MX-25-496

SOFTWARE USER'S MANUAL
FOR
SISTIM 6.3.1.0

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1. SCOPE

1.1 IDENTIFICATION

1.2 SYSTEM OVERVIEW

1.2.1 PURPOSE

Simulator/Stimulator (SISTIM) is a message stimulation and simulation product that supports testing and training for fire support systems. It is capable of transmitting and receiving fire support messages using communications protocols, and performing simple message response generation for several common fire support systems; for instance, generating a response of Message To Observer to a Fire Request message when simulating a mortar Fire Direction Center (FDC) unit.

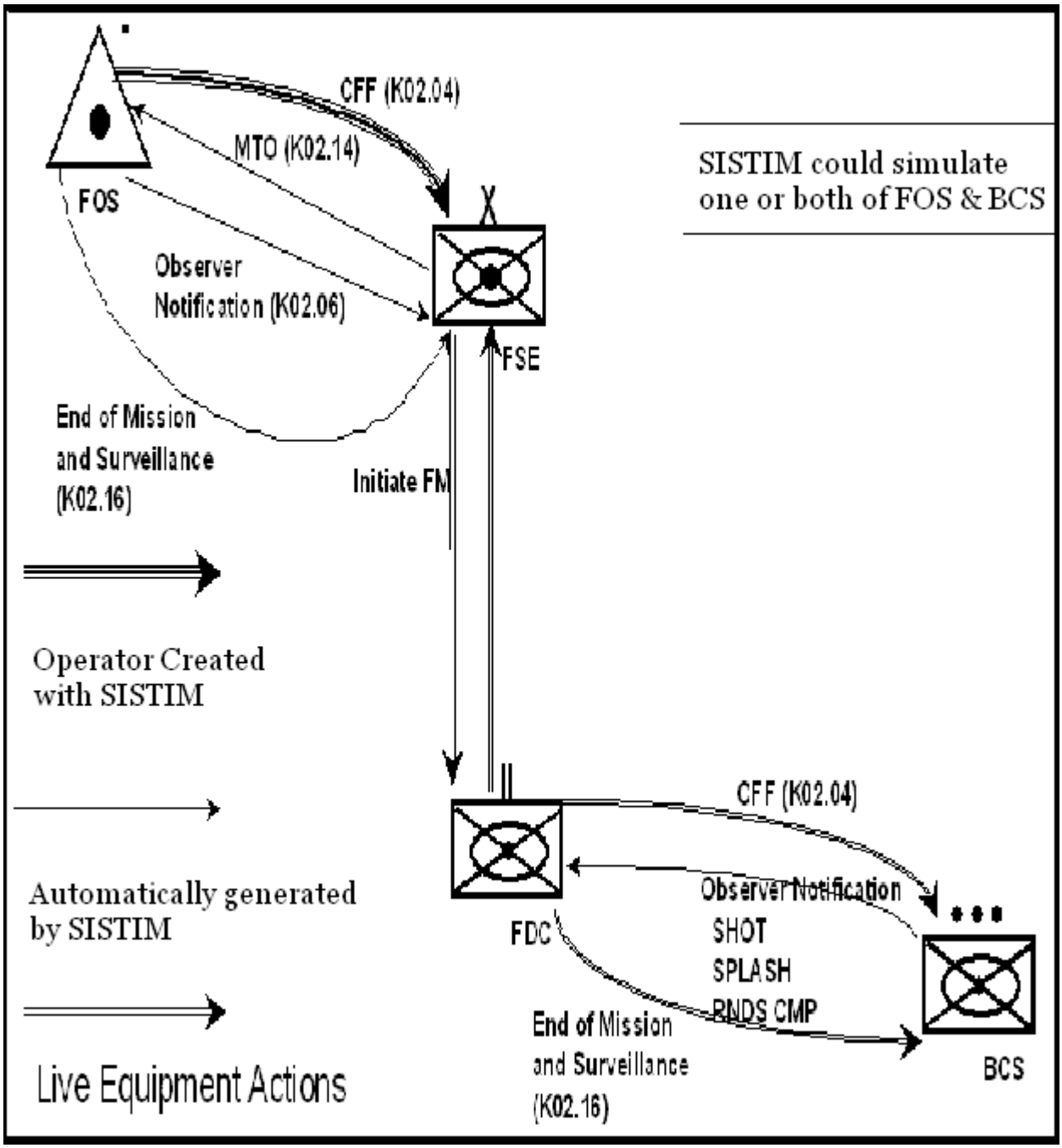
SISTIM also includes a Time-Ordered-Event-List (TOEL) generation and execution capability, providing the operator with a means of creating and "playing back" a sequence of actions to the live fire support system. This capability then stimulates the fire support system to test system actions. The simulation capabilities are also active to permit the "filling in" of absent systems, permitting testing in a sparse environment.

1.2.2 EXERCISES

1.2.2.1 NETWORKS AND UNITS

An exercise is created by an operator and consists of a communications structure, a unit hierarchy and a scenario. The communications networks are defined by configuring various network parameters so that later defined units can be assigned to specific communications nets. Units are defined describing the type of operational facility (OPFAC), command headquarters, and their communication network assignments.

SISTIM IN ACTION



1.2.2.2 AUTOMATIC TARGET GENERATION AND MESSAGES

After the units and communications paths are created, then targets can be created. The operator can establish the FLOT location, orientation, target box depth, and target intensity. Targets can automatically be generated using the operator defined target density. These targets are assigned to the observer units previously configured. After the targets are created, then additional messages can be inserted into the Event List. After the scenario had been created, it can be saved and run.

1.2.2.3 EXECUTION

SISTIM operates in three states, configure ready and running. Configure state represents the capabilities to create, manage, save, delete, and modify exercises. It provides modification capabilities of all aspects of exercises but does not provide the capability to execute exercises or events. Ready State represents the capabilities of SISTIM to manually prepare for the execution of an exercise as well as the “pause” state within an exercise. Running State represents the SISTIM capabilities to execute an exercise with permitted operator interactions.

In order to provide the capability to test Advanced Field Artillery Tactical Data System (AFATDS) mission processing threads, SISTIM provides a mechanism for defining the mission situation, including the participating system roles, and automated message event generation. The collection of mission defining elements is called an exercise. SISTIM provides the capability to set up exercises consisting of a TOEL/EOEL of external messages arranged to be transmitted on predefined networks, by predefined devices acting in predefined roles, at specified times relative to the initiation of the exercise. Individual message events may be created and executed (transmitted and received) within the TOEL of an exercise, or upon operator command at any time when SISTIM is in the ready or running states.

1.3 DOCUMENT OVERVIEW

This document is intended to give the operator an overview of the steps needed to develop and run scenarios using SISTIM.

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2. REFERENCED DOCUMENTS

MX-24-229	Software User's Manual for the SISTIM 2.X Simulator/Stimulator	22 Nov 96
SISTIM SS	SISTIM System Specification	1 Jun 01
MIL-STD-6040	U.S. Message Test Formatting Program	31 Mar 00
PK11 VMF BOM II	Package 11 VMF BOM Standardization Document R2C2 Vol. II	19 Mar 97
PK11 VMF BOM III	Package 11 VMF BOM Standardization Document R2C2 Vol. III	19 Mar 97
JVMF-TIDP-TE	JVMF Technical Interface Design Package	3 Feb 98

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3. EXECUTION PROCEDURES

3.1 INITIALIZATION

3.1.1 POWER UP INSTRUCTIONS

For a typical system power up, it is necessary to remove any floppy diskettes from the floppy disk drives. If non-system floppy diskettes are in the drive, the system will not boot and in some cases, no messages will be displayed.

At power on, the typical system will normally boot the UNIX operating system with no operator intervention required. Refer to the specific operating system documentation for more detail and resolution of any errors that may be encountered.

3.1.2 STARTING THE SISTIM APPLICATION

Once SISTM is powered up the following toolbar will appear at the bottom of your screen. SISTIM can then be started by either double clicking on the ***SISTIM*** icon below:

SISTIM – Initiates ***SISTIM.***

XTerm – Creates and displays a xterm.

XTerm 12 X 24 – Creates and displays a larger xterm.

Auto Config Devices – Should only be utilized by an experienced tester.

Power Off – Turns off the system.

Add Lan Printer – Adds a Lan printer to your configuration.

(See Appendix F)

User Manual – Displays the Training Manual.

3.2 SISTIM WINDOWS

SISTIM's user interface is entirely menu driven and window oriented. This makes SISTIM extremely user friendly for both the novice and expert operator.

3.2.1 FIELD TYPES

The windows displayed by SISTIM consist of different types of fields. The fields require different types of inputs from the operator. Each field types used during operation of SISTIM are discussed in Message Templates.

3.2.2 NOTES TO THE OPERATOR

1) The words "TOEL", "Scenario" and "Exercise" are used frequently throughout this manual. In order to avoid confusion as to their descriptions and differences, they are being described in this section.

   TOEL - A Time Ordered Event List.

   Scenario - The particular configuration of networks and units as well as the positioning of the units on a battlefield used to create a TOEL.

   Exercise - A grouping of networks, units, a scenario, and a TOEL used to simulate and stimulate units in a training battlefield situation.

2) When building a scenario, it is wise to save the data to the database often. This will help to avoid data losses due to power failures, etc.

3.2.3 WINDOWS

The following paragraphs will describe the different windows utilized by the SISTIM. These descriptions are divided into the following subparagraphs:

Figure - A graphical representation of the screen.

Description - A brief summary of the window's function.

Fields/Parameters - A brief description of the fields on the window and the values and ranges associated with them. If a menu is being described, a brief description of the menu options is included.

Window Navigation - How to access the window.

Accessible Windows - The titles and paragraph numbers of the windows that can be accessed from this window or menu.

The title of the paragraph is also the title of the window being described.

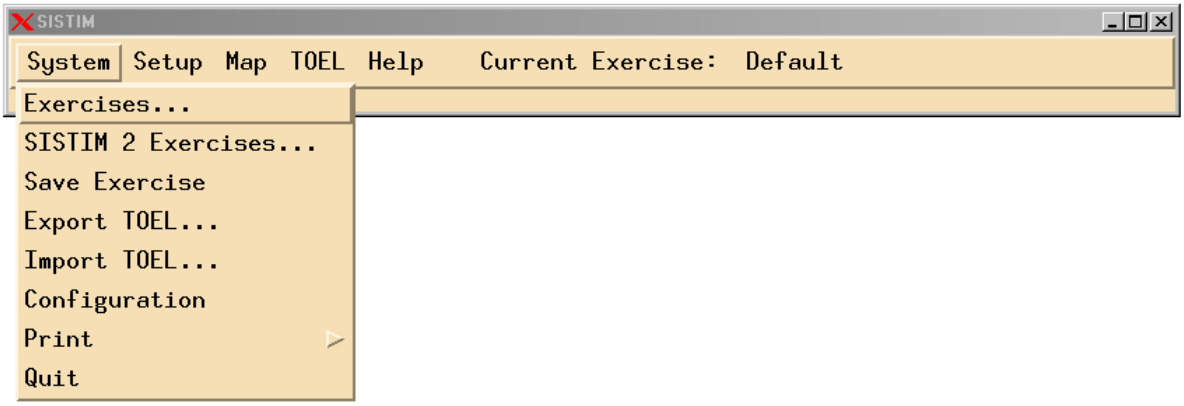
3.2.3.1 SISTIM MAIN WINDOW

3.2.3.1.1 Description

This is the main window for SISTIM. It contains the options required to setup units, communications, and scenarios needed to complete a tactically sound TOEL. This window also allows the operator to run previously created TOELs and to list and save exercises for future use.

3.2.3.1.2 Fields/Parameters

SYSTEM MENU



Exercises - This option allows the operator to display and select from a list of the exercises that have already been created. (See Exercise List).

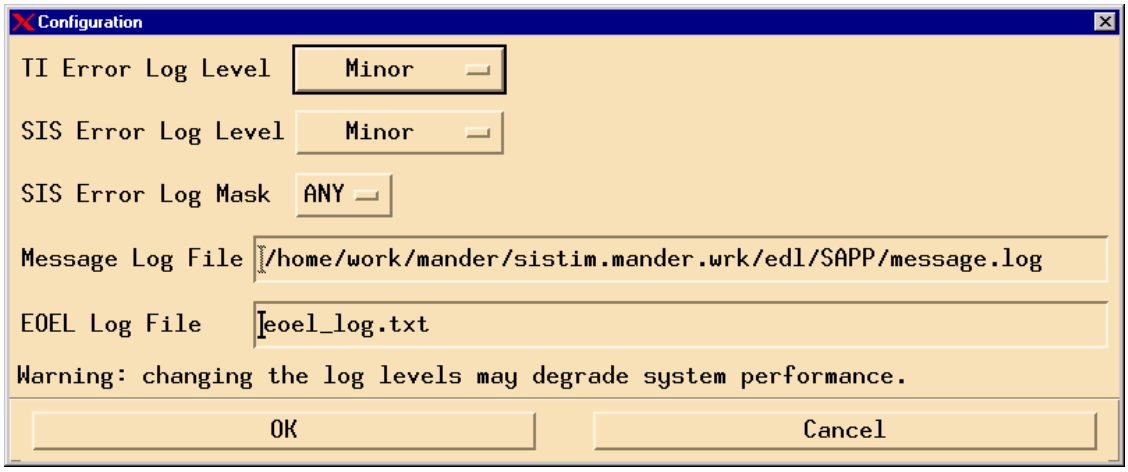
SISTIM 2 Exercises - This option is used to convert a limited number of SISTIM 2.0 Exercises into SISTIM exercises. This allows for a select number of Package 10 based exercises to be recreated with Package 11 and JVMF messages. (See SISTIM 2 Exercises).

Export TOEL - This option is used to allow the operator to transfer the current exercise TOEL to a text file which can be viewed and edited and then re-read back into SISTIM. (See Export TOEL).

Import TOEL - This option is used in conjunction with the Export TOEL function. A properly formatted text file created with Export TOEL can be converted into a new SISTIM exercise. (See Import TOEL).

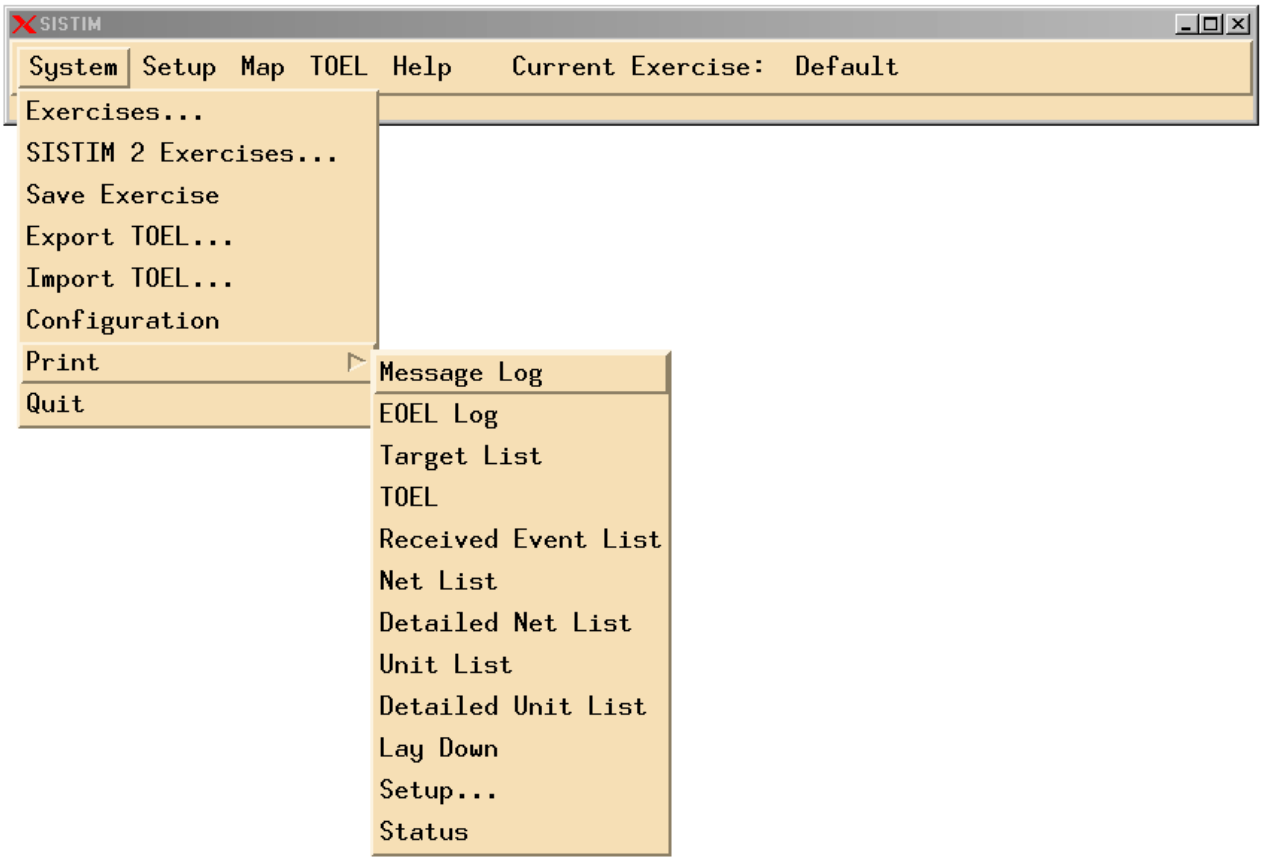
Save Exercise - This option saves the current exercise under the current name.

Configuration - This option displays the Configuration Window below which allows the operator to choose the SISTIM and TCIM error log levels, from “none to debug”, and to modify the location of the message log files.



Print - Selecting this option displays a cascade menu of print options.

Message Log - This option prints the message log.



EOEL Log – This option prints the EOEL log.

Target List - This option prints the target list.

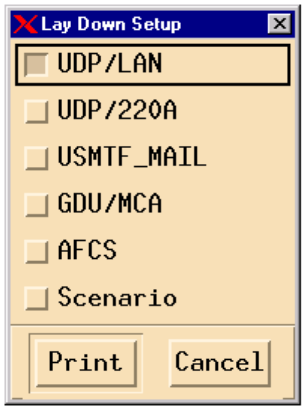
TOEL - This option prints the current exercise TOEL.

Received Event List - This option prints the current received event list.

Net List - This option prints the a summary of the current exercise's Network List.

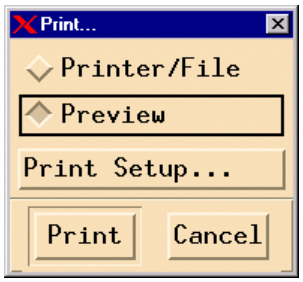
Detailed Net List - This options prints a detailed description of all of the Networks in the current exercise.

Unit List - This option prints the current exercise's Unit List.

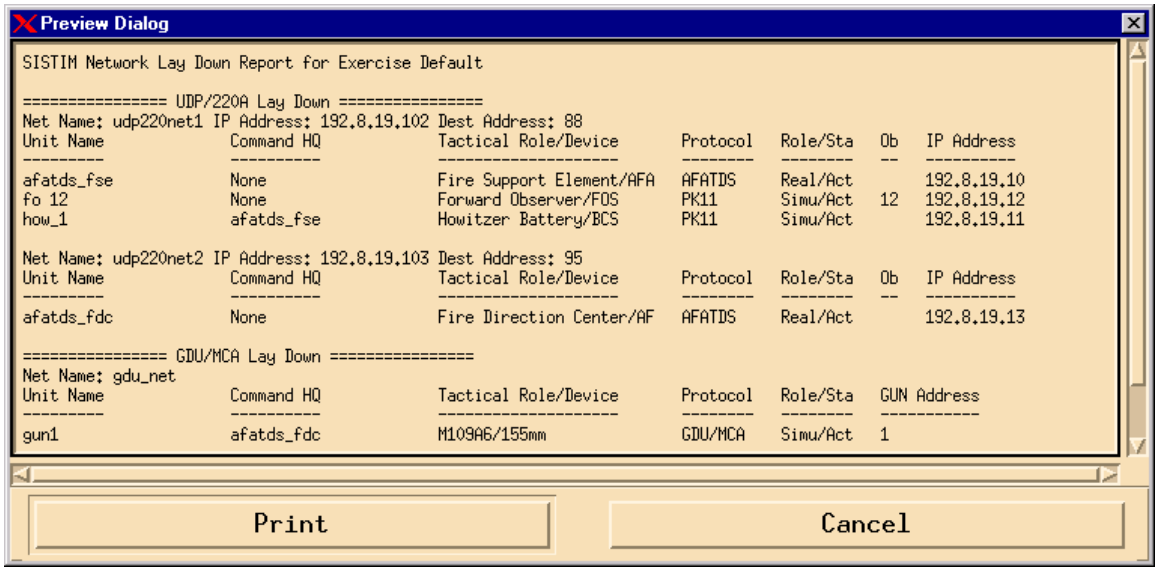


Detailed Unit List - This options prints a detailed description of all of the Units in the current exercise.

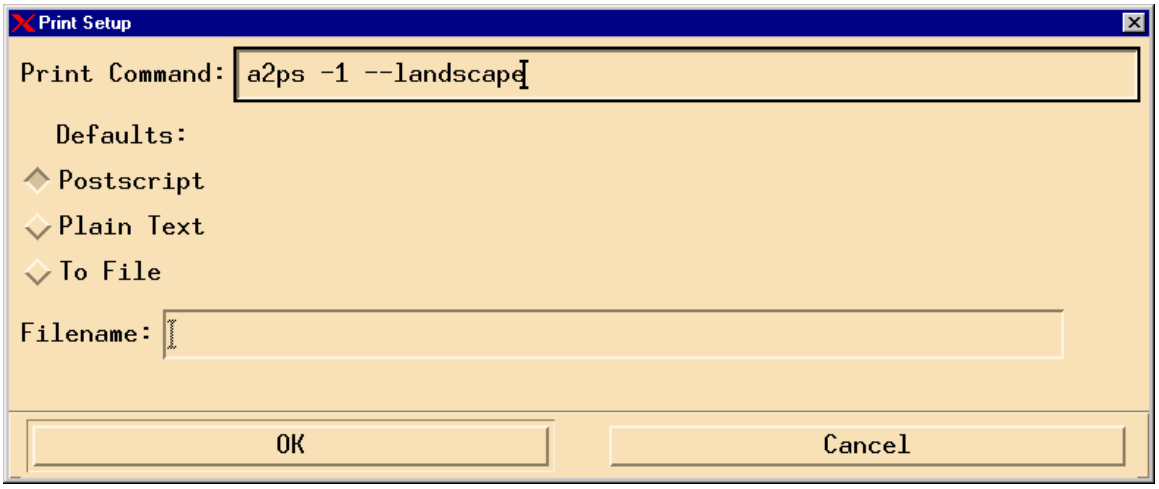
Lay Down - This option is used to print information about the current scenario or any of the networks within an exercise. When this option is selected the window below is displayed which allows the operator to choose what to print.When print is selected, the following window is displayed.



