuclear events were defined at the ECC station which nuclear caused events to occur in the ARTBASS scenario and EMC/TAF history.

3.4 Unit Position

The ECC notional unit positions were defined via the Unit Position interactive menu. The EMC/TAF history provided the ECC/TAF history with the center of mass for each defined real unit. ARTBASS unit data consists of only leaf level units. Following receipt of the unit information from ARTBASS, ECC/TAF calculated the center of mass of the defined higher echelon units.

3.5 Control Measures

OPFOR and BLUEFOR control measures (i.e, objectives, phase lines, tank ditch, minefield, axis of advance, echelon boundary lines) were defined in accordance with the developed scenario based on the 15 Apr 1984 NTC training history.

3.6 Prescheduled Events

The ECC operator defined preplanned scenario event messages via the Prescheduled Event menu. These events provided

BLUEFOR - REAL

1/034 ARM/BN

A/1-034	MI/CO	1 MANPACK		
CP/A/1-034	MI/CP	3 APC W/M-2		
1/A/1-034	MI/PLT	4 APC W/M-2		
2/A/1-034	MI/PLT	4 APC W/M-2		
3/A/1-034	MI/PLT	4 APC W/M-2		
B/1-034	ARM/PLT			
CP/B/1-034	ARM/CP	2 TANK		
1/B/1-034	ARM/PLT	4 TANK		
2/B/1-034	ARM/PLT	4 TANK		
3/B/1-034	ARM/PLT	4 TANK		
C/1-034	MI/CP	1 MANPACK		
CP/C/1-034	MI/PLT	2 APC W/M-2		
1/C/1-034	MI/PLT	4 APC W/M-2		
2/C/1-034	MI/PLT	4 APC W/M-2		
3/C/1-034	MI/PLT	4 APC W/M-2		
D/1-034	ARM/CP			
CP/D/1-034	ARM/PLT	2 TANK		
1/D/1-034	ARM/PLT	4 TANK		
2/D/1-034	ARM/PLT	4 TANK		
3/D/1-034	ARM/PLT	4 TANK		
SCT/1-034	ARM/PLT	1 MANPACK	3 APC W/M-2	3 APC W/TOW
FW/1-034	EW/PLT	3 RADAR		
4.2/1-034	ARTY/4.2PLT	3 107MM MORTAR		

Figure 23. ECC units.

TOC/1-034 MI/TOC

BN TOC MI/PLT 2 TANK 6 APC W/M-2 7 FIGHTER/BOMBER
1 MANPACK W/VIPER

CBT TRNS 1-034 ARM/CBT TRNS

1-034 MED MED/PLT 7 APC W/M-2

CBT TRNS S+S S+S/PLT 1 APC W/M-2 9 TRUCK

FLD TRNS 1-034 MI 1 TRUCK

DIVAD 1-034 AD/PLT

1-34 ENG ENG/PLT 3 APC W/M-2 1 TRUCK

AT/1-034 AT/PLT 8 APC W/TOW

DS BN ARTY/BN

DSA ARTY/BTRY 2 155MM SP HOW

DSB ARTY/BTRY 2 155MM SP HOW

DSC ARTY/BTRY 2 155MM SP HOW

1-042 BN ARTY/BN

A/1-042 ARTY/BTRY (NO EQUIP. ASSIGNED)

B/1-042 ARTY/BTRY

C/1-042 ARTY/BTRY

Figure 23. ECC units (continued).

OPFOR - REAL

NAME	TYP/ECH	#PERS.	EQUIPMENT	
52 REGIMENT				
52	ARM/REG	3 RECON	1 BMP W/ SAG	
1/52	ARM/BN	1 BMP 10 MANPACK	22 TANK 4 HELICOPTER	46 BMP W/SAG 12 122 SP HOW
A/1/52	ARM/CO			
B/1/52	ARM/CO			
C/1/52	ARM/CO			
2/52	ARM/BN	12 TANK 6 ZSU	6 BRDMS	25 BMP W/SAG
A/2/52	ARM/CO			
B/2/52	ARM/CO			
C/2/52	ARM/CO			
3/52	ARM/BN	25 BMP W/SAG	12 TANK	
A/3/52	ARM/CO			
B/3/52	ARM/CO			
C/3/52	ARM/CO			
1/52 RECON	ARM/CO	6 BMP W/SAG	4 BRDM	
2-68 130M	ARTY/BN	1 152 GUN HOW		
U/I MRL (122M)	ARTY/BN	1 152 GUN HOW		
1-28 (122SP)	ARTY/BN	1 122 SP HOW		
2-28 (122SP)	ARTY/BN	1 122 SP HOW		
3-28 (122SP)	ARTY/BN	1 152 SP WHO		
U/I/122 SP	ARTY/BN			
TOC REG	REG/ARM			

Figure 23. ECC units (continued).