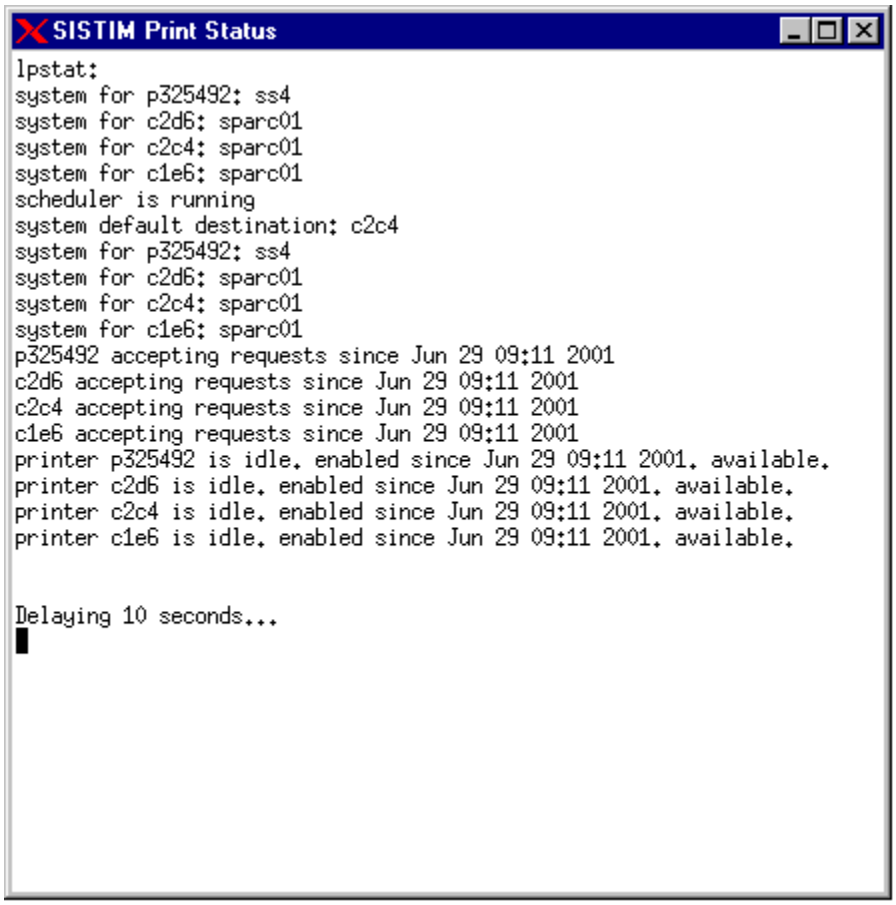
The Print Setup button will take the operator to the Print Setup window. The operator can choose either to Preview or Print. Both the preview and Printer/File selections will produce similar output to the following depending on what source is printed to.



Setup - This option displays the following window that allows the operator to configure the printing.

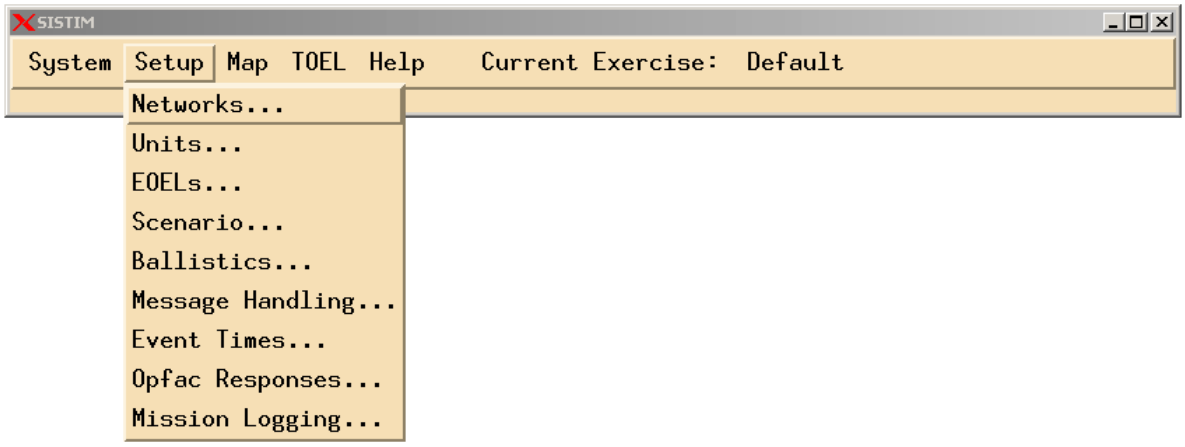


Status - This option displays the SISTIM Print Status Window that displays information about current printers.



Quit - This option executes SISTIM's shutdown sequence (See Shutdown Message).

SETUP MENU



Networks - Selecting this option will display a window, which allows the operator to configure the communication networks for the scenario units. (See Network List).

Units - Selecting this option will display a window, which allows the operator to configure the real and simulated units in the scenario. (See Unit List).

EOELs – Selecting this option will display a window, which allows the operator to setup an EOEL list. (See EOEL List).

Scenario - Selecting this option displays the window to set the scenario parameters. (See Scenario).

Ballistics - Selecting this option displays the window, which allows the operator to configure the Ballistics Test Setup. Ballistics Test Setup is for specific tests only and is not intended for general testing. (See Ballistics Test Setup).

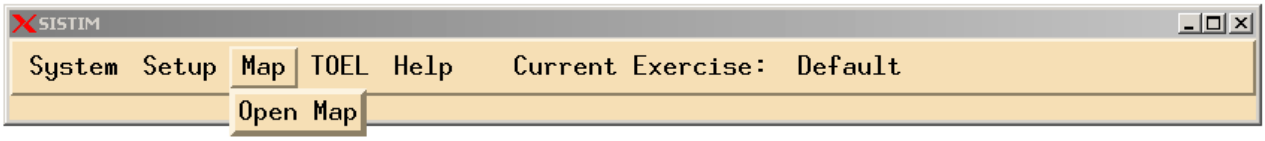
Message Handling - Selecting this option displays the window, which allows the operator to determine how to handle both incoming and outgoing messages for each Message Specification. (See Message Handling Setup).

Event Times - Selecting this option displays the window, which allows the operator to modify the transmit times of the events in the current TOEL. (See Event Times).

Opfac Responses - Selecting this option displays the window, which allows the operator to specify how long to wait when responding to messages with Opfac Logic. (See Opfac Responses).

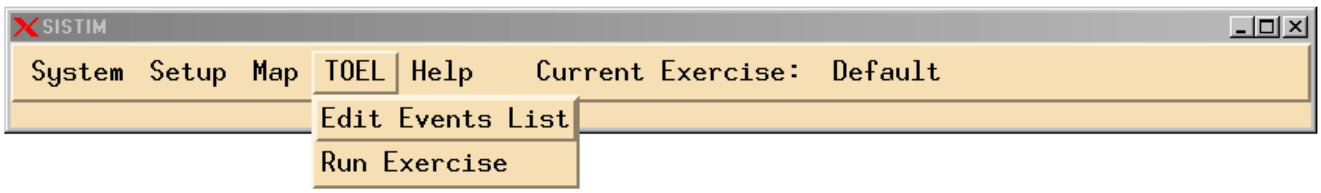
Mission Logging – Selecting this option displays the window, which allows the operator to track all messages generated by the opfac logic during the mission. (See Mission Logging)

MAP MENU



Open Menu – This option displays the SISTIM map. (See Map)

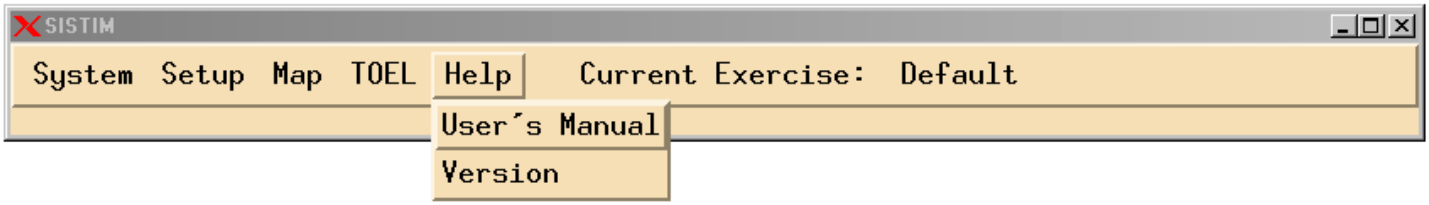
TOEL MENU



Edit Events List - This option displays the event list to the operator for editing. (See Event List)

Run Exercise - This option displays the Exercise Controller window, which allows the operator to begin the exercise. (See Exercise Controller). Selecting this option changes SISTIM from Configure to Ready mode.

HELP MENU



User's Manual - Selecting this option displays this manual.

Version - This option shows the operator the current version and release (See Version).

Current Exercise - This label shows the name of the currently loaded exercise.

3.2.3.1.3 Window Navigation

This window is reached when SISTIM is started.

3.2.3.1.4 Accessible Windows

Exercise List

SISTIM 2 Exercises

Export TOEL

Import TOEL

Version

Shutdown Message

Network List

Unit List

EOEL List

Scenario Setup

Ballistics Test Setup

Message Handling Setup

Event Times

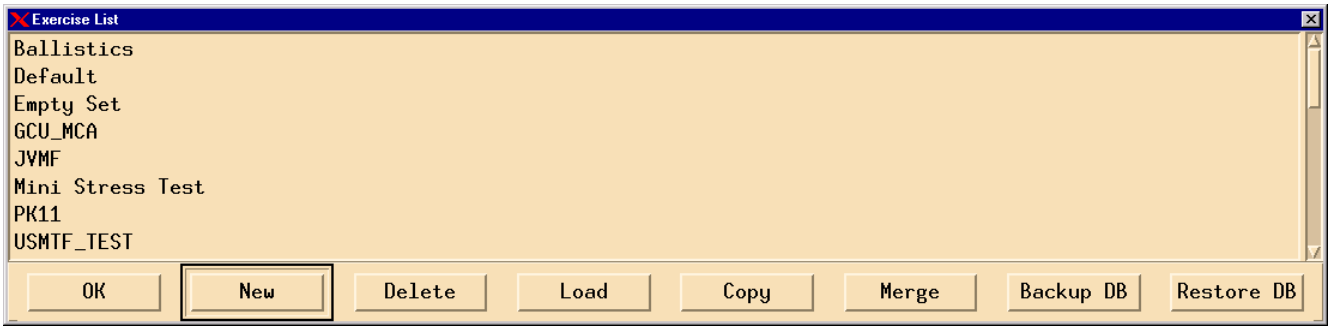
Opfac Responses

Map

Event List

Exercise Controller

3.2.3.2 EXERCISE LIST



3.2.3.2.1 Description

This window displays a list of previous saved exercises that can be loaded for execution, and allows the operator to create new exercises.

3.2.3.2.2 Fields/Parameters

OK - This button closes the Exercise List window.

New - This button gives the operator the opportunity to create a new exercise. When activated a window is displayed asking for the name of the new exercise (See New Exercise Data). When selected a message window is displayed asking whether the changes should be saved before the new exercise is created (See Save Changes).

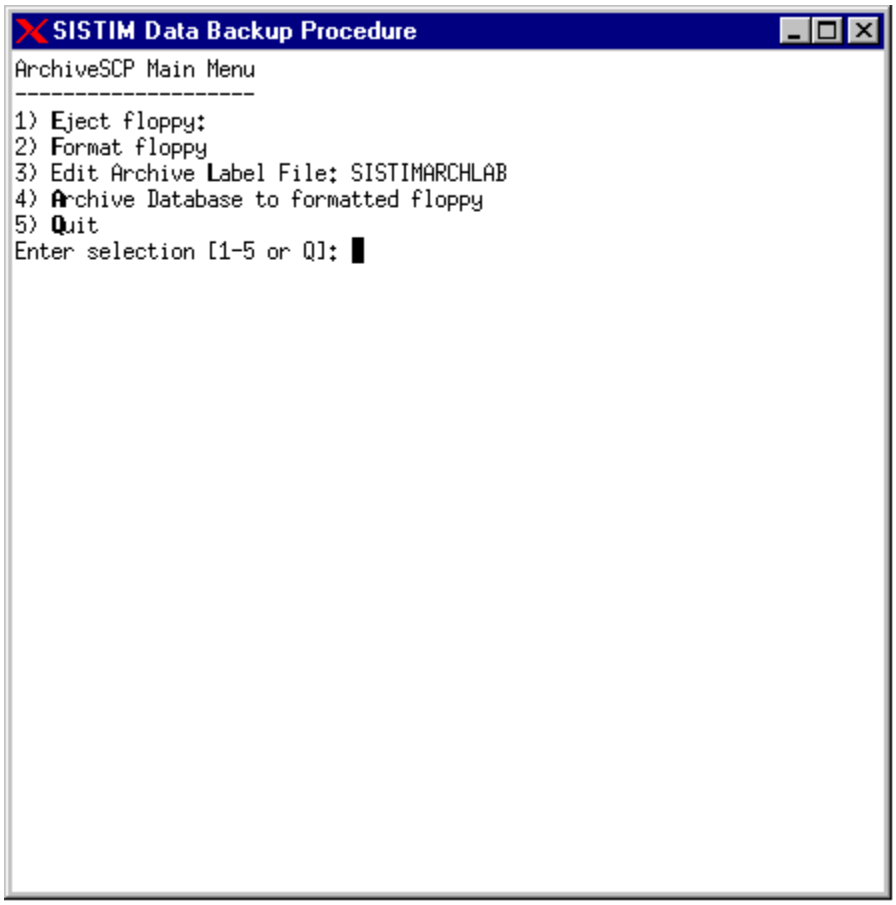
Delete - This button deletes the highlighted exercise from the exercise list (Note: an exercise must be highlighted before this button can be activated). When the exercise has been deleted, the exercise name is removed from the list. **CAUTION:** Make sure you have a backup copy of your exercises, before deleting any exercises.

Load - This button loads the highlighted exercise for execution or editing (Note: an exercise must be highlighted before this button can be activated). If a currently loaded exercise has been edited when another exercise is highlighted for loading, a message screen is displayed asking whether the changes should be saved before the new exercise is loaded (See Save Changes Window). When the loading of the exercise is complete, the Current Exercise label on the main window bar changes to reflect the new exercise name.

Copy - When this button is selected, a window is displayed asking for the name of the copied exercise (See New Exercise Data). Then a message window is displayed asking whether the changes to the currently loaded exercise should be saved before the newly selected exercise is copied (See Save Changes message). (Note: an exercise must be highlighted before this button can be activated).

Merge - This option allows the operator to add an exercise from another database into the current database. (Note: This operation requires a 3.5" floppy disk that already has a SISTIM database on it).

Backup DB - This button activates the SISTIM Data Backup Procedure. This procedure saves the exercise to 3.5” floppy disk. Follow the on-screen instructions.



If the floppy diskette does not appear to be previously formatted, the Backup procedure will allow the operator to have the floppy formatted prior to copying any files.

Restore DB - This button allows the operator to reload a previously saved exercise from the floppy. Once the data has been restored, the exercise is available to be loaded.

3.2.3.2.3 Window Navigation

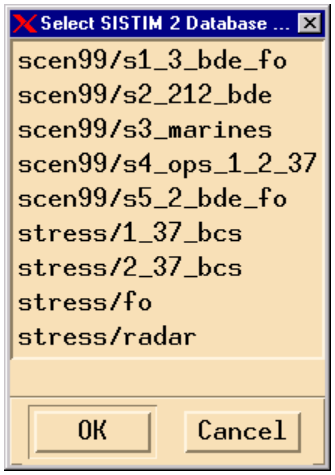
SISTIM - Select "Exercises…" from the "System" menu.

3.2.3.2.4 Accessible Windows

Save Changes

New Exercise Data

3.2.3.3 SISTIM 2 EXERCISES

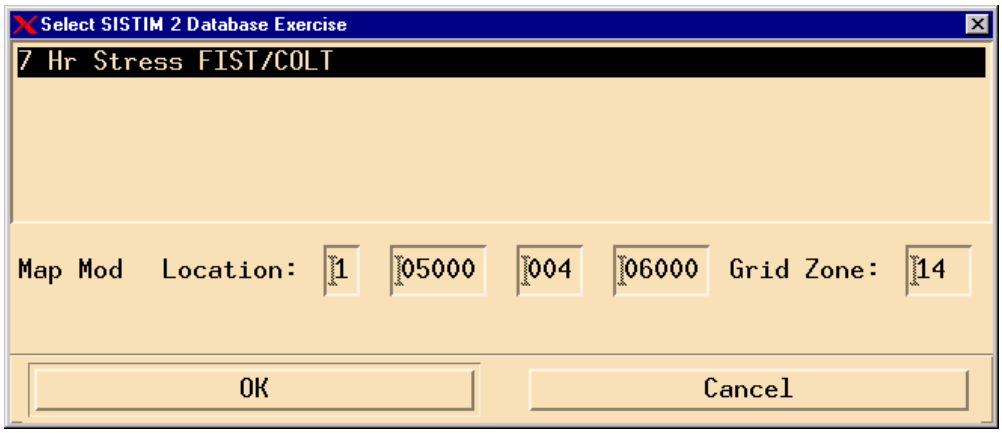


3.2.3.3.1 Description

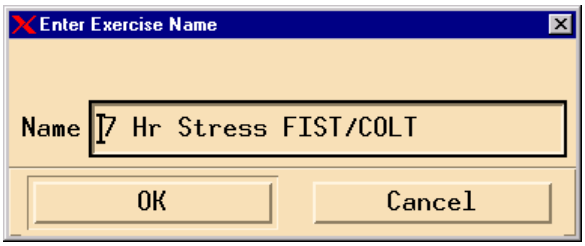
This option allows for the conversion of a limited number of SISTIM 2.0 Exercises into SISTIM exercises. This allows for a select number of Package 10 based exercises to be recreated with Package 11 and JVMF messages. It should be noted that SISTIM is not installed with this functionality enabled in most systems. At this time this feature is for specific testing purposes only.

3.2.3.3.2 Fields/Parameters

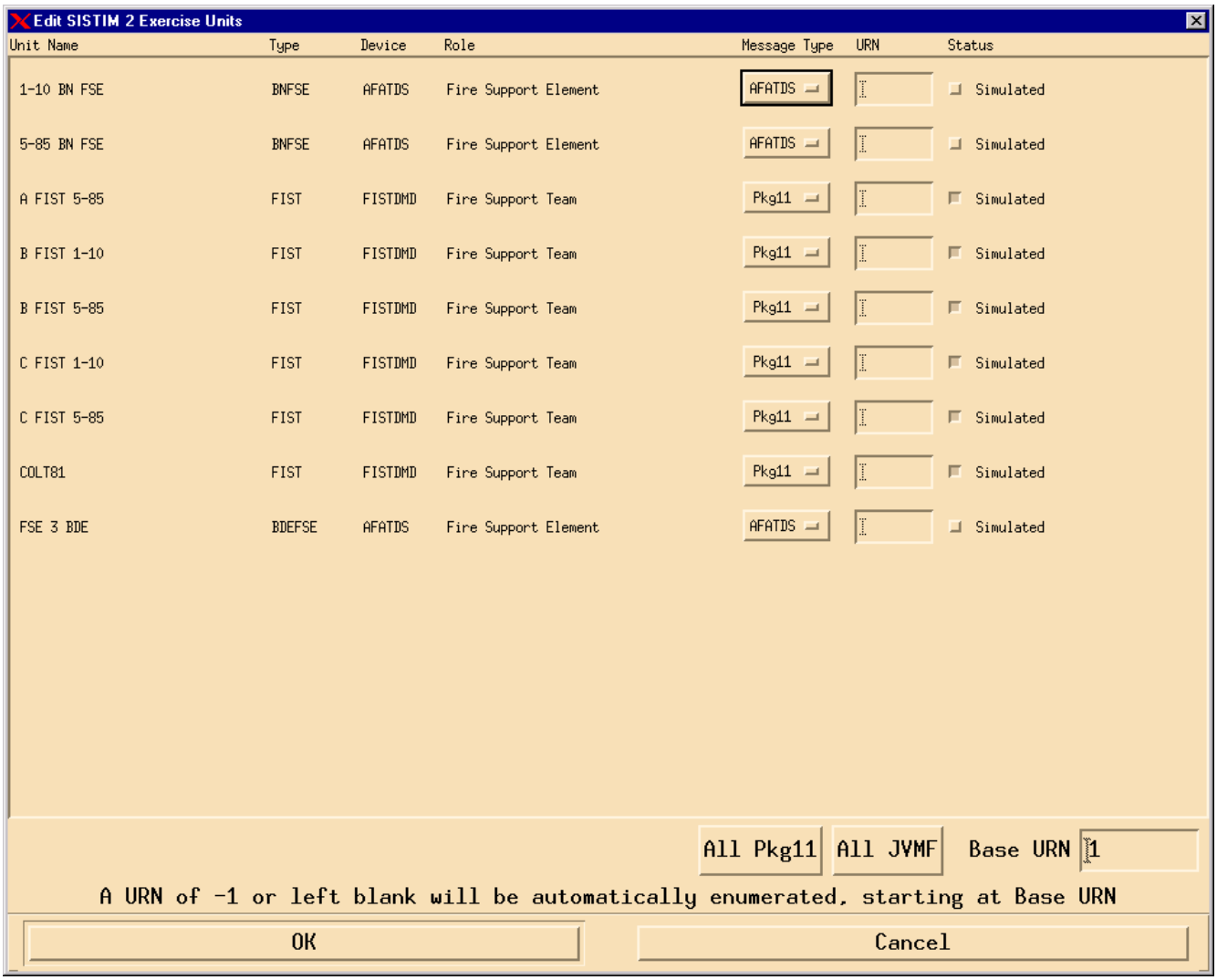
OK - By selecting the desired Database from the list and pressing the OK button, the user is then presented with a series of windows that allow for the conversion process to be completed with all necessary information. The window below is the first to appear. If there are multiple exercises within the selected database then the operator can choose which exercise, if there is only one then it is selected by default. The operator should also make sure the Map Mod matches the Map Mod intended for the chosen exercise.



OK - After the operator selects the exercise and chooses the correct Map Mod, the following window allows the name of the new SISTIM exercise to be chosen. It is important to note that SISTIM will convert any S2 database into a completely new exercise.



OK - After the operator chooses a name for the exercise, the following window will appear and allow the operator to edit the unit data for the exercise. It is advantageous to match the URN's and device types with the database to be used at AFATDS and other "Live" devices.



OK - Once the operator presses “OK” the conversion will begin. A message will display on the screen with status and any potential errors.

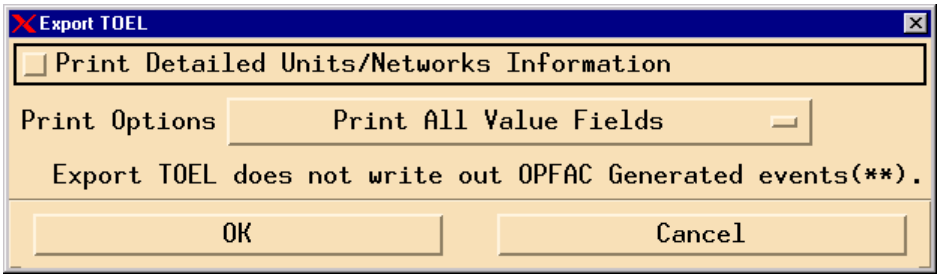
3.2.3.3.3 Window Navigation

SISTIM - Select "SISTIM 2 Exercises" from the "System" menu.

3.2.3.3.4 Accessible Windows

None

3.2.3.4 EXPORT TOEL



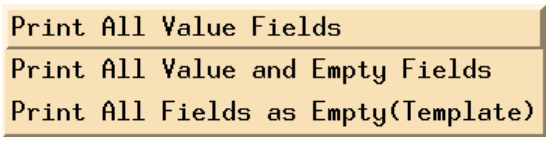
3.2.3.4.1 Description

This window allows the operator to export the current exercise's TOEL into a formatted text file. This text file can be edited and used later or it can simply be a convenient way to view a large TOEL.

3.2.3.4.2 Fields/Parameters

Print Detailed Units/Networks Information - By selecting this radio button, the operator has the option to print the Detailed or Summary version of the Units and Network in the current exercise.

Print Options - This selection has the following possible values. "All Value Fields" will display only fields that have data. "All Value and Empty Fields" will display every field regardless. "Template" will print and empty formatted message for all message types for the current TOEL.



OK - When this is pressed the operator now has the option to print the current exercise TOEL similar to the "System" menu "Print" (See SISTIM). By choosing to print to a file and choosing a ".txt" file, the operator will later be able to edit and import the file back into a SISTIM TOEL.

Close - This button closes the Export TOEL window without creating a new exercise.

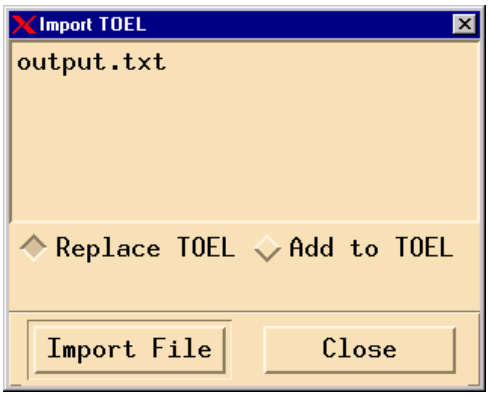
3.2.3.4.3 Window Navigation

SISTIM - Select "Export TOEL" from the "System" menu.

3.2.3.4.4 Accessible Windows

None

3.2.3.5 IMPORT TOEL



3.2.3.5.1 Description

This window allows the operator to choose a pre-formatted text file and create a new exercise. It is extremely important to realize that the only type of text file that will work is one that was created with the Export TOEL feature (See Export TOEL).

3.2.3.5.2 Fields/Parameters

Import File - First select the file from the list to import. If there are none displayed then the import can not be done until one is created or present in the “/usr/sistim” directory. Pressing the Import File button starts the process and the amount of time depends on the size of the TOEL to create.

Replace TOEL - When this box is checked the current exercise’s TOEL will be overwritten. If unselected the import will append the new messages to the current TOEL.

Close - This button closes the Import TOEL window without creating a new exercise.

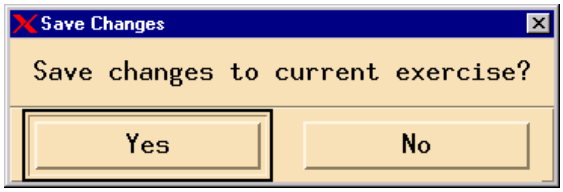
3.2.3.5.3 Window Navigation

SISTIM - Select "Import TOEL" from the "System" menu.

3.2.3.5.4 Accessible Windows

None

3.2.3.6 SAVE CHANGES



3.2.3.6.1 Description

This message window is used throughout the system allowing the operator to save any changes made before a requested action is completed.

3.2.3.6.2 Fields/Parameters

There are two sets of button parameters available on these windows. They are as follows:

Yes - Activation of this button saves the additions/changes made to the current window/exercise and closes the Save Changes window.

No - Activation of this button closes the Save Changes window without saving any additions/changes.

3.2.3.6.3 Window Navigation

SISTIM - Select "Exercises…" from the "System" menu.

Exercise List - Activate the "Load", "New", or "Copy" buttons.

-Or-

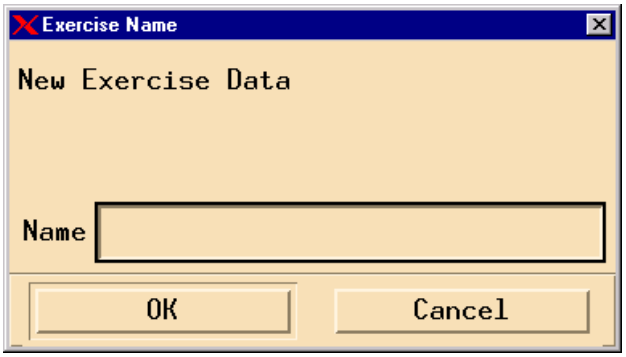
SISTIM - Select "Exit" from the "System" menu.

Shutdown Message - Activate the "OK" button.

3.2.3.6.4 Accessible Windows

None

3.2.3.7 NEW EXERCISE DATA



3.2.3.7.1 Description

This window allows an operator to enter a name for a new exercise.

3.2.3.7.2 Fields/Parameters

Name - Any name, up to 30 characters, and is valid can be used in this field.

OK - This button closes the New Exercise Data window and saves the new exercise under the entered name. The newly entered exercise name will now appear on the Exercise List window and will be made the Current Exercise. (See Exercise List).

Close - This button closes the New Exercise Data window without creating a new exercise.

3.2.3.7.3 Window Navigation

SISTIM - Select "Exercises" from the "System" menu.

Exercise List - Activate the "New" or "Copy" button.

3.2.3.7.4 Accessible Windows

None

3.2.3.8 VERSION

3.2.3.8.1 Description

This window displays the version number, release date, and all copyright notices.

3.2.3.8.2 Fields/Parameters

OK - This button closes this Version window.

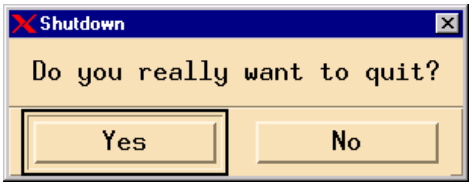
3.2.3.8.3 Window Navigation

SISTIM - Select "Version" from the "Help" menu.

3.2.3.8.4 Accessible Windows

None

3.2.3.9 SHUTDOWN MESSAGE



3.2.3.9.1 Description

This window gives the operator the option to begin the shutdown sequence and exit from the SISTIM application.

3.2.3.9.2 Fields/Parameters

OK - This button closes the Shutdown Message window and begins the system shutdown sequence. When selected the Save Changes window is displayed. (See Section 3.2.3.6 Save Changes). This is the preferred method to shutdown the program.

Cancel - This button closes the Shutdown Message window without action.

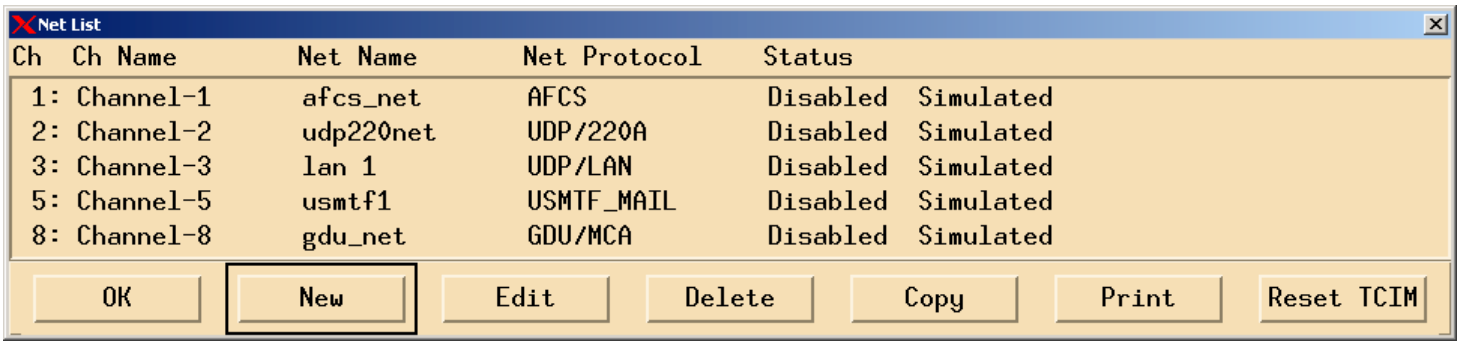
3.2.3.9.3 Window Navigation

SISTIM - Select "Exit" from the "System" menu.

3.2.3.9.4 Accessible Windows

Save Changes

3.2.3.10 NETWORK LIST



3.2.3.10.1 Description

This window allows the operator to configure the communications networks within the current exercise.

3.2.3.10.2 Fields/Parameters

Ch/ChName/NetName/NetProtocol/Status - This is the list of the currently configured networks.

Ch: Channel Number

Ch Name: Channel Name

Net Name: Network Name

Net Protocol: The type of network

Status: Status of network: Enabled or Disabled & Live or Simulated

OK - This button closes the Network List window.

New - This button gives the operator the opportunity to configure a new network. When this button is activated, a window is displayed which allows the operator to choose the type of network protocol to create. (See Network Protocol Available).

Edit - This button allows the operator to edit the parameters for an existing network (Note: a network must be highlighted before this button can be activated). When this button is activated, a window is displayed which allows the operator to edit the desired parameters for the highlighted network. (See the appropriate section for the type of network selected; UDPLAN Channel Setup, UDP220 Channel Setup, USMTFMail Channel Setup, GDUMCA Channel Setup, or AFCS Channel Setup). Double clicking on a Network will invoke the Edit function.

Delete - This button deletes the selected network from the network list (Note: a network must be selected before this button can be activated). When the network has been deleted, the parameters are removed from the network list.

Copy - This button will allow the operator to copy the highlighted network to a new network name. (Note: the network to be copied must be highlighted before this button can be activated). The “net_id” field must then be specified.

Print – This button will allow the operator to print the highlighted network.

Reset TCIM – This button will allow the operator to reset the TCIM without having to exit SISTIM first.

3.2.3.10.3 Window Navigation

SISTIM - Select "Networks" from the "Setup" menu.

3.2.3.10.4 Accessible Windows

Network Protocol Available

UDPLAN Channel Setup

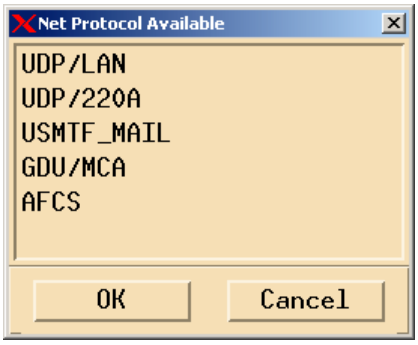
UDP220 Channel Setup 1

USMTFMail Channel Setup

GDUMCA Channel Setup

AFCS Channel Setup

3.2.3.11 NETWORK PROTOCOL AVAILABLE



3.2.3.11.1 Description

This window allows the operator to choose the type of network protocol to be created.

3.2.3.11.2 Fields/Parameters

The first field on this window is a list of different types of network protocols available (UDP/LAN, UDP/220A, USMTF_MAIL, GDU/MCA, and AFCS).

OK - This button closes the Protocol Available window and displays the network window associated with the network protocol highlighted (See the associated sections for each type network window: UDPLAN Channel Setup, UDP220 Channel Setup, USMTFMail Channel Setup, GDU/MCA Channel Setup, or AFCS Channel Setup). (Note: A protocol must be highlighted before this button can be activated).

Close - This button closes the Network Protocol Available window without action.

3.2.3.11.3 Window Navigation

SISTIM - Select "Networks" from the "Setup" menu.

Network List - Activate the New Button.

3.2.3.11.4 Accessible Windows

UDPLAN Channel Setup

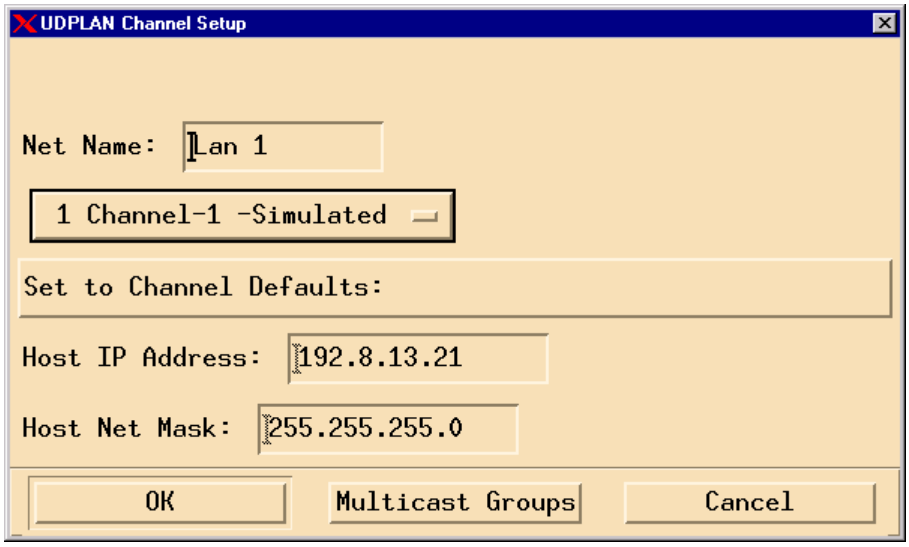
UDP220 Channel Setup 1

USMTFMail Channel Setup

GDU/MCA Channel Setup

AFCS Channel Setup

3.2.3.12 UDPLAN CHANNEL SETUP



3.2.3.12.1 Description

This window allows the operator to configure the UDPLAN protocol network within the current exercise.

3.2.3.12.2 Fields/Parameters

Net Name - Any name, up to 12 alpha/numeric characters, is valid in this field.

Channel - The channel for this network will either be simulated or external. Once a channel has been chosen for a network, it is grayed-out to ensure no duplications.

Set to Channel Defaults: - Sets “Host IP Address”, “Host Net Mask”, “Host Ifconfig Cmd”, and “Host Service” to defaults values.

Host IP Address: - TCP/IP numeric network address for the SISTIM host machine. (Note: The SISTIM application will fill this field in with the proper data and should generally not be changed by the operator).

Host Net Mask: - This is used to define the domain for the Host IP Address. (Note: The SISTIM application will fill this field in with the proper data and should generally not be changed by the operator).

Multicast Groups - This button brings up the Multicast Group List window (See Multicast Group List) to allow definition and setup of multicast groups. UDP Multicast is only available between FBCB2 and AFATDS units.

OK - This button closes the UDPLAN Channel Setup window and the new network will appear in the “Net List” window. (Note: at a minimum, the “Net Name” field must be specified before this button will be activated).

Close - This button closes the UDPLAN Channel Setup window without any action.

3.2.3.12.3 Window Navigation

SISTIM - Select "Networks" from the "Setup" menu.

Network List - Activate the "New" button.

Network Protocol Available– Select “UDP/LAN” from window.

-Or-

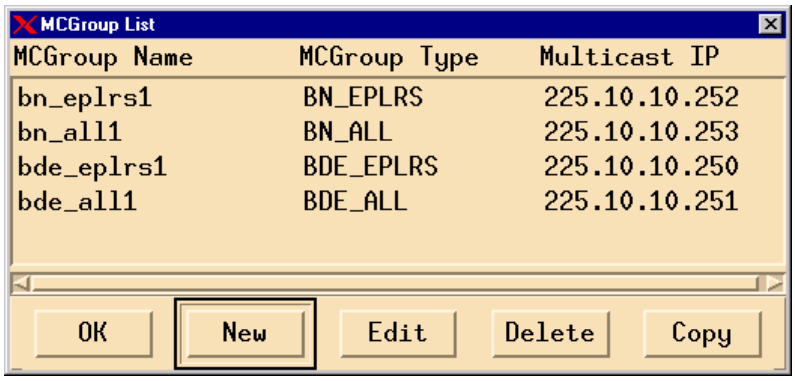
SISTIM - Select "Networks" from the "Setup" menu.

Network List - Activate the "Edit" button when a UDPLAN type network is selected.

3.2.3.12.4 Accessible Windows

Multicast Group List

3.2.3.13 MULTICAST GROUP LIST



3.2.3.13.1 Description

This window displays a list of the multicast groups and allows the operator to create, edit, and delete multicast groups for the current net.

3.2.3.13.2 Fields/Parameters

MCGroup Name/MCGroup Type/Multicast IP - This is the list of the multicast groups for the net. The information displayed includes the identifying name for each multicast group, its group type (BN_EPLRS, BN_ALL, BDE_EPLRS, or BDE_ALL), and its multicast IP address.

OK - This button closes the Multicast Group List window.

New - This button gives the operator the opportunity to create a new multicast group. When activated the multicast group setup window is displayed allowing the operator to enter data for the new multicast group (See Multicast Group Setup).

Edit - This button gives the operator the opportunity to edit an existing multicast group. (Note: a multicast group must be highlighted before this button can be activated). When this button is activated, the multicast group setup window is displayed allowing the operator to modify data for the selected multicast group (See Multicast Group Setup).

Delete - This button deletes the highlighted multicast group from the list. (Note: a multicast group must be highlighted before this button can be activated).

3.2.3.13.3 Window Navigation

SISTIM - Select "Networks" from the "Setup" menu.

Network List - Activate the "New" button.

Network Protocol Available– Select “UDP/LAN” from window.

UDPLAN Channel Setup - Activate the "Multicast Groups" button.

-Or-

SISTIM - Select "Networks" from the "Setup" menu.

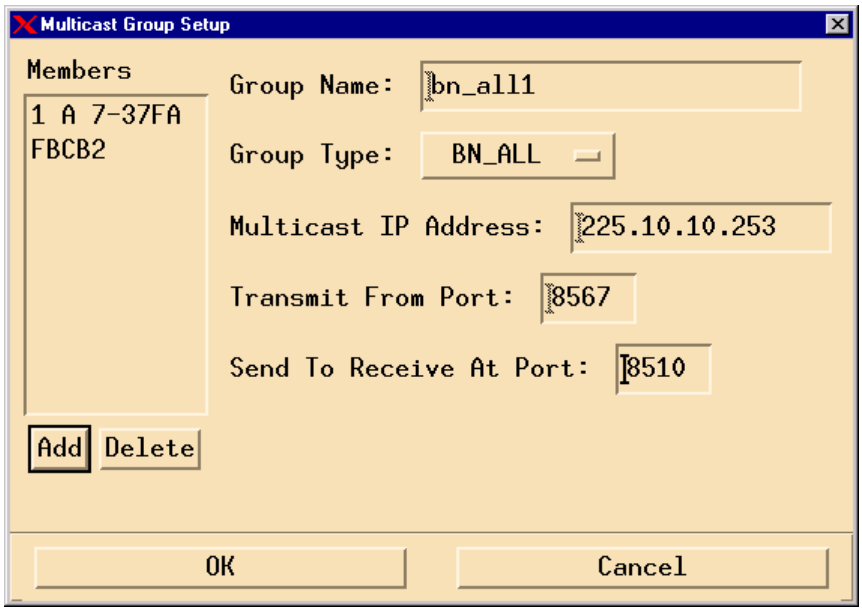
Network List - Activate the "Edit" button when a UDPLAN type network is selected.

UDPLAN Channel Setup - Activate the "Multicast Groups" button.

3.2.3.13.4 Accessible Windows

Multicast Group Setup

3.2.3.14 MULTICAST GROUP SETUP



3.2.3.14.1 Description

This window allows the operator to configure a multicast group for the current net.

3.2.3.14.2 Fields/Parameters

Group Name - Any name, up to 24 alpha/numeric characters, is valid in this field.

Group Type - This selection indicates whether this is a Battalion EPLRS, Battalion All, Brigade EPLRS, or Brigade All group.

Multicast IP Address: - Indicates the multicast IP address of the group.

Transmit From Port: - Indicates the port number from which multicast messages addressed from members of this group will be transmitted. This field is not editable, and will be set automatically based on the Group Type selection.

Send To Receive At Port: - Indicates the port number where multicast messages addressed to members of this group will be sent and received. This field is not editable, and will be set automatically based on the Group Type selection.

Add - This button allows selection of a unit to be added to this group. Only legal units will be presented for selection.

Delete - This button deletes the selected unit from the group.

OK - This button closes the Multicast Group Setup window and saves any data entered. The new multicast group will appear in the “Multicast Group List” window.

Cancel - This button closes the Multicast Group Setup window without any action.

3.2.3.14.3 Window Navigation

SISTIM - Select "Networks" from the "Setup" menu.

Network List - Activate the "Edit" button when a UDPLAN type network is selected.

Multicast Group List - Activate the "New" button.

-Or-

SISTIM - Select "Networks" from the "Setup" menu.

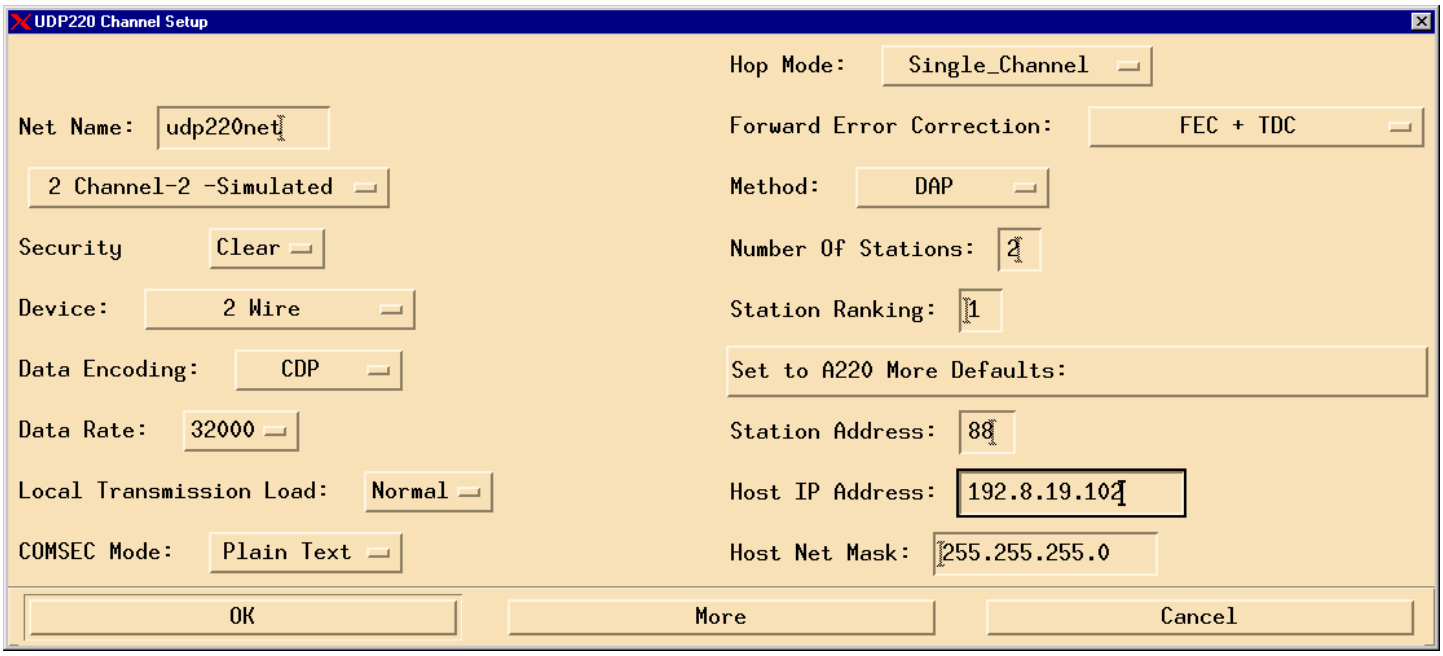
Network List - Activate the "Edit" button when a UDPLAN type network is selected.

Multicast Group List - Activate the "Edit" button when a multicast group is selected.

3.2.3.14.4 Accessible Windows

None

3.2.3.15 UDP220 CHANNEL SETUP 1



3.2.3.15.1 Description

This window allows the operator to configure the UDP220A protocol network within the current exercise.

3.2.3.15.2 Fields/Parameters

Net Name - Any name, up to 12 alpha/numeric characters, is valid in this field.

Channel - The channel for this network can either be or external. Once a channel has been chosen for a network, it is grayed-out to ensure no duplications.

Security - The only option in SISTIM is 'CLEAR'.

Device - Selects different device interfaces on each channel.

Data Encoding - Selects the type of modulation on each channel.

Data Rate - Selects the baud rate on each channel.

Local Transmission Load - Estimated amount of network traffic to be expected.

COMSEC Mode - COMSEC operating mode.

Hop Mode - This field informs the TCIM if SINCGARS radio is set for frequency hopping.

Forward Error Correction - Enables and disables Golay FEC, TDC, and V.36 data link layer scrambling associated with the 188-220A transmission header.

Method - Select the different NAD methods.

Stations - Number of net stations to use for NAD algorithms.

Frequency of Access Ranking: - NAD priority assigned to this station.

Set to A220 Defaults - Sets A220 parameters to defaults values. Selecting this feature will override and customization made on the UDP220 Channel Setup 2 Window (See UDP Channel Setup 2).

Station Address - The link address for this station. (Value “255”-> unknown)

Host IP Address - TCP/IP numeric network address for the SISTIM host machine. (Note: The SISTIM application will fill this field in with the proper data and should generally not be changed by the operator).

Host Net Mask - This is used to define the domain for the Host IP Address. (Note: The SISTIM application will fill this field in with the proper data and should generally not be changed by the operator).

OK - This button closes the UDP220 Channel Setup 1 window and the new network will appear in the “Net List” window. (Note: at a minimum, the “net_id” field must be specified before this button can be activated).

More - Selecting this button will display the UDP220 Channel Setup 2 window (See UDP220 Channel Setup 2) allowing the operator to make additional customizations to the UDP220 network.

Close - This button closes the UDP220 Channel Setup 1 window without any action.

3.2.3.15.3 Window Navigation

SISTIM - Select "Networks" from the "Setup" menu.

Network List - Activate the "New" button.

Network Protocol Available - Select “UDP/220A” from window.