BLUEFOR - NOTIONAL

1-3 ARMOR BN W/ 1-8 MECH BN ATTACHED

CP/A/1-3
1/A/1-3
2/A/1-3
3/A/1-3
A/1-8

CP/B/1-3
1/B/1-3
2/B/1-3
3/B/1-3
B/1-8

CP/C/1-3
1/C/1-3
2/C/1-3
3/C/1-3
C/1-8

CP/D/1-3
1/D/1-3
2/D/1-3
3/D/1-3
D/1-8

SCT/1-3	
1-3 MED	MED PLT
CBT TRANS	MAINT/SEC
DIVAD 1-3	AD/PLT
AT/1-3	MECH/AT
A/2-618	ARTY/BTRY
B/2-618	ARTY/BTRY
C/2-618	ARTY/BTRY

Figure 23. ECC units (continued).

OPFOR - NOTIONAL

1/172 BN

 A/1/172 MI/CO
 B/1/172 MI/CO
 C/1/172 MI/CO

2/172 BN

 A/2/172 MI/CO
 B/2/172 MI/CO
 C/2/172 MI/CO

TK/172 BN

 A/TK/172 ARM/CO
 B/TK/172 ARM/CO
 C/TK/172 ARM/CO

3/172 RECON MI/CO
 1/172 ENG CBT/PLT
 AA PLT172 AD/CO

HOW BN/172 ARTY/BN
 172 HOW/49 ARTY/BN
 50 GH BN/49 ARTY/BN

RD ASP 1 CBTTRNS/CO

Figure 23. ECC units (concluded).

controller cues as to events which should be occurring in the training scenario (e.g., release of FRAGOs, release authority for use of nuclear weapons, orders to begin certain types of operations). The defined events were displayed on the side display at the operator-defined time to act as a cueing prompt and were also included in the Prescheduled Event Log.

3.7 Free Format Messages

Free-format messages, which include the same features available in the NTC CIS free format message capability, were demonstrated in the participatory portion of the demonstration. Messages could be entered and sent to either another station or the history itself.

3.8 NBC Reports

Selected NBC reports, as defined in the ECC demonstration scenario, were logged and available for replay during the demonstration.

3.9 Intelligence

Intelligence alert data as received by the ARTBASS operator was relayed to the ECC operator and then entered into the ECC history via the ECC Intelligence menu. Based upon these inputs, Intelligence Log statistical display and appropriate intelligence graphics were available for display.

3.9.1 Statistical Reports - The following statistical reports, primarily logs, were demonstrated:

- Task Organization
- Fire Support Log
- Intelligence Log
- Prescheduled Event Log
- NBC Report Log
- Nuclear Event Log
- Unit Radiation Status

These reports were generated based upon the data derived from the EMC/TAF history, the ARTBASS scenario and operator entries at the ECC station.

3.9.2 Graphical Displays - The following ECC graphical displays were demonstrated:

- Unit display via echelon matrix buttons
- Control measures
- Fallout prediction display
- Nuclear prompt effects display
- Radiation contours
- Intelligence
- Engagement vectors
- Indirect firing displays

3.9.2.1 Alerts - The following alerts were demonstrated:

1. Unit engagements
2. Indirect firings (as received from ARTBASS and EMC/TAF)
3. Nuclear events

4.0 CONCLUSION

The demonstration served to show the feasibility of presenting a Division-level scenario at an NTC station, based upon inputs from both a live and simulated data flow. The use of the ECC station as a vehicle for providing AARs to command staffs being trained with the simulation and as an exercise coordination station were discussed. The operation concept and the prototype software were demonstrated.

ATTACHMENT 2
ABBREVIATIONS AND ACRONYMS

AAR	After Action Review
APC	Armored Personnel Carrier
ARTBASS	Army Training Battle Simulation System
BLUEFOR	Blue Force
CIS	Core Instrumentation Subsystem
CPX	Command Post Exercise
DNA	Defense Nuclear Agency
DTG	Date Time Group
ECC	Exercise Coordination and Control
EMC	Exercise Monitoring and Control
HOB	Height of Burst
IBCCS	Integrated Battlefield Command and Control Simulation
IFCAS	Indirect Fire Casualty Assessment System
MRR	Motorized Rifle Regiment
NTC	National Training Center
OPFOR	Opposing Force
RDS	Requirements Design Specification
RS	Radiation Status
USVT	Unit State Vector Table
UTM	Universal Transverse Mercator
TOC	Tactical Operations Center

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