-Or-

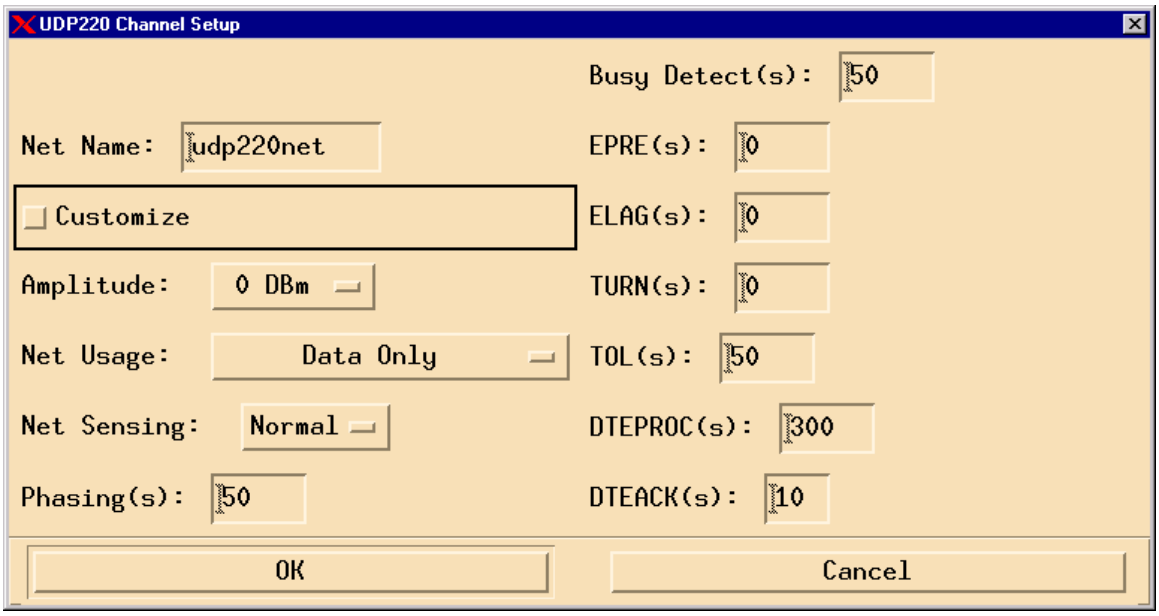
SISTIM - Select "Networks" from the Setup" menu.

Network List - Activate the "Edit" button when a UDP220 type network is selected.

3.2.3.15.4 Accessible Windows

UDP220 Channel Setup 2

3.2.3.16 UDP220 CHANNEL SETUP 2



3.2.3.16.1 Description

By selecting “More” in the “UDP220 Channel Setup” window, an additional UDP220 Channel Setup window will appear. This window's values should generally not be modified. They are usually used for comparison to the devices SISTIM is communicating with. It is very rare that these values will actually be the cause of any communications problems.

3.2.3.16.2 Fields/Parameters

Net Name - Any name, up to 12 alpha/numeric characters, is valid in this field. (It will be the same “net_id” as main UDP220 Channel Setup window).

Customize – By selecting this radio button, the operator has the option to modify the A220 parameters.

Amplitude - Amplitude for analog modulations.

Net Usage - For radio nets, indicates whether the net will be used for both voice and data or data only.

Net Sensing - Indicates whether to sense net busy using all possible means or to use methods that limit false busy indications in noisy nets.

Phasing(s) - Time (ms) end of EPRE during which the TCIM sends a 1/0 data pattern.

Busy Detect(s) - Time from transmit start at any station (PTT) until all stations detect net busy.

EPRE(s) - Time from PTT (see Busy Detect(s) above) activation until device has sent its COMSEC or other preamples and is ready to accept data from the TCIM.

ELAG(s) - Time (ms) from when the transmitting TCIM delivers the last bit of data to the media until the media the same bit to the receiving TCIM.

TURN(s) - Time (ms) for transmitter and receiver to be ready for next operation after end of ELAG.

TOL(s) - Timing cushion value (ms) used in Type 1 coupled acknowledgment computations.

DTEPROC(s) - Milliseconds allotted to the receiver to process received data not requiring a Type 1 coupled acknowledgment before the first NAD slot time occurs.

DTEACK(s) - Milliseconds allotted to the receiver to process a Type 1 frame requiring a coupled acknowledgment and to prepare a coupled Type 1 acknowledgment for transmission in the first slot.

OK - This button closes the UDP220 Channel Setup 2 window and returns to the network UDP220 Channel Setup 1 window.

Close - This button closes the UDP220 Channel Setup 2 window without any action.

3.2.3.16.3 Window Navigation

SISTIM - Select "Networks" from the "Setup" menu.

Network List - Activate the "New" button.

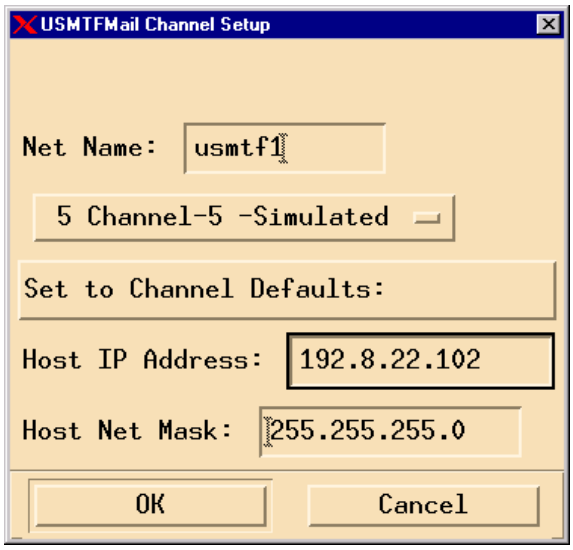
Network Protocol Available – Select “UDP/220A” from window.

UDP220 Channel Setup 1 - Activate the "More" button.

3.2.3.16.4 Accessible Windows

None

3.2.3.17 USMTFMAIL CHANNEL SETUP



3.2.3.17.1 Description

This window allows the operator to configure the USMTFMail protocol network within the current exercise.

3.2.3.17.2 Fields/Parameters

Net Name - Any name, up to 12 alpha/numeric characters, is valid in this field.

Channel - The channel for these networks can either be simulated or external. Once a channel has been chosen for a network, it is grayed-out to ensure no duplications.

Set to Channel Defaults - Sets “Host IP Address”, “Host Net Mask”, “Host Ifconfig Cmd”, and “Host Service” to defaults values.

Host IP Address - TCP/IP numeric network address for the SISTIM host machine. (Note: The SISTIM application will fill this field in with the proper data and should generally not be changed by the operator).

Host Net Mask - This is used to define the domain for the Host IP Address. (Note: The SISTIM application will fill this field in with the proper data and should generally not be changed by the operator).

OK - This button closes the USMTFMail Channel Setup window and the new network will appear in the “Net List” window. (Note: at a minimum, the “Net Name" field must be specified before this button can be activated).

Close - This button closes the USMTFMail Channel Setup window without any action.

3.2.3.17.3 Window Navigation

SISTIM - Select "Networks" from the "Setup" menu.

Network List - Activate the "New" button.

Protocol Avail List - Select “USMTFMail” from window.

-Or-

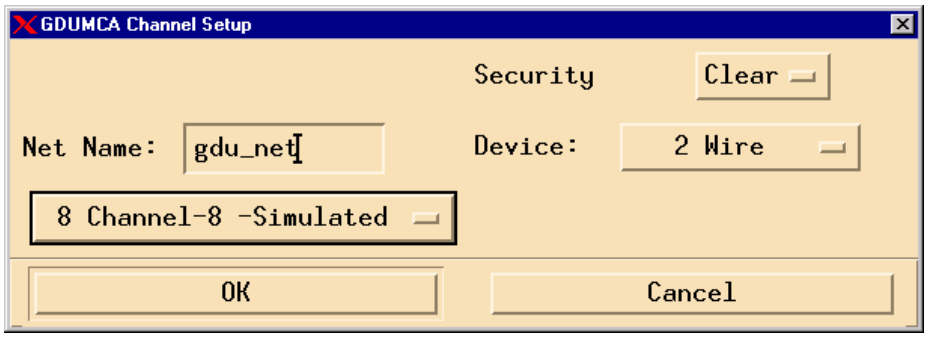
SISTIM - Select "Networks" from the "Setup" menu.

Network List - Activate the "Edit" button when a USMTFMail type network is selected.

3.2.3.17.4 Accessible Windows

None

3.2.3.18 GDUMCA CHANNEL SETUP



3.2.3.18.1 Description

This window allows an operator to configure a GDU/MCA network within the current exercise.

3.2.3.18.2 Fields/Parameters

Name - A 15-character name to identify the exercise.

Channel - The channel for these networks can either be simulated or external. Once a channel has been chosen for a network, it is grayed-out to ensure no duplications. The GDU/MCA protocol should be on a TCIM channel when on an external network.

Security - The only option in SISTIM is 'CLEAR'.

Device - Selects different device interfaces on each channel.

OK - This button closes the GDUMCA Channel Setup window and the new network will appear in the “Net List” window. (Note: at a minimum, the “Net Name" field must be specified before this button can be activated).

Close - This button closes the GDUMCA Channel Setup window without creating a network.

3.2.3.18.3 Window Navigation

SISTIM - Select "Networks" from the "Setup" menu.

Network List - Activate the "New" button.

Protocol Avail List - Select “GDU/MCA” from window.

-Or-

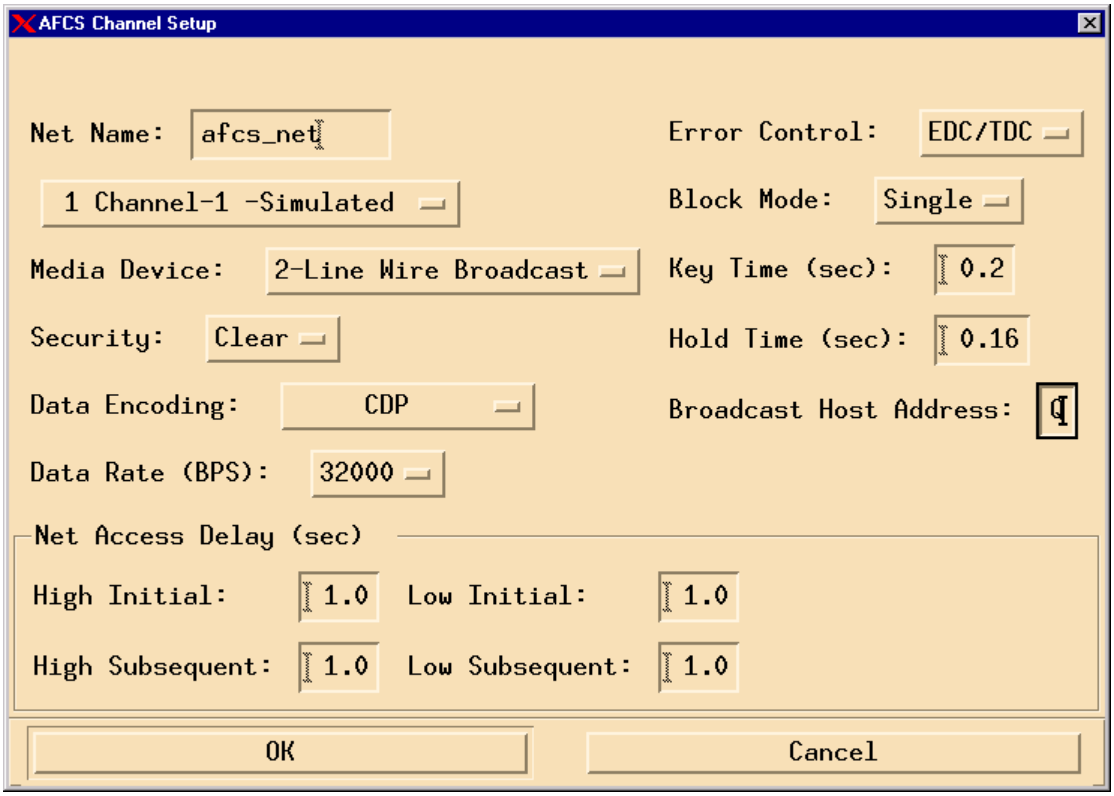
SISTIM - Select "Networks" from the "Setup" menu.

Network List - Activate the "Edit" button when a GDU/MCA type network is selected.

3.2.3.18.4 Accessible Windows

None

3.2.3.19 AFCS CHANNEL SETUP



3.2.3.19.1 Description

This window allows an operator to configure an AFCS network within the current exercise. AFCS Networks are used to allow communications between SISTIM simulated Paladins and AFATDS. Some selections may be grayed out based on legality rules of the AFCS network.

3.2.3.19.2 Fields/Parameters

Name - A 15-character name to identify the exercise.

Channel - The channel for these networks can either be simulated or external. Once a channel has been chosen for a network, it is grayed-out to ensure no duplications. The AFCS protocol should be on a TCIM channel when on an external network.

Media Device - Selects different communications device interfaces on each channel.

Security - The only option in SISTIM is 'CLEAR'.

Data Encoding - This field selects the modulation to be used to communicate with the external communications device.

Data Rate - Selects the baud rate on each channel.

Net Access Delay - This is the amount of time to delay a transmission after either a Net Busy indication or expiration of a Hold Timer. With this field, it is possible to prioritize the net so that higher priority devices have a shorter Net Access Delay (NAD) than lower priority devices. Its use requires that there be four different values for NAD to insure adequate access to the net.

Error Control - Selects the error correction technique to be applied to all messages using this network.

Block Mode - Single means each block is transmitted once. For noisy nets, to improve error correction, Double may be selected so each block is transmitted twice.

Key Time - Selects the key time delay value. Legal values are between 0 and 255 representing 0.1 to 25.5 seconds.

Hold Time - This field designates a constant used in calculating a Hold Time, the time after transmission of a message (or receipt of a message if not transmitter) that a device should wait for a control message.

Broadcast Host Address - Selects the Tacfire Net Address of the AFCS network for the simulated paladins on this network.

OK - This button closes the AFCS Channel Setup window and the new network will appear in the “Net List” window. (Note: at a minimum, the “Net Name" field must be specified before this button can be activated).

Close - This button closes the AFCS Channel Setup window without creating a network.

3.2.3.19.3 Window Navigation

SISTIM - Select "Networks" from the "Setup" menu.

Network List - Activate the "New" button.

Protocol Avail List - Select “AFCS” from window.

-Or-

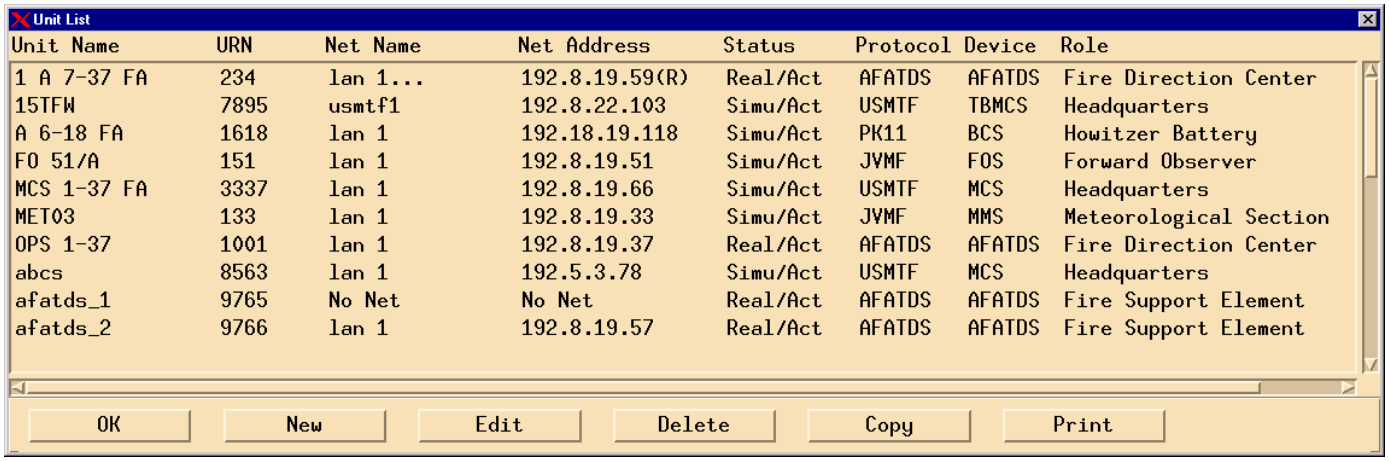
SISTIM - Select "Networks" from the "Setup" menu.

Network List - Activate the "Edit" button when an AFCS type network is selected.

3.2.3.19.4 Accessible Windows

None

3.2.3.20 UNIT LIST



Unit Name	URN	Net Name	Net Address	Status	Protocol	Device	Role
1 A 7-37 FA	234	lan 1...	192.8.19.59(R)	Real/Act	AFATDS	AFATDS	Fire Direction Center
15TFW	7895	usmtf1	192.8.22.103	Simu/Act	USMTF	TBMCS	Headquarters
A 6-18 FA	1618	lan 1	192.18.19.118	Simu/Act	PK11	BCS	Howitzer Battery
FO 51/A	151	lan 1	192.8.19.51	Simu/Act	JVMF	FOS	Forward Observer
MCS 1-37 FA	3337	lan 1	192.8.19.66	Simu/Act	USMTF	MCS	Headquarters
MET03	133	lan 1	192.8.19.33	Simu/Act	JVMF	MMS	Meteorological Section
OPS 1-37	1001	lan 1	192.8.19.37	Real/Act	AFATDS	AFATDS	Fire Direction Center
abcs	8563	lan 1	192.5.3.78	Simu/Act	USMTF	MCS	Headquarters
afatds_1	9765	No Net	No Net	Real/Act	AFATDS	AFATDS	Fire Support Element
afatds_2	9766	lan 1	192.8.19.57	Real/Act	AFATDS	AFATDS	Fire Support Element

3.2.3.20.1 Description

This window allows the operator to view or edit the parameters for live and simulated units within the current exercise.

3.2.3.20.2 Fields/Parameters

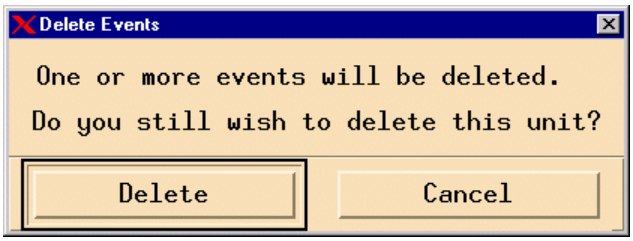
Unit Name/Net Name/Status/Protocol/Device/Role - This is the list of the currently entered units. The information displayed includes the identifying name for each unit, their communications network, the device, and the unit role.

OK - This button closes the Unit List window.

New - This button starts the procedure so that the operator can add a new unit to the scenario. When this button is activated, a window is displayed which allows the operator to select the protocol of the new unit (See Unit Protocol Available).

Edit - This button allows the operator to edit the parameters for an existing unit (Note: a unit must be highlighted before this button can be activated). When this button is activated, a window is displayed that allows the operator to edit the desired parameters for the highlighted unit. (See the associated sections for each type unit window; Unit Setup (PK11 Observer), Unit Setup (PK11 Other), Unit Setup (PK11 Paladin), Unit Setup (JVMF Observer), Unit Setup (JVMF Other), Unit Setup (USMTF), or Unit Setup (GDU/MCA)). Double clicking a unit invokes the Edit function.

Delete - This button deletes the highlighted unit from the unit list (Note: a unit must be highlighted before this button can be activated). When the unit has been deleted, the information for the highlighted unit is removed from the unit list. **Warning** there is no confirmation asked for when deleting a unit. Although if there are any Events associated with this unit the Delete Events window below will be displayed prompting the operator for confirmation.



If the operator still chooses to delete a unit that has associated events, those events will also be removed from the TOEL.

Copy - This button copies the parameters from the highlighted unit to a new unit. (Note: the unit to be copied must be highlighted before this button can be activated). The “Unit Name” and “Unit Reference Number” fields of the new, copied unit must be specified to activate this window.

Print - This button will print out the unit that is highlighted.

3.2.3.20.3 Window Navigation

SISTIM - Select "Units" from the "Setup" menu.

3.2.3.20.4 Accessible Windows

Unit Protocol Available

Unit Setup (PK11 Observer)

Unit Setup (PK11 Other)

Unit Setup (PK11 Paladin)

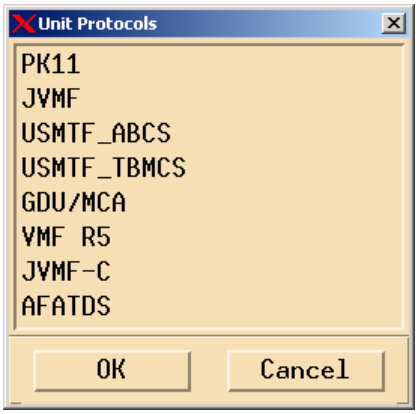
Unit Setup (JVMF Observer)

Unit Setup (JVMF Other)

Unit Setup (USMTF)

Unit Setup (GDU/MCA)

3.2.3.21 UNIT PROTOCOL AVAILABLE



3.2.3.21.1 Description

This window allows the operator to choose the type of unit protocol to be created.

3.2.3.21.2 Fields/Parameters

The first field on this window is a list of the different types of unit protocols available.

OK - This button closes the Unit Protocol Available window and displays the Unit Role Available window (See Unit Role Available). Once the operator chooses the unit role the unit window associated with the highlighted unit protocol will be displayed. (See the associated sections for each type unit window; Unit Setup (PK11 Observer), Unit Setup (PK11 Other), Unit Setup (PK11 Paladin), Unit Setup (JVMF Observer), Unit Setup (JVMF Other), Unit Setup (USMTF), or Unit Setup (GDU/MCA)). (Note: Choosing the "AFATDS" protocol will display an AFATDS unit. All fields will be similar to the Setup windows. In addition an "AFATDS" type can be setup to operate on all available network protocols).

Cancel - This button closes the Unit Protocol Available window without action.

3.2.3.21.3 Window Navigation

SISTIM - Select "Units" from the "Setup" menu.

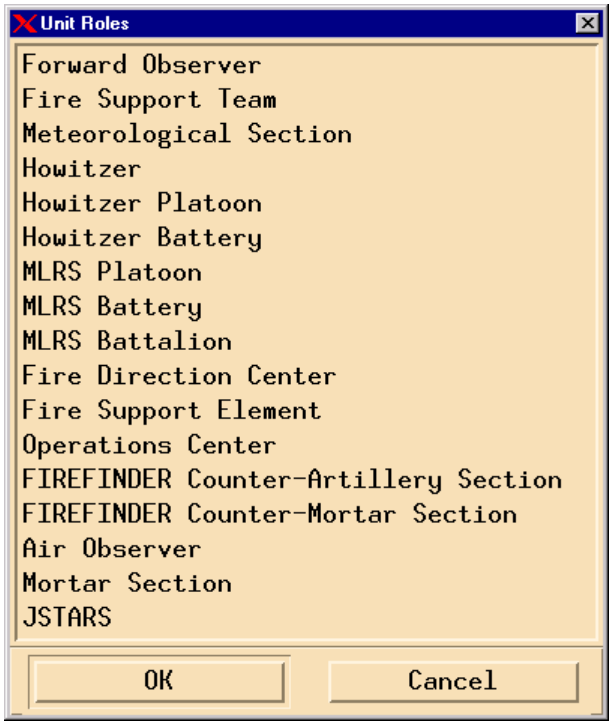
Unit List - Activate the “New Button”.

3.2.3.21.4 Accessible Windows

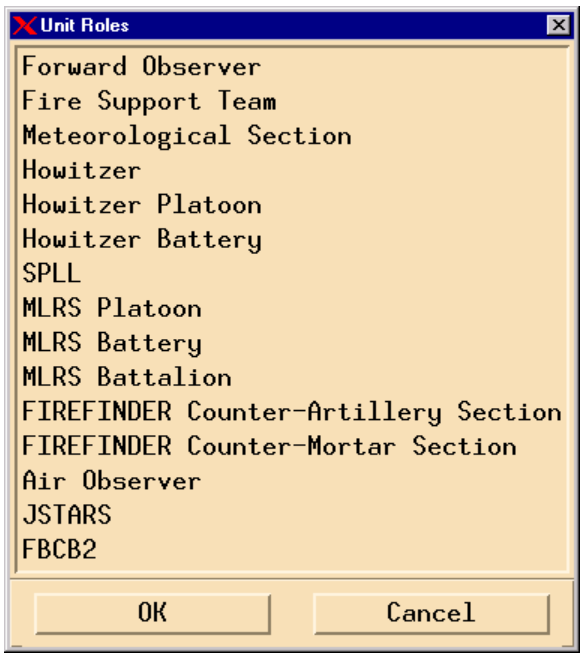
Unit Role Available

3.2.3.22 UNIT ROLES AVAILABLE

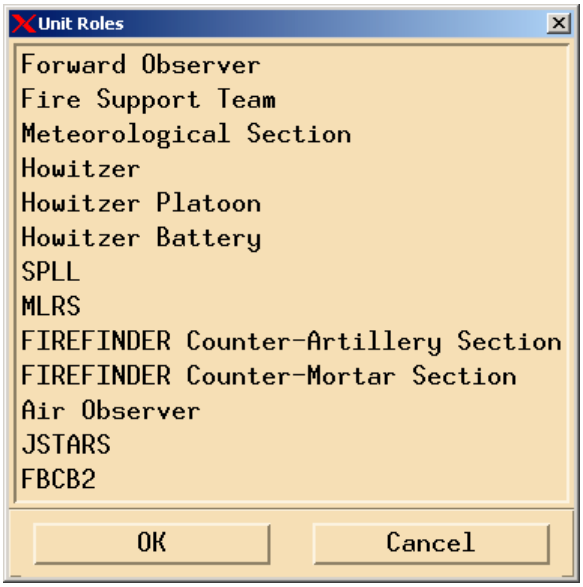
PKG 11



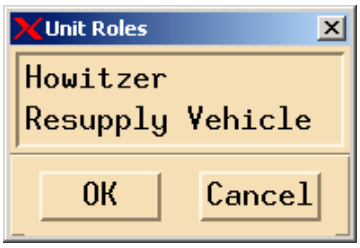
JVMF



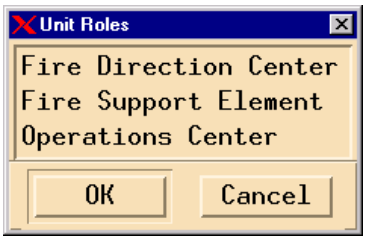
VMF R5



JVMF-C



AFATDS



3.2.3.22.1 Description

These windows display lists of the different functions of units available to enter into a scenario. SISTIM does not enforce unit function. The significant consequence of this choice is that choosing an observer type function (Forward Observer, Meteorological Section, FIREFINDER, Air Observer, or JSTARS) will display the associated Observer Unit template. Choosing Howitzer will display the GDU/MCA or PK11 Paladin Unit template and is the only valid selection for a GDU/MCA Unit. All other selections will display the Other Type Unit template.

3.2.3.22.2 Fields/Parameters

The first field on this window is a list of the different types of units available.

OK - This button closes the Unit Avail List window and displays the unit window associated with the unit type highlighted. (See the associated sections for each type network window; Unit Setup (PK11 Observer), Unit Setup (PK11 Other), Unit Setup (PK11 Paladin), Unit Setup (JVMF Observer), Unit Setup (JVMF Other), Unit Setup (USMTF), or Unit Setup (GDU/MCA)). Double clicking a unit invokes the OK function. (Note: A unit must be highlighted before this button can be activated).

Close - This button closes the Unit Role Available List window without action.

3.2.3.22.3 Window Navigation

SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "New" button.

Unit Protocol Available - Activate the "OK" button.

3.2.3.22.4 Accessible Windows

Unit Setup (PK11 Observer)

Unit Setup (PK11 Other)

Unit Setup (PK11 Paladin)

Unit Setup (JVMF Observer)

Unit Setup (JVMF Other)

Unit Setup (USMTF)

Unit Setup (GDU/MCA)

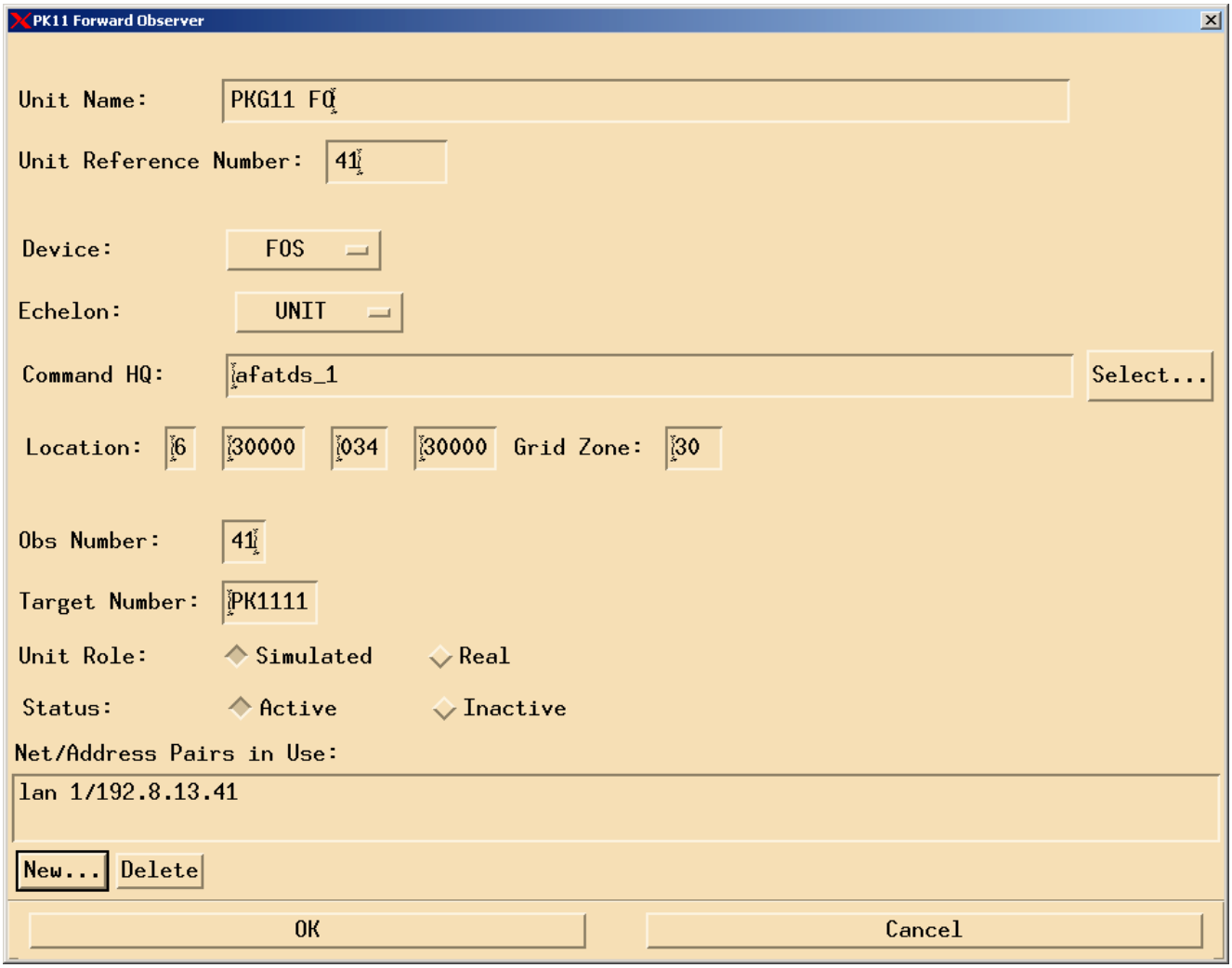
Unit Setup (VMF R5 Observer)

Unit Setup (VMF R5 Other)

Unit Setup (JVMF-C Howitzer)

Unit Setup (JVMF-C Resupply Vehicle)

3.2.3.23 UNIT SETUP (PK11 OBSERVER)



3.2.3.23.1 Description

This window allows the operator to setup a PK11 Observer type unit in the current exercise.

3.2.3.23.2 Fields/Parameters

Unit Name - Any valid unit name can be entered into this field up to 64 characters.

Unit Reference Number - The URN is a number between 0 - 16777215. This number is used by AFATDS to identify units and it must be unique within each exercise.

Device - This is a pull-down menu, which enables the operator to choose the type of device. The only valid type for PK11 Observer is FOS.

Echelon - This is a pull-down menu, which enable the operator to choose the echelon of the device. The only valid echelon for PK11 Observer is UNIT.

Command HQ - By selecting "Select" a window is displayed that allows the operator to set the command unit (See Select Command HQ).

Location - This is the location in the exercise at which the unit is located. Any valid (UTM) coordinate is allowed in this field.

Obs Number - The observer number must be an integer between 01 and 99. This number must be unique.

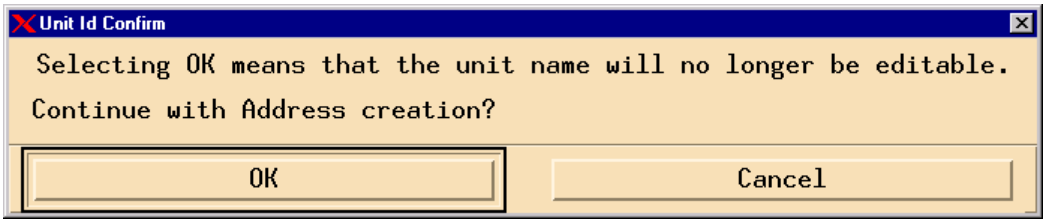
Target Number - Any valid target number can be entered into this field. The format is "AANNNN", A = Alpha and N = Numeric.

Unit Role - The operator has the option of setting a unit to Simulated (acted by SISTIM) or Real (configured on another machine connected to SISTIM).

Status - The operator has the option of setting the status of this unit to either Active or Inactive.

Net/Address Pairs in Use - A list of the Net/Address pairs that are currently in use by this unit.

New - Activation of this button displays a window (See Select Net/Address Pair (PK11 Lan), or Select Net Address Pair (PK11 UDP/220A) that allows the operator to add a new net for this unit. NOTE: If the operator chooses to add the Net/Address Pairs when the unit is first created the following warning will appear.



This warning is displayed to warn the operator that once a Net/Address is created the Unit Name can no longer be edited.

Delete - This option allows the operator to remove a highlighted Net/Address pair from the list.

OK - Activation of this button closes the Unit Setup window and saves any data entered in this window. (Note: Error messages may appear to notify the operator of incorrect or incomplete entries).

Close - This button closes the Unit Setup window and will not save any changes made to the unit.

3.2.3.23.3 Window Navigation

SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "New" button.

Unit Protocol Available - Activate the "OK" button with PK11 selected.

Unit Role Available - Activate the "OK" button with an appropriate observer type selected.

-Or-

SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "Edit" button when an appropriate PK11 observer type unit selected.

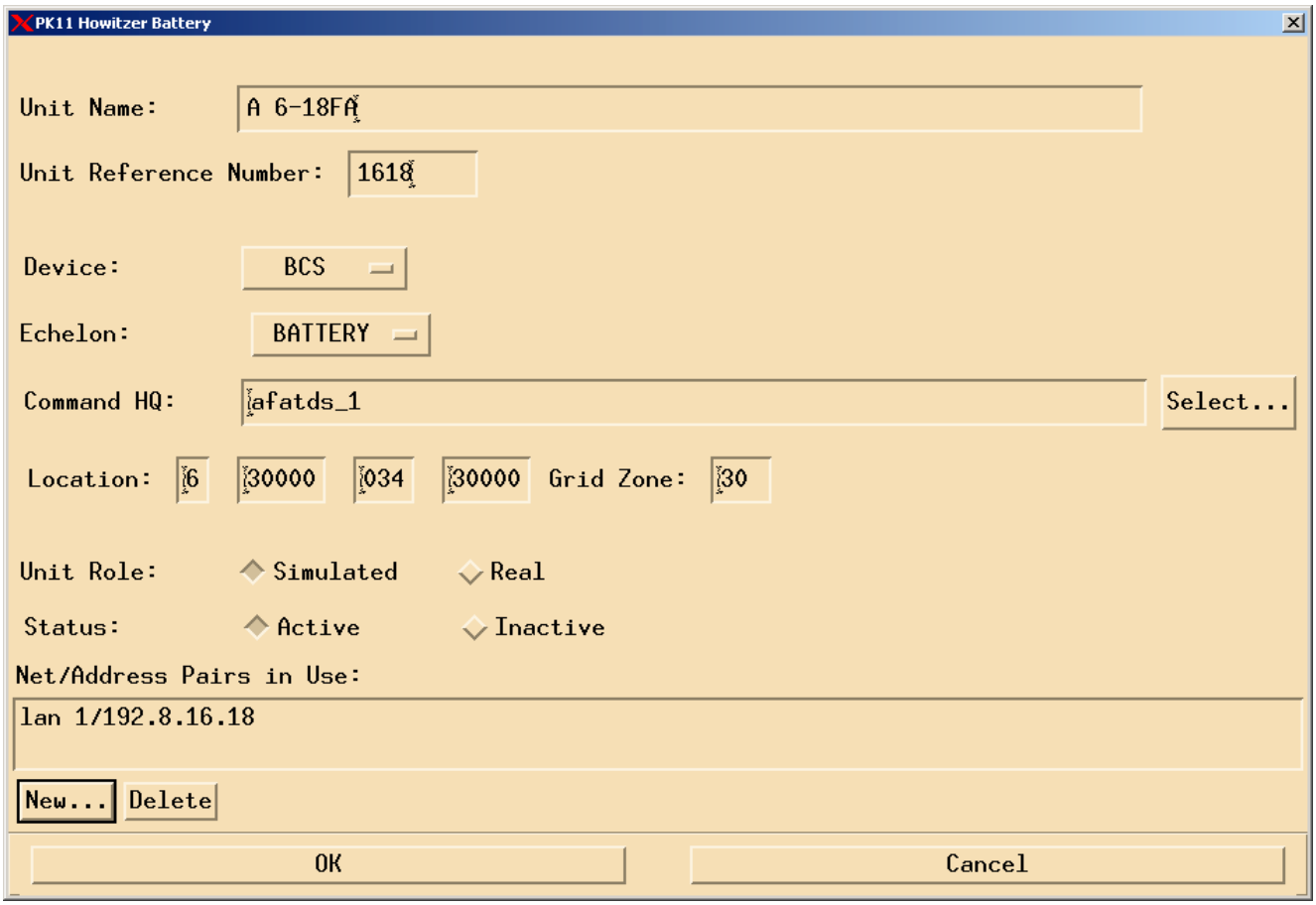
3.2.3.23.4 Accessible Windows

Select Command HQ

Select Net/Address Pair (PK11 LAN)

Select Net/Address Pair (PK11 UDP/220A)

3.2.3.24 UNIT SETUP (PK11 OTHER)



3.2.3.24.1 Description

This window allows the operator to setup a PK11 Other type unit in the current exercise.

3.2.3.24.2 Fields/Parameters

Unit Name - Any valid unit name can be entered into this field up to 64 characters.

Unit Reference Number - The URN is a number between 0 - 16777215. This number is used by AFATDS to identify units and it must be unique within each exercise.

Device - This is a pull-down menu, which enables the operator to choose the type of device. The valid types for PK11 Other are FOS, MMS, BCS, MLRS, IFSAS, FF, ATHS, MBC, Paladin, and JSTARS.

Echelon - This is a pull-down menu, which enable the operator to choose the echelon of the device. The valid echelons for PK11 Other are UNIT, SECTION, PLATOON, BATTERY, COMPANY, BATTALION, BRIGADE, DIVISION, CORPS.

Command HQ - By selecting "Select" a window is displayed that allows the operator to set the command unit (See Select Command HQ).

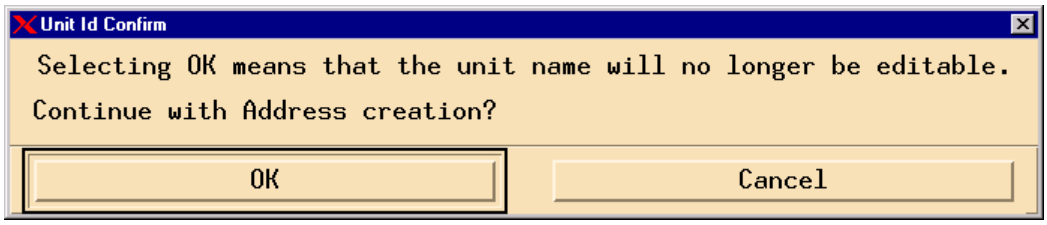
Location - This is the location in the exercise at which the unit is located. Any valid (UTM) coordinate is allowed in this field.

Unit Role - The operator has the option of setting a unit to Simulated (acted by SISTIM) or Real (configured on another machine connected to SISTIM).

Status - The operator has the option of setting the status of this unit to either Active or Inactive.

Net/Address Pairs in Use - A list of the Net/Address pairs that are currently in use by this unit.

New - Activation of this button displays a window (See Select Net/Address Pair (PK11 Lan), or Select Net Address Pair (PK11 UDP/220A) that allows the operator to add a new net for this unit. NOTE: If the operator chooses to add the Net/Address Pairs when the unit is first created the following warning will appear.



This warning is displayed to warn the operator that once a Net/Address is created the Unit Name can no longer be edited.

Delete - This option allows the operator to remove a highlighted Net/Address pair from the list.

OK - Activation of this button closes the Unit Setup window and saves any data entered in this window. (Note: Error messages may appear to notify the operator of incorrect or incomplete entries).

Close - This button closes the Unit Setup window and will not save any changes made to the unit.

3.2.3.24.3 Window Navigation

SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "New" button.

Unit Protocol Available - Activate the "OK" button with PK11 selected.

Unit Role Available - Activate the "OK" button with an appropriate type selected.

-Or-

SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "Edit" button with an appropriate PK11 type unit selected.

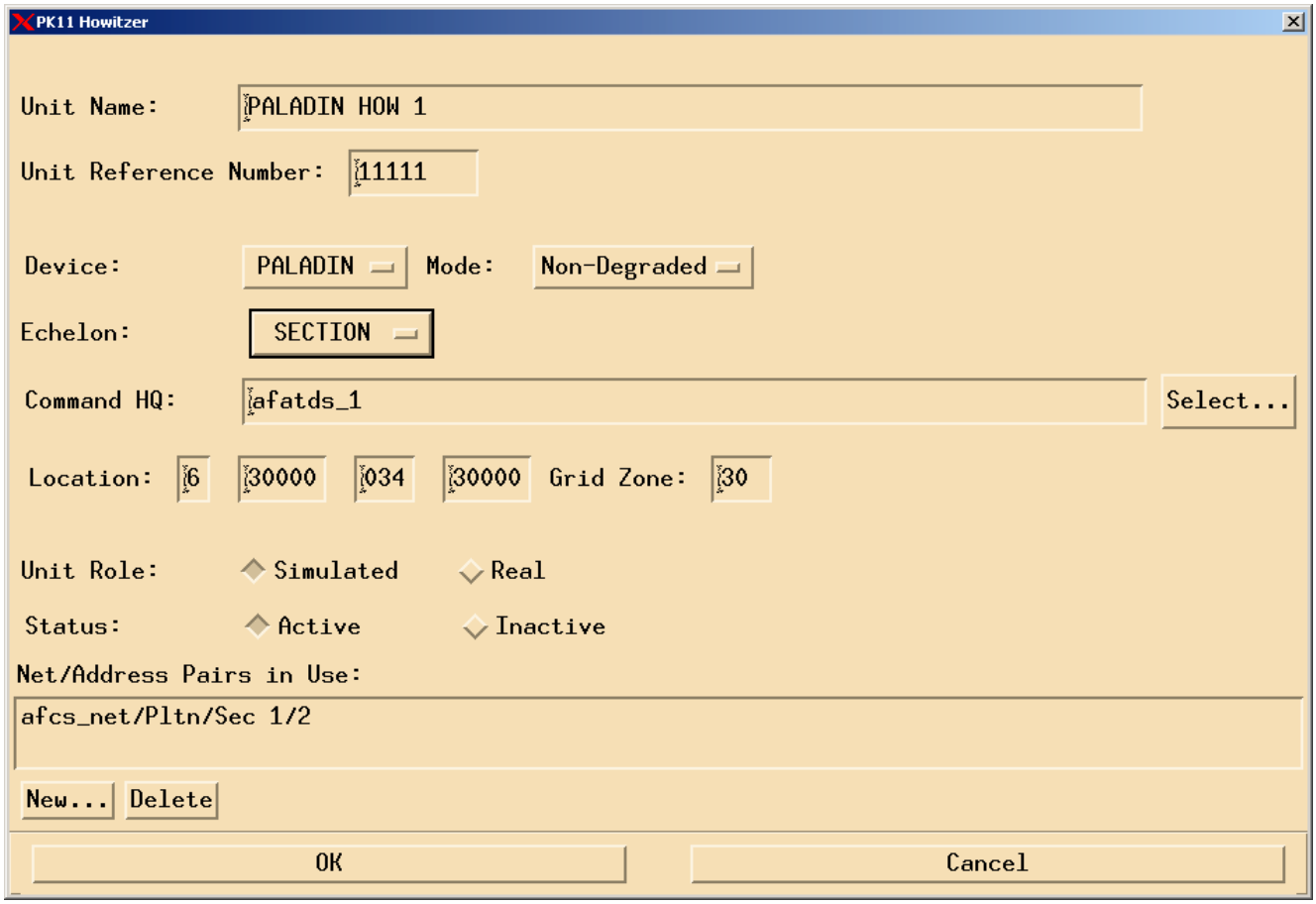
3.2.3.24.4 Accessible Windows

Select Command HQ

Select Net/Address Pair (PK11 LAN)

Select Net/Address Pair (PK11 UDP/220A)

3.2.3.25 UNIT SETUP (PK11 PALADIN)



3.2.3.25.1 Description

This window allows the operator to setup a PK11 Paladin type unit in the current exercise. In order to create a valid PK11 Paladin Unit, the operator must choose PK11 on the Unit Protocol Available Sceen and Howitzer on the Unit Role Available Screen.

3.2.3.25.2 Fields/Parameters

Unit Name - Any valid unit name can be entered into this field up to 64 characters.

Unit Reference Number - The URN is a number between 0 - 16777215. This number is used by AFATDS to identify units and it must be unique within each exercise.

Device - This is a pull-down menu, which enables the operator to choose the type of device. The only valid types to create a PK11 Paladin is Paladin.

Echelon - This is a pull-down menu, which enable the operator to choose the echelon of the device. The only valid echelon for PK11 Paladin is SECTION.

Mode - This is a pull down menu, which enables the operator to choose the current Paladin unit's mode. Selecting Non-Degraded means the current paladin is simulating a Paladin unit with its ballistics computer enabled. Degraded mode Paladins are ones that are operating without their ballistics computer.

Command HQ - By selecting "Select" a window is displayed that allows the operator to set the command unit (See Select Command HQ).

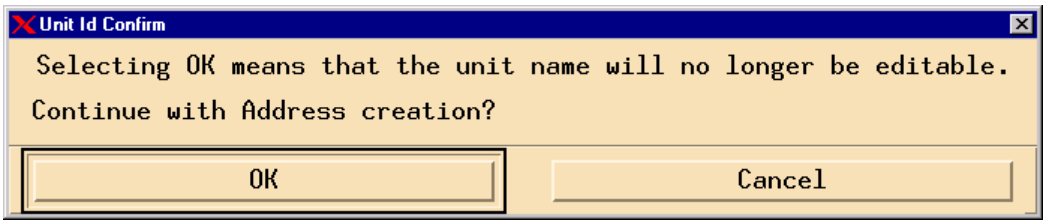
Location - This is the location in the exercise at which the unit is located. Any valid (UTM) coordinate is allowed in this field.

Unit Role - The operator has the option of setting a unit to Simulated (acted by SISTIM) or Real (configured on another machine connected to SISTIM).

Status - The operator has the option of setting the status of this unit to either Active or Inactive.

Net/Address Pairs in Use - A list of the Net/Address pairs that are currently in use by this unit.

New - Activation of this button displays a window (See Select Net/Address Pair (AFCS) that allows the operator to add a new net for this unit. NOTE: If the operator chooses to add the Net/Address Pairs when the unit is first created the following warning will appear.



This warning is displayed to warn the operator that once a Net/Address is created the Unit Name can no longer be edited.

Delete - This option allows the operator to remove a highlighted Net/Address pair from the list.

OK - Activation of this button closes the Unit Setup window and saves any data entered in this window. (Note: Error messages may appear to notify the operator of incorrect or incomplete entries).

Close - This button closes the Unit Setup window and will not save any changes made to the unit.

3.2.3.25.3 Window Navigation

SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "New" button.

Unit Protocol Available - Activate the "OK" button with PK11 selected.

Unit Role Available - Activate the "OK" button with an appropriate type selected.

-Or-

SISTIM - Select "Units" from the "Setup" menu.

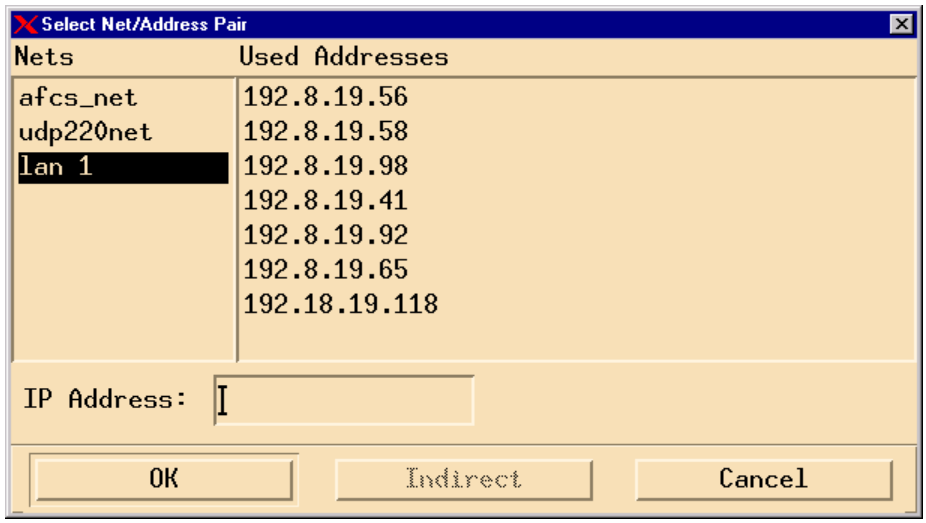
Unit List - Activate the "Edit" button with an appropriate PK11 type unit selected.

3.2.3.25.4 Accessible Windows

Select Command HQ

Select Net/Address Pair (AFCS)

3.2.3.26 SELECT NET/ADDRESS PAIR (PK11 LAN)



3.2.3.26.1 Description

This window allows the operator to select the communications network and the address to be used by this unit. In order to access this window there must be a valid UDP/LAN network in the Network List (See Network List), and it must be highlighted in the Available Nets field.

3.2.3.26.2 Fields/Parameters

Available Nets - A list of nets available for this unit. When a net is selected, the used address list is displayed.

Used Addresses - A list of currently in use net addresses are displayed.

IP Address - This field allows the operator to choose the UDP/LAN address to use for this unit. This must be a unique IP. (Note: For simulated units this address is not used outside of SISTIM, for real units this address should match the IP at that device).

OK - This button closes the Select Net/Address Pair window and inserts the chosen IP address into the Unit Setup.

Close - This button closes the Select Net/Address Pair window without saving any changes.

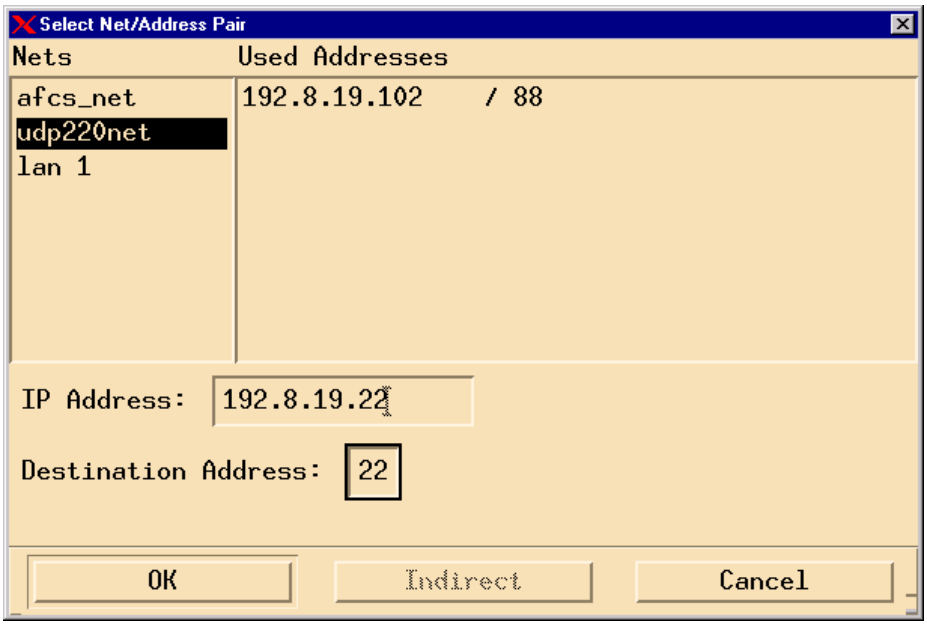
3.2.3.26.3 Window Navigation

All PK11 Unit Setup windows - Activate the "New" button.

3.2.3.26.4 Accessible Windows

None

3.2.3.27 SELECT NET/ADDRESS PAIR (PK11 UDP/220A)



3.2.3.27.1 Description

This window allows the operator to select the communications network and the address to be used by this unit. In order to access this window there must be a valid UDP/220A network in the Network List (See Network List), and it must be highlighted in the Available Nets field.

3.2.3.27.2 Fields/Parameters

Available Nets - A list of nets available for this unit. When a net is selected, the used address list is displayed.

Used Addresses - A list of currently in use net addresses are displayed.

IP Address - This field allows the operator to choose the UDP/220A address to use for this unit. This must be a unique IP. (Note: For simulated units this address is not used outside of SISTIM, for real units this address should match the IP at that device).

Destination Address - This is the destination address for this unit and it should match the number used by AFATDS.

OK - This button closes the Select Net/Address Pair window and inserts the chosen IP address into the Unit Setup.

Close - This button closes the Select Net/Address Pair window without saving any changes.

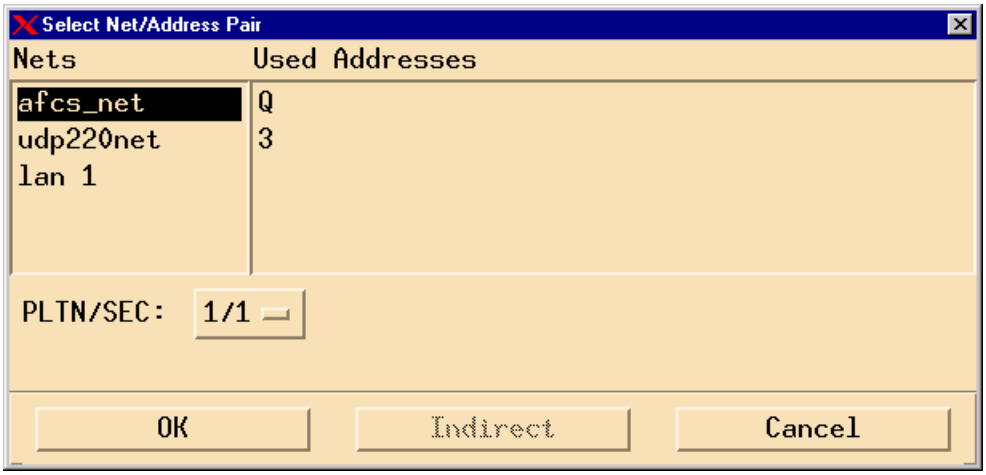
3.2.3.27.3 Window Navigation

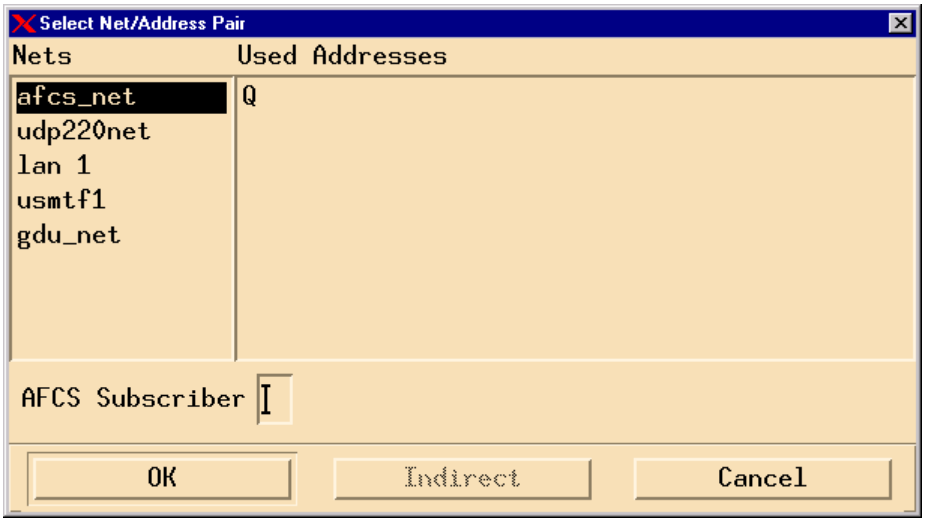
All PK11 Unit Setup windows - Activate the "New" button.

3.2.3.27.4 Accessible Windows

None

3.2.3.28 SELECT NET/ADDRESS PAIR (AFCS)





3.2.3.28.1 Description

This window allows the operator to select the communications network and the address to be used by this unit. In order to access this window there must be a valid AFCS network in the Network List (See Network List), and it must be highlighted in the Available Nets field.

3.2.3.28.2 Fields/Parameters

Available Nets - A list of nets available for this unit. When a net is selected, the used address list is displayed.

Used Addresses - A list of currently in use net addresses are displayed.

PLTN/SEC or AFCS Subscriber - This field allows the operator to choose the AFCS address to use for this unit. PLTN/SEC, represented on the top of the previous screen, is selected from the pull-down provided. Any PLTN/SEC combination that is already in use is not made available to the user. Each PLTN/SEC combination is equivalent to a unique single numerical value representing the gun address of that unit on the AFCS net. The PLTN/SEC pulldown appears for PK11 Paladin units only. The AFCS Subscriber field, represented on the bottom of the previous screen, is used by AFATDS units to represent their tacfire address on the AFCS net.

OK - This button closes the Select Net/Address Pair window and inserts the chosen IP address into the Unit Setup.

Close - This button closes the Select Net/Address Pair window without saving any changes.

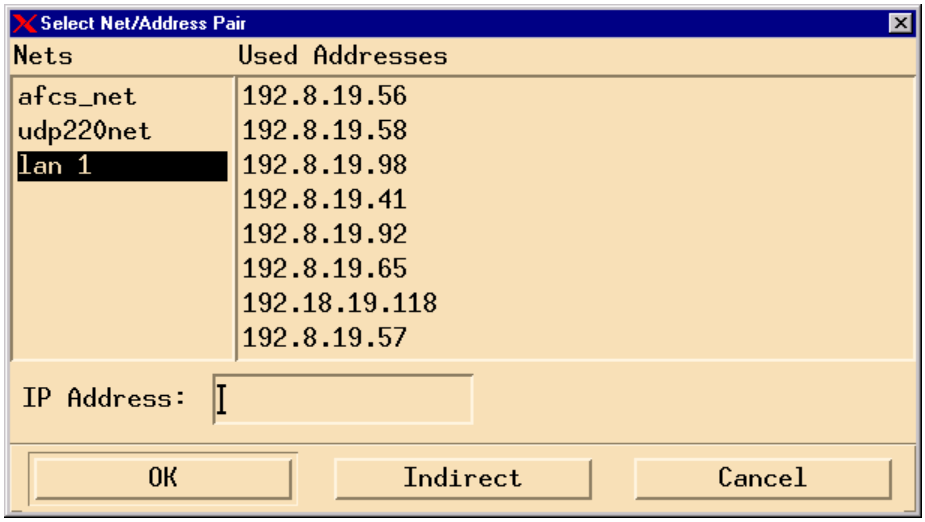
3.2.3.28.3 Window Navigation

PK11 Paladin Unit Setup windows - Activate the "New" button.

3.2.3.28.4 Accessible Windows

None

3.2.3.29 SELECT NET/ADDRESS PAIR (INDIRECT)



3.2.3.29.1 Description

This window allows the operator to setup the communications for a REAL unit that is indirectly connected to SISTIM. In order to do this there must be a direct UDPLAN or UDP220 connection to a Real PK11, JVMF, USMTF_ABCS or AFATDS unit, and the desired Indirect Unit must be properly connected to that “router”. All these units should be properly created in the Current SISTIM Exercise. The proper method to enter an Indirect Unit is to choose the Net that the direct unit is connected on from the Available Nets portion of the window, then select the Unit to communicate indirectly through from the selection window that is displayed. The most common and useful way to utilize the indirect feature is to communicate to multiple AFATDS through one direct AFATDS “router”.

3.2.3.29.2 Fields/Parameters

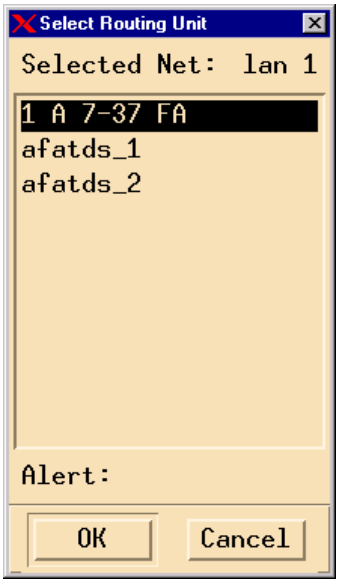
Available Nets - A list of nets available for this unit. When a net is selected, the used address list is displayed. Select a UDP/LAN or UDP220 type network with a valid real unit connected before you attempt to setup indirect communications.

Used Addresses - A list of currently in use net addresses are displayed.

IP Address - This field allows the operator to choose the address to use for this unit. (Note: This field does not need to be completed, since in order to setup indirect communications with a unit the IP is not used).

OK - This button closes the Select Net/Address Pair window and makes any changes effective. In the Unit List window any units that are Indirect will now have an (I) by their IP addresses, and those that are routers will have a (D) by their IP addresses.

Indirect – Selecting this button is the proper method to create an indirect connection. When depressed the following window is display that will allow the operator to select the directly connected REAL unit that SISTIM will communicate through.



When the Proper Direct Unit has been chosen simply select OK to continue.

Close - This button closes the Select Net/Address Pair window without saving any changes.

WARNINGS - When an AFATDS unit is used as the routing unit for other AFATDS, it should be noted if the routing unit is deleted communication will be lost with the indirect units. Although if this is attempted the following Warning message will be displayed. If the operator selects “Cancel” the action will be cancelled and the Unit will not be removed. Selecting “Delete” will continue with the deletion

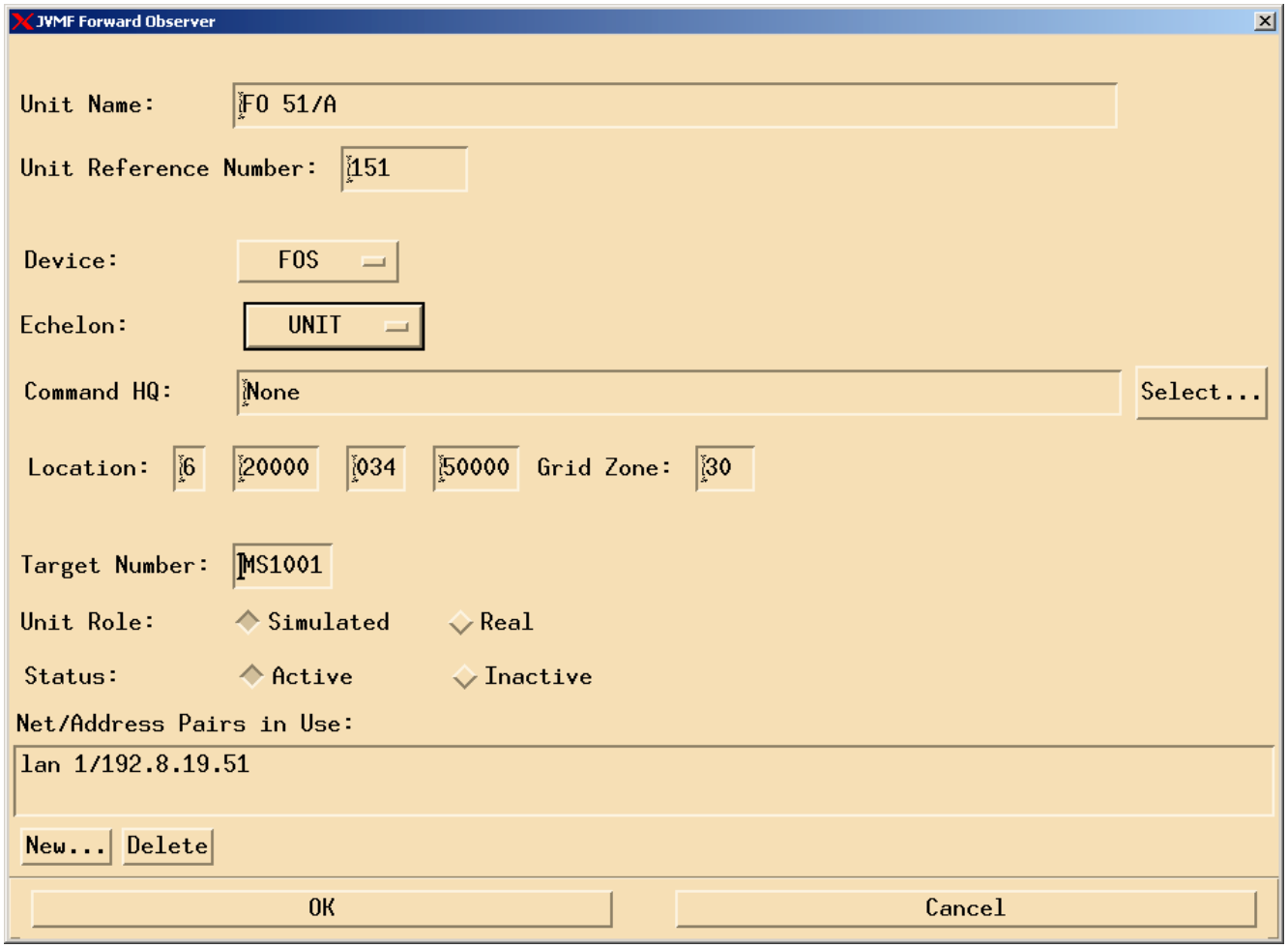
3.2.3.29.3 Window Navigation

All Unit Setup windows - Activate the "New " button.

3.2.3.29.4 Accessible Windows

None

3.2.3.30 UNIT SETUP (JVMF OBSERVER)



3.2.3.30.1 Description

This window allows the operator to setup a JVMF Observer type unit in the current exercise.

3.2.3.30.2 Fields/Parameters

Unit Name - Any valid unit name can be entered into this field up to 64 characters.

Unit Reference Number - The URN is a number between 0 - 16777215. This number is used by AFATDS to identify units and it must be unique within each exercise.

Device - This is a pull-down menu, which enables the operator to choose the type of device. The only valid type for JVMF Observer is FOS.

Echelon - This is a pull-down menu, which enable the operator to choose the echelon of the device. The only valid echelon for JVMF Observer is UNIT.

Command HQ - By selecting "Select" a window is displayed that allows the operator to set the command unit (See Select Command HQ).

Location - This is the location in the exercise at which the unit is located. Any valid (UTM) coordinate is allowed in this field.

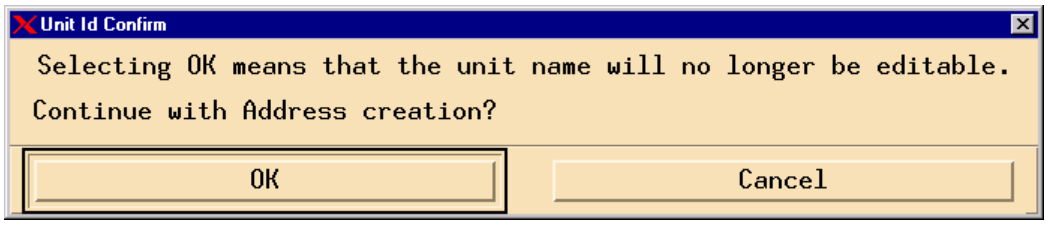
Target Number - Any valid target number can be entered into this field. The format is "AANNNN", A = Alpha and N = Numeric.

Unit Role - The operator has the option of setting a unit to Simulated (acted by SISTIM) or Real (configured on another machine connected to SISTIM).

Status - The operator has the option of setting the status of this unit to either Active or Inactive.

Net/Address Pairs in Use - A list of the Net/Address pairs that are currently in use by this unit.

New - Activation of this button displays a window (See Select Net/Address Pair (JVMF LAN)) that allows the operator to add a new net for this unit. (Note: A JVMF unit may also be placed on a UDP 220 net similar to a PK11 Unit (See Select Net/Address Pair (PK11 UDP/220A)). NOTE: If the operator chooses to add the Net/Address Pairs when the unit is first created the following warning will appear.



This warning is displayed to warn the operator that once a Net/Address is created the Unit Name can no longer be edited.

Delete - This option allows the operator to remove a highlighted Net/Address pair from the list.

OK - Activation of this button closes the Unit Setup window and saves any data entered in this window. (Note: Error messages may appear to notify the operator of incorrect or incomplete entries).

Close - This button closes the Unit Setup window and will not save any changes made to the unit.

3.2.3.30.3 Window Navigation

SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "New" button.

Unit Protocol Available - Activate the "OK" button with JVMF selected.

Unit Role Available - Activate the "OK" button with an appropriate observer type selected.

-Or-

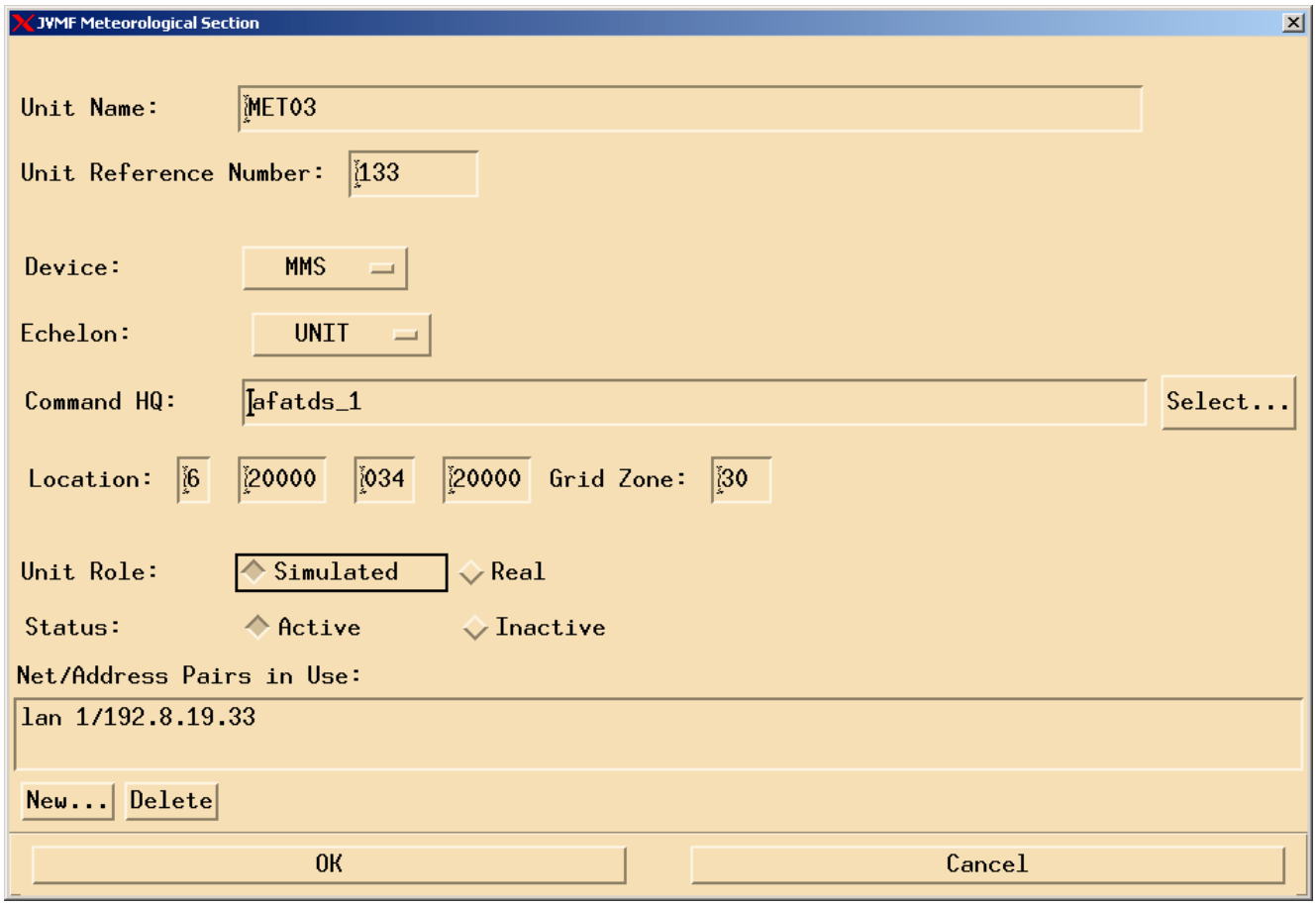
SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "Edit" button with an appropriate JVMF observer type unit selected.

3.2.3.30.4 Accessible Windows

Select Command HQ Select Net/Address Pair (JVMF LAN)

3.2.3.31 UNIT SETUP (JVMF OTHER)



3.2.3.31.1 Description

This window allows the operator to setup a JVMF Other type unit in the current exercise.

3.2.3.31.2 Fields/Parameters

Unit Name - Any valid unit name can be entered into this field up to 64 characters.

Unit Reference Number - The URN is a number between 0 - 16777215. This number is used by AFATDS to identify units and it must be unique within each exercise.

Device - This is a pull-down menu, which enables the operator to choose the type of device. The valid types for JVMF Other are FOS, MMS, MLRS, FF, ATHS, JSTARS, FBCB2, and PALADIN.

Echelon - This is a pull-down menu, which enable the operator to choose the echelon of the device. The only valid echelon for JVMF Other is UNIT, SECTION, PLATOON, BATTERY, COMPANY, BATTALION, BRIGADE, DIVISION, CORPS.**Command HQ** - By selecting "Select" a window is displayed that allows the operator to set the command unit (See Select Command HQ).

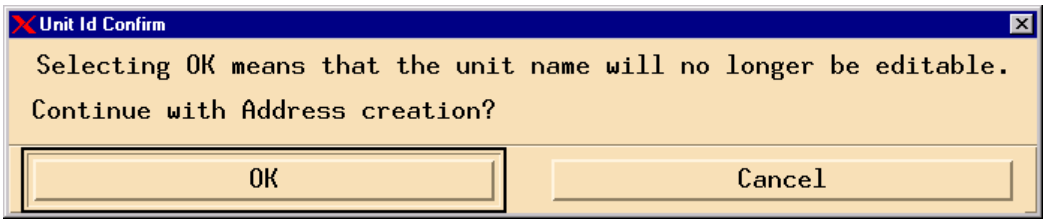
Location - This is the location in the exercise at which the unit is located. Any valid (UTM) coordinate is allowed in this field.

Unit Role - The operator has the option of setting a unit to Simulated (acted by SISTIM) or Real (configured on another machine connected to SISTIM).

Status - The operator has the option of setting the status of this unit to either Active or Inactive.

Net/Address Pairs in Use - A list of the Net/Address pairs that are currently in use by this unit.

New - Activation of this button displays a window (See Select Net/Address Pair (JVMF LAN)) that allows the operator to add a new net for this unit. (Note: A JVMF unit may also be placed on a UDP 220 net similar to a PK11 Unit (See Select Net/Address Pair (PK11 UDP/220A)). NOTE: If the operator chooses to add the Net/Address Pairs when the unit is first created the following warning will appear.



This warning is displayed to warn the operator that once a Net/Address is created the Unit Name can no longer be edited.

Delete - This option allows the operator to remove a highlighted Net/Address pair from the list.

OK - Activation of this button closes the Unit Setup window and saves any data entered in this window. (Note: Error messages may appear to notify the operator of incorrect or incomplete entries).

Close - This button closes the Unit Setup window and will not save any changes made to the unit.

3.2.3.31.3 Window Navigation

SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "New" button.

Unit Protocol Available - Activate the "OK" button with JVMF selected.

Unit Role Available - Activate the "OK" button with an appropriate type selected.

-Or-

SISTIM - Select "Units" from the "Setup" menu.

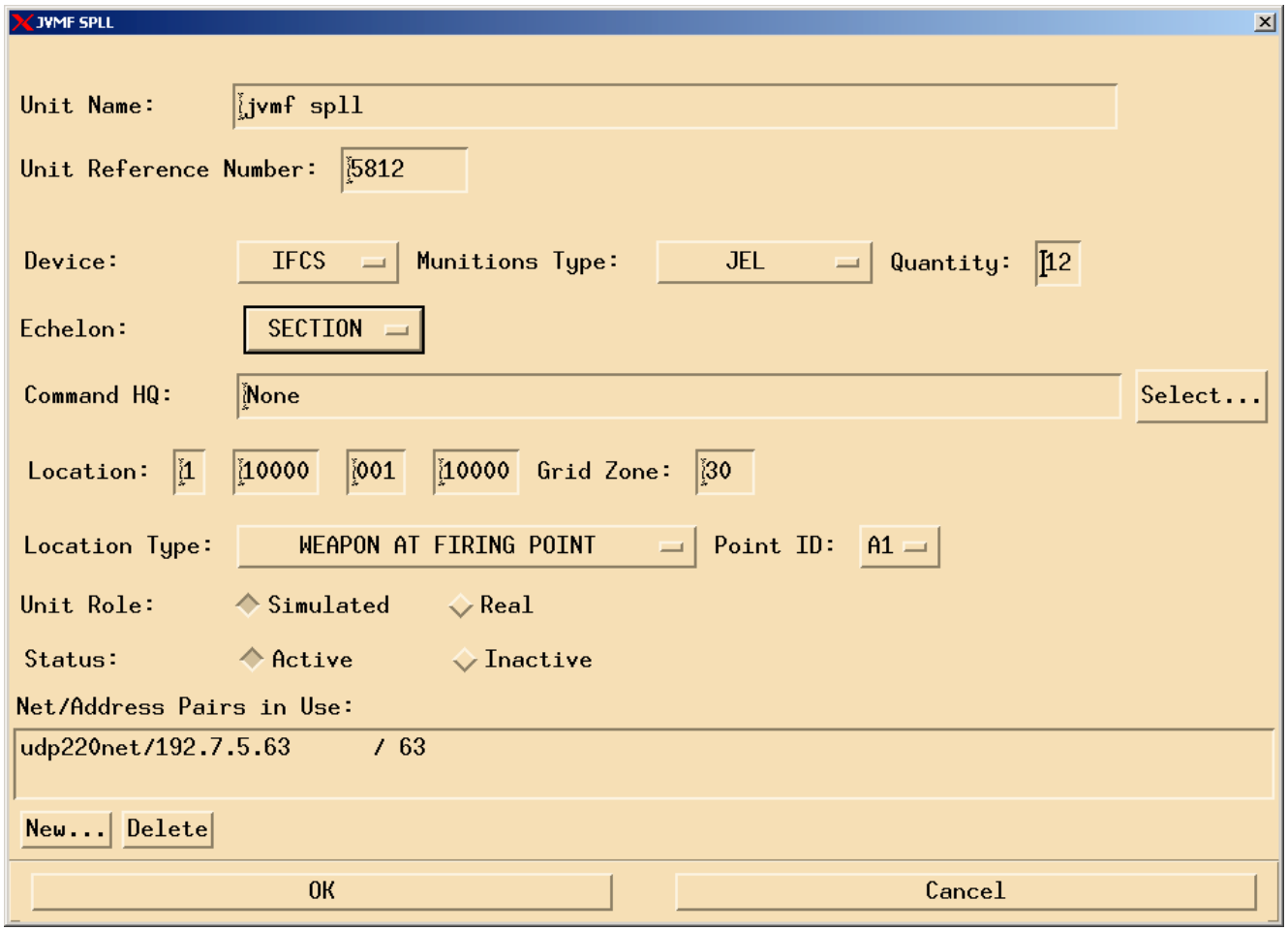
Unit List - Activate the "Edit" button with an appropriate JVMF type unit selected.

3.2.3.31.4 Accessible Windows

Select Command HQ

Select Net/Address Pair (JVMF LAN)

3.2.3.32 UNIT SETUP (JVMF SPLL)



3.2.3.32.1 Description

This window allows the operator to setup a JVMF SPLL type unit in the current exercise.

3.2.3.32.2 Field/Parameters

Unit Name – Any valid unit name can be entered into this field up to 64 characters.

Unit Reference Number – The URN is a number between 0 – 16777215. This number is used by AFATDS to identify units and it must be unique within each exercise.

Device - This is a pull-down menu, which enables the operator to choose the type of device. The valid type for JVMF SPLL is IFCS.

Echelon – This is a pull-down menu, which enable the operator to choose the echelon of the device. The only valid echelon for JVMF SPLL is SECTION.

Munitions Type - This is a pull-down menu, which enables the operator to choose the munition type. The valid types for JVMF SPLL are: JEG, JEH, JEJ, JEK, JEM, JED, JEE, JEP, JEQ, JER, JML, JTA, JTB, JTD, JTE, JTF, JMT, JTC, JTG, JTH, JTJ, JTK, JTL, JTW, JTM, JEN, JMU, JEL, JNB, JSA, YMGM157B.

Quantity – Any valid quantity can be entered into this field up to 2 digits.

Command HQ - By selecting "Select" a window is displayed that allows the operator to set the command unit (See Select Command HQ).

Location - This is the location in the exercise at which the unit is located. Any valid (UTM) coordinate is allowed in this field.

Location Type – This is a pull-down menu, which enables the operator to choose the current location type of the JVMF SPLL unit. The valid types are: WEAPON AT FIRING POINT, REARM POINT, RENDEZVOUS POINT, SURVEY CONTROL POINT, WEAPON HIDE POINT, POINT SPECIFIED BY COORDINATES, MOVE POINT, PLATOON CENTER.

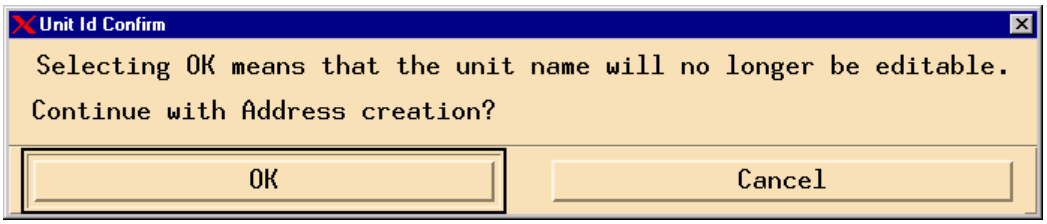
Point ID – This is a pull-down menu, which enable the operator to choose the Point ID of the current location type for the JVMF SPLL unit. The valid Point ID's are: A1 – A9, B1 – B9, C1 – C9.

Unit Role - The operator has the option of setting a unit to Simulated (acted by SISTIM) or Real (configured on another machine connected to SISTIM).

Status - The operator has the option of setting the status of this unit to either Active or Inactive.

Net/Address Pairs in Use - A list of the Net/Address pairs that are currently in use by this unit.

New - Activation of this button displays a window (See Select Net/Address Pair (JVMF LAN)) that allows the operator to add a new net for this unit. (Note: A JVMF unit may also be placed on a UDP 220 net similar to a PK11 Unit (See Select Net/Address Pair (PK11 UDP/220A)). NOTE: If the operator chooses to add the Net/Address Pairs when the unit is first created the following warning will appear.



This warning is displayed to warn the operator that once a Net/Address is created the Unit Name can no longer be edited.

Delete - This option allows the operator to remove a highlighted Net/Address pair from the list.

OK - Activation of this button closes the Unit Setup window and saves any data entered in this window. (Note: Error messages may appear to notify the operator of incorrect or incomplete entries).

Close - This button closes the Unit Setup window and will not save any changes made to the unit.

3.2.3.32.3 Window Navigation

SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "New" button.

Unit Protocol Available - Activate the "OK" button with JVMF selected.

Unit Role Available - Activate the "OK" button with an appropriate type selected.

-Or-

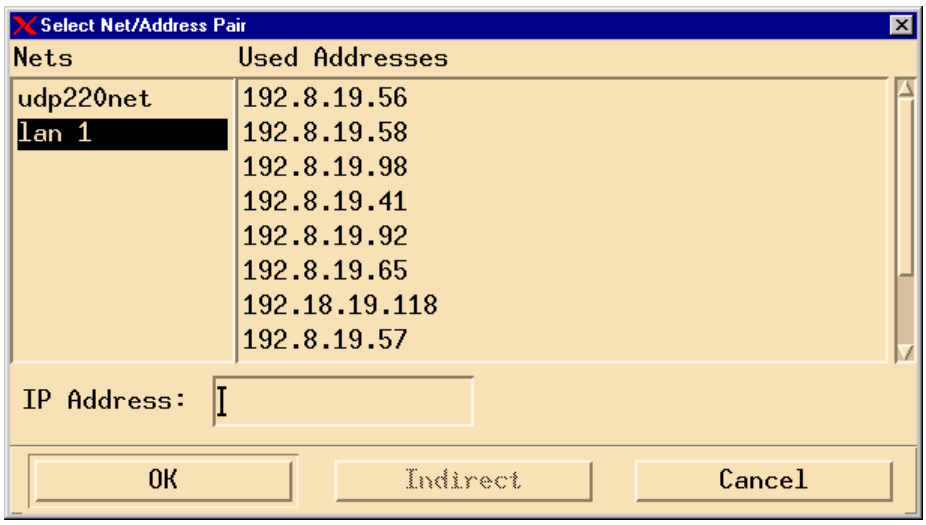
SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "Edit" button with an appropriate JVMF type unit selected.

3.2.3.32.4 Accessible Windows

Select Command HQ Select Net/Address Pair (JVMF LAN)

3.2.3.33 SELECT NET/ADDRESS PAIR (JVMF)



3.2.3.33.1 Description

This window allows the operator to select the communications network and the address to be used by this unit. In order to access this window there must be a valid UDP/LAN network in the Network List (See Network List), and it must be highlighted in the Available Nets field.

3.2.3.33.2 Fields/Parameters

Available Nets - A list of nets available for this unit. When a net is selected, the used address list is displayed.

Used Addresses - A list of currently in use net addresses are displayed.

IP Address - This field allows the operator to choose the UDP/LAN address to use for this unit. This must be a unique IP. (Note: For simulated units this address is not used outside of SISTIM, for real units this address should match the IP at that device).

OK - This button closes the Select Net/Address Pair window and inserts the chosen IP address into the Unit Setup.

Close - This button closes the Select Net/Address Pair window without saving any changes.

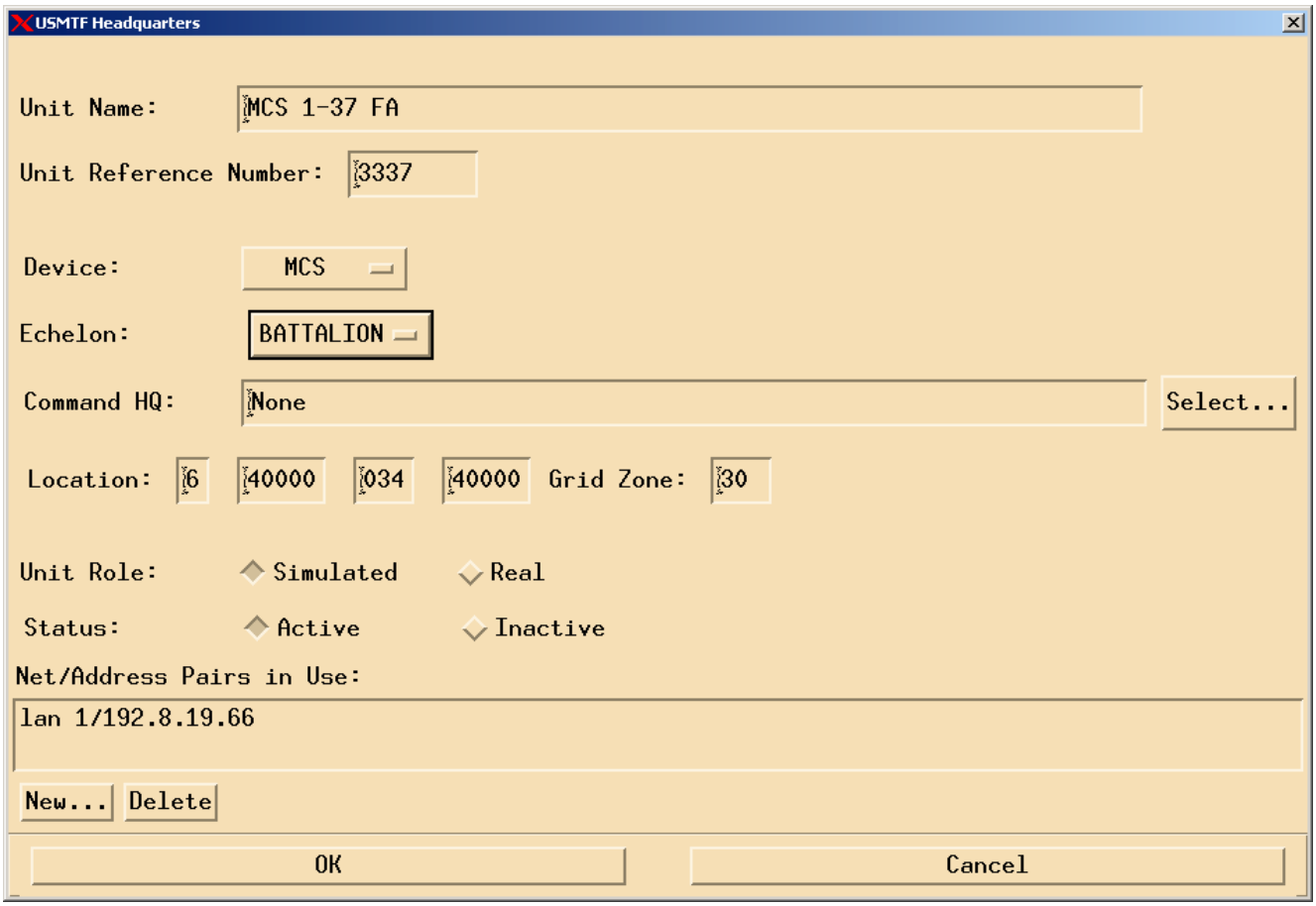
3.2.3.33.3 Window Navigation

All JVMF Unit Setup windows - Activate the "New" button.

3.2.3.33.4 Accessible Windows

None

3.2.3.34 UNIT SETUP (USMTF)



3.2.3.34.1 Description

This window allows the operator to setup a USMTF type unit in the current exercise. Selecting either USMTF_ABCS or USMTF_TBMCS will allow a similar type unit to be created. Although the only device available for USMTF_TBMCS is TBMCS, and it will not be available for USMTF_ABCS. The type of network that the unit can be placed on will also depend on whether it is ABCS or TBMCS.

3.2.3.34.2 Fields/Parameters

Unit Name - Any valid unit name can be entered into this field up to 64 characters.

Unit Reference Number - The URN is a number between 0 - 16777215. This number is used by AFATDS to identify units and it must be unique within each exercise.

Device - This is a pull-down menu, which enables the operator to choose the type of device. The valid types for USMTF are TBMCS, FAAD31, MCS, ASAS, AMDWS, IMETS, ISYSCON, GCCS-A and CSSCS.

Echelon – This is a pull-down menu, which enables the operator to choose the echelon for the device. The valid types for USMTF are BATTALION, BRIDAGE, DIVISION, CORPS.

Command HQ - By selecting "Select" a window is displayed that allows the operator to set the command unit (See Select Command HQ).

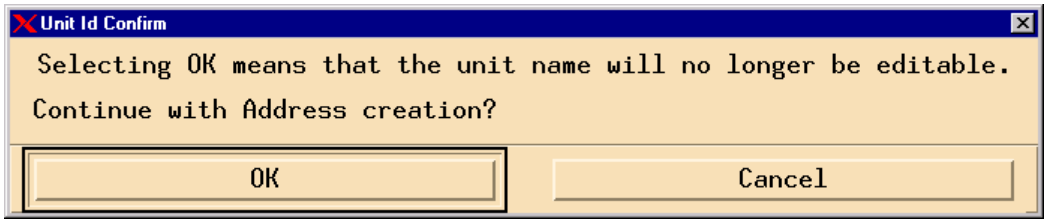
Location - This is the location in the exercise at which the unit is located. Any valid (UTM) coordinate is allowed in this field.

Unit Role - The operator has the option of setting a unit to Simulated (acted by SISTIM) or Real (configured on another machine connected to SISTIM).

Status - The operator has the option of setting the status of this unit to either Active or Inactive.

Net/Address Pairs in Use - A list of the Net/Address pairs that are currently in use by this unit.

New - Activation of this button displays a window (See Select Net/Address Pair (USMTF_ABCS) or Select Net/Address Pair (USMTF_TBMCS)) that allows the operator to add a new net for this unit. NOTE: If the operator chooses to add the Net/Address Pairs when the unit is first created the following warning will appear.



This warning is displayed to warn the operator that once a Net/Address is created the Unit Name can no longer be edited.

Delete - This option allows the operator to remove a highlighted Net/Address pair from the list.

OK - Activation of this button closes the Unit Setup window and saves any data entered in this window. (Note: Error messages may appear to notify the operator of incorrect or incomplete entries).

Close - This button closes the Unit Setup window and will not save any changes made to the unit.

3.2.3.34.3 Window Navigation

SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "New" button.

Unit Protocol Available - Activate the "OK" button with USMTF selected.

Unit Available List - Activate the "OK" button with an appropriate type selected.

-Or-

SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "Edit" button when an appropriate USMTF type unit selected.

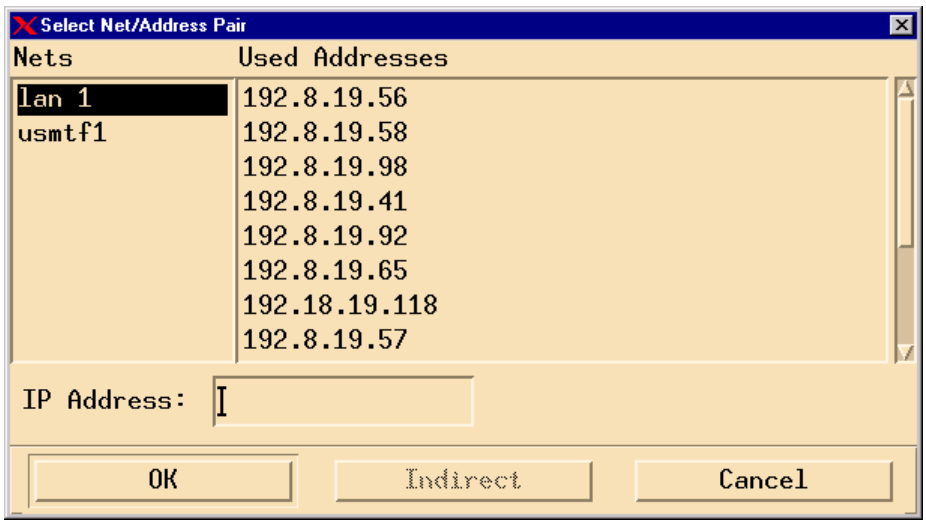
3.2.3.34.4 Accessible Windows

Select Command HQ

Select Net/Address Pair (USMTF_ABCS)

Select Net/Address Pair (USMTF_TBMCS)

3.2.3.35 SELECT NET/ADDRESS PAIR (USMTF_ABCS)



3.2.3.35.1 Description

This window allows the operator to select the communications network and the address to be used by this unit. In order to access this window there must be a valid UDP/LAN network in the Network List (See Network List), and it must be highlighted in the Available Nets field. USMTF_ABCS units use UDP/LAN communications.

3.2.3.35.2 Fields/Parameters

Available Nets - A list of nets available for this unit. When a net is selected, the used address list is displayed.

Used Addresses - A list of currently in use net addresses are displayed.

IP Address - This field allows the operator to choose the UDP/LAN address to use for this unit. This must be a unique IP. (Note: For simulated units this address is not used outside of SISTIM, for real units this address should match the IP at that device).

OK - This button closes the Select Net/Address Pair window and inserts the chosen IP address into the Unit Setup.

Close - This button closes the Select Net/Address Pair window without saving any changes.

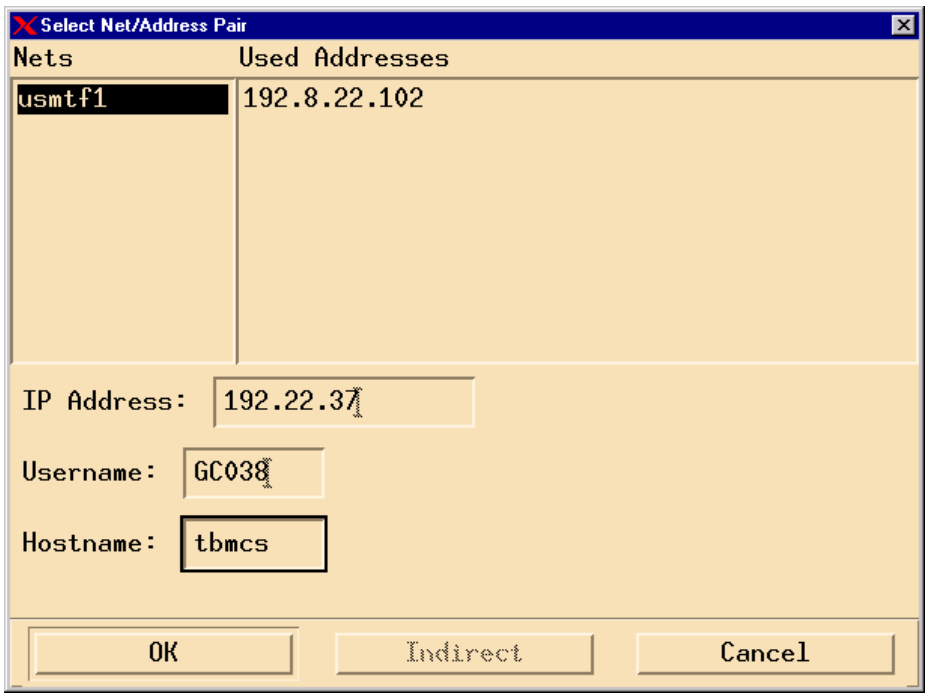
3.2.3.35.3 Window Navigation

All USMTF_ABCS Unit Setup windows - Activate the "New" button.

3.2.3.35.4 Accessible Windows

None

3.2.3.36 SELECT NET/ADDRESS PAIR (USMTF_TBMCS)



3.2.3.36.1 Description

This window allows the operator to select the communications network and the address to be used by this unit. In order to access this window there must be a valid USMTFMail network in the Network List (See Section 3.2.3.10 Network List), and it must be highlighted in the Available Nets field. USMTF_TBMCS Units use USMTFMail communications.

3.2.3.36.2 Fields/Parameters

Available Nets - A list of nets available for this unit. When a net is selected, the used address list is displayed.

Used Addresses - A list of currently in use net addresses are displayed.

IP Address - This field allows the operator to choose the UsmtfMail address to use for this unit. This must be a unique IP. (Note: For simulated units this address is not used outside of SISTIM, for real units this address should match the IP at that device.

Username - This field is the user name used by AFATDS for this unit.

Hostname - This field is the host name used by AFATDS for this unit.

OK - This button closes the Select Net/Address Pair window and inserts the chosen IP address into the Unit Setup.

Close - This button closes the Select Net/Address Pair window without saving any changes.

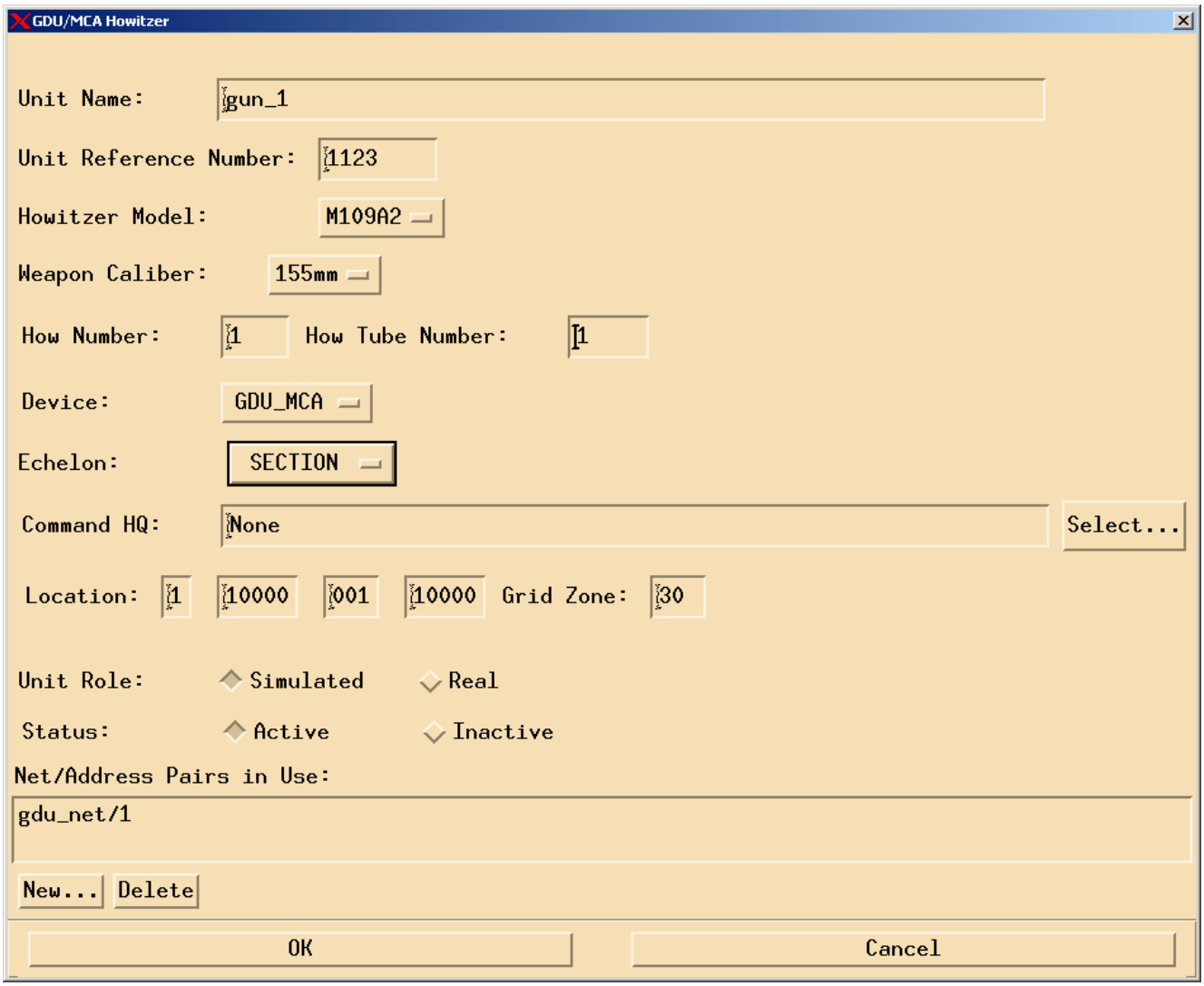
3.2.3.36.3 Window Navigation

All USMTF_TBMCS Unit Setup windows - Activate the "New" button.

3.2.3.36.4 Accessible Windows

None

3.2.3.37 UNIT SETUP (GDU/MCA)



3.2.3.37.1 Description

This window allows the operator to setup a GDU/MCA type unit in the current exercise. (Note: To create a valid GDU unit the operator should choose Howitzer from the Unit Role Available window).

3.2.3.37.2 Fields/Parameters

Unit Name - Any valid unit name can be entered into this field up to 64 characters.

Unit Reference Number - The URN is a number between 0 - 16777215. This number is used by AFATDS to identify units and it must be unique within each exercise.

Howitzer Model - This is a pull down menu, which allows the operator to choose the type of Weapon associated with this weapon.

Weapon Caliber - This displays the weapon caliber associated with the howitzer model chosen in the previous selection. (Note: This is not an editable field, it is chosen automatically when a Howitzer Model is chosen).

How Number - This displays the Howitzer number for this unit.

How Tube Number - This displays the Tube number for this unit.

Device - This is a pull-down menu, which enables the operator to choose the type of device. The only valid type for GDU/MCA is GDU_MCA.

Echelon – This is a pull-down menu, which enables the operator to choose the echelon for the device. The only valid echelon for GDU/MCA is SECTION.

Command HQ - By selecting "Select" a window is displayed that allows the operator to set the command unit (See Select Command HQ).

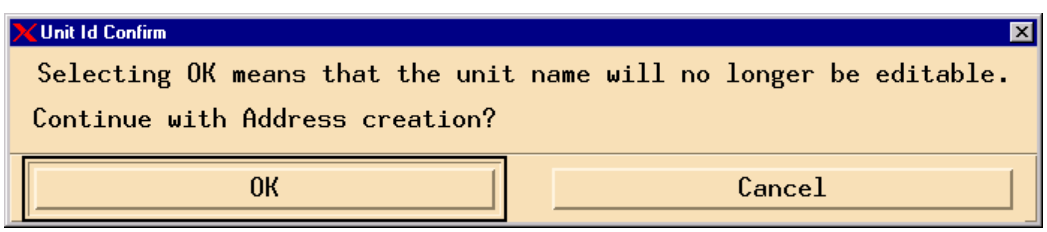
Location - This is the location in the exercise at which the unit is located. Any valid (UTM) coordinate is allowed in this field.

Unit Role - The operator has the option of setting a unit to Simulated (acted by SISTIM) or Real (configured on another machine connected to SISTIM).

Status - The operator has the option of setting the status of this unit to either Active or Inactive.

Net/Address Pairs in Use - A list of the Net/Address pairs that are currently in use by this unit.

New - Activation of this button displays a window (See Select Net/Address Pair (GDU/MCA)) that allows the operator to add a new net for this unit. NOTE: If the operator chooses to add the Net/Address Pairs when the unit is first created the following warning will appear.



This warning is displayed to warn the operator that once a Net/Address is created the Unit Name can no longer be edited.

Delete - This option allows the operator to remove a highlighted Net/Address pair from the list.

OK - Activation of this button closes the Unit Setup window and saves any data entered in this window. (Note: Error messages may appear to notify the operator of incorrect or incomplete entries).

Close - This button closes the Unit Setup window and will not save any changes made to the unit.

3.2.3.37.3 Window Navigation

SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "New" button.

Unit Protocol Available - Activate the "OK" button with GDU/MCA selected.

Unit Available List - Activate the "OK" button Howitzer selected.

-Or-

SISTIM - Select "Units" from the "Setup" menu.

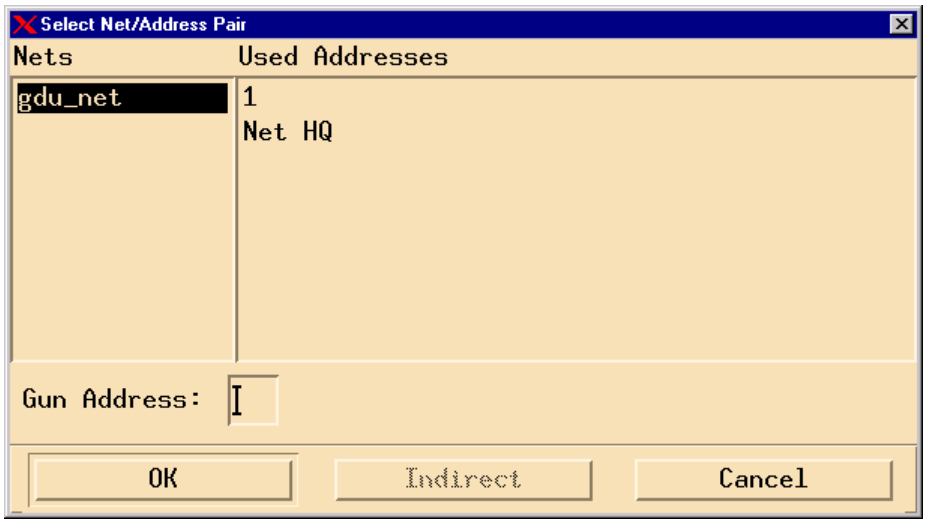
Unit List - Activate the "Edit" button when an appropriate GDU/MCA type unit selected.

3.2.3.37.4 Accessible Windows

Select Command HQ

Select Net/Address Pair (GDU/MCA)

3.2.3.38 SELECT NET/ADDRESS PAIR (GDUMCA)



3.2.3.38.1 Description

This window allows the operator to select the communications network and the address to be used by this unit. In order to access this window there must be a valid GDU/MCA network in the Network List (See Network List), and it must be highlighted in the Available Nets field.

3.2.3.38.2 Fields/Parameters

Available Nets - A list of nets available for this unit. When a net is selected, the used address list is displayed.

Used Addresses - A list of currently in use net addresses are displayed.

Gun Address - Any number from 1 to 12 can be chosen for this Address. This is the number used by the Net HQ to address the gun. In order to have a truly valid GDU/MCA Network an AFATDS unit in the current Exercise should be assigned as the Net HQ for each GDU/MCA Network.

OK - This button closes the Select Net/Address Pair window and inserts the chosen IP address into the Unit Setup.

Cancel - This button closes the Select Net/Address Pair window without saving any changes.

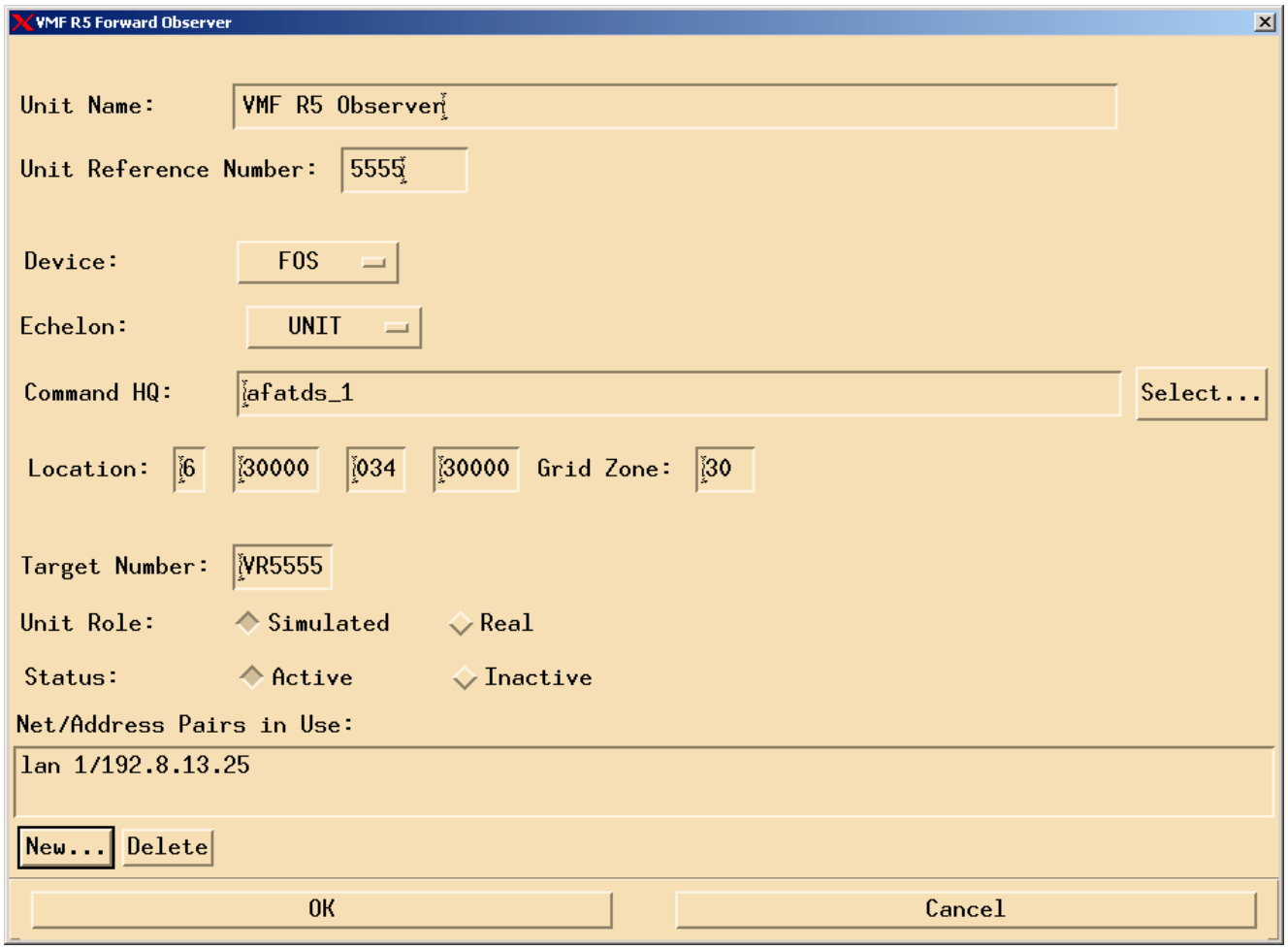
3.2.3.38.3 Window Navigation

All GDU/MCA Unit Setup windows - Activate the "New" button.

3.2.3.38.4 Accessible Windows

None

3.2.3.39 UNIT SETUP (VMF R5 OBSERVER)



3.2.3.39.1 Description

This window allows the operator to setup a JVMF R5 Observer type unit in the current exercise.

3.2.3.39.2 Fields/Parameters

Unit Name - Any valid unit name can be entered into this field up to 64 characters.

Unit Reference Number - The URN is a number between 0 - 16777215. This number is used by AFATDS to identify units and it must be unique within each exercise.

Device - This is a pull-down menu, which enables the operator to choose the type of device. The only valid type for VMF R5 Observer is FOS.

Echelon – This is a pull-down menu, which enable the operator to choose the echelon for the device. The only valid type for VMF R5 is UNIT.

Command HQ - By selecting "Select" a window is displayed that allows the operator to set the command unit (See Select Command HQ).

Location - This is the location in the exercise at which the unit is located. Any valid (UTM) coordinate is allowed in this field.

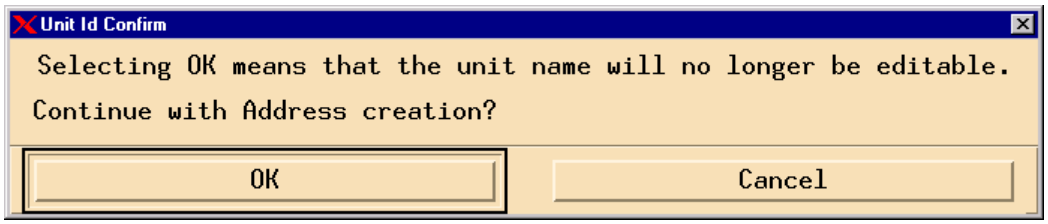
Target Number - Any valid target number can be entered into this field. The format is "AANNNN", A = Alpha and N = Numeric.

Unit Role - The operator has the option of setting a unit to Simulated (acted by SISTIM) or Real (configured on another machine connected to SISTIM).

Status - The operator has the option of setting the status of this unit to either Active or Inactive.

Net/Address Pairs in Use - A list of the Net/Address pairs that are currently in use by this unit.

New - Activation of this button displays a window (See Select Net/Address Pair (JVMF LAN)) that allows the operator to add a new net for this unit. (Note: A JVMF unit may also be placed on a UDP 220 net similar to a PK11 Unit (See Select Net/Address Pair (PK11 UDP/220A)). NOTE: If the operator chooses to add the Net/Address Pairs when the unit is first created the following warning will appear.



This warning is displayed to warn the operator that once a Net/Address is created the Unit Name can no longer be edited.

Delete - This option allows the operator to remove a highlighted Net/Address pair from the list.

OK - Activation of this button closes the Unit Setup window and saves any data entered in this window. (Note: Error messages may appear to notify the operator of incorrect or incomplete entries).

Close - This button closes the Unit Setup window and will not save any changes made to the unit.

3.2.3.39.3 Window Navigation

SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "New" button.

Unit Protocol Available - Activate the "OK" button with VMF R5 selected.

Unit Role Available - Activate the "OK" button with an appropriate observer type selected.

-Or-

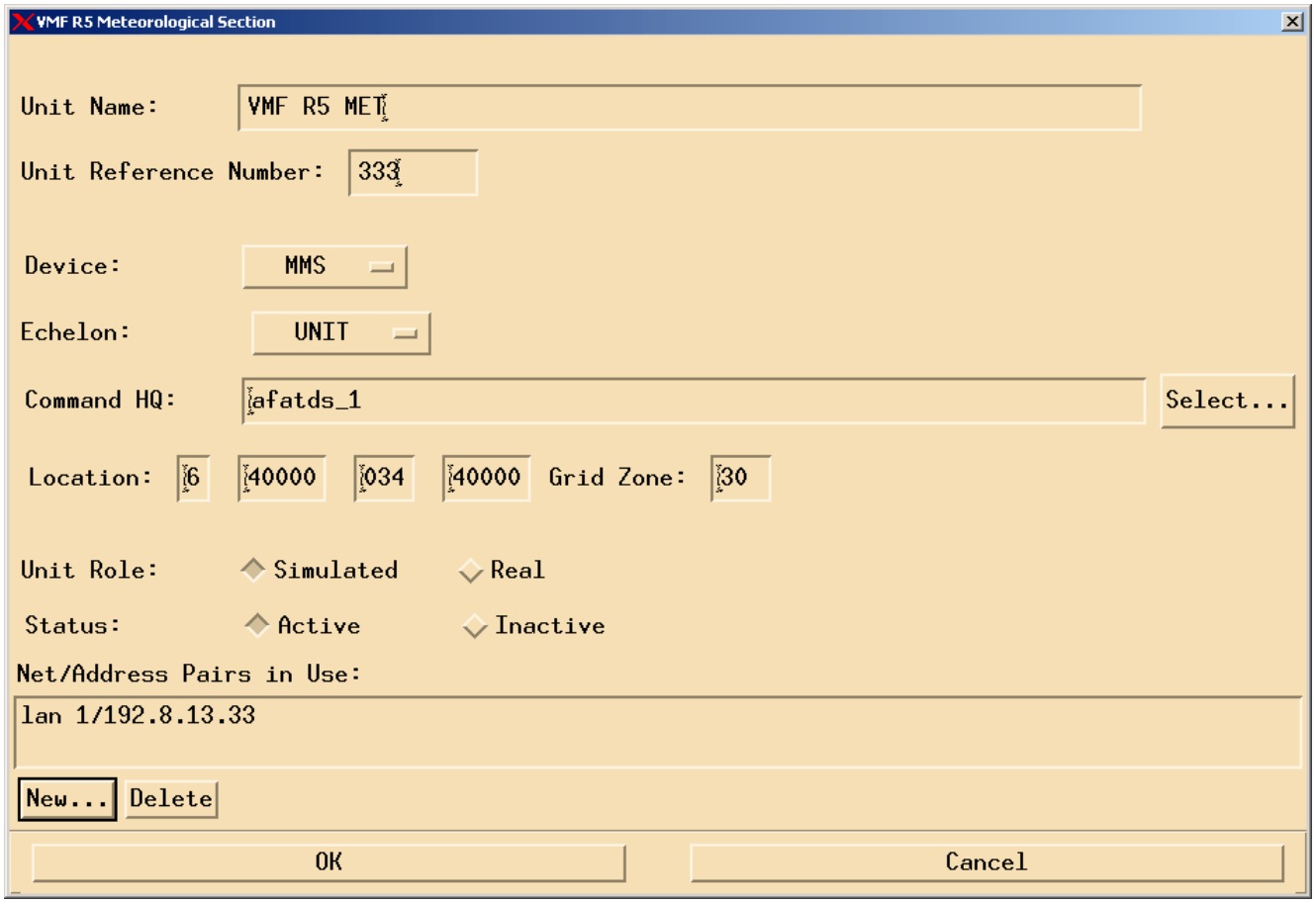
SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "Edit" button with an appropriate JVMF R5 observer type unit selected.

3.2.3.39.4 Accessible Windows

Select Command HQ Select Net/Address Pair (JVMF LAN)

3.2.3.40 UNIT SETUP (VMF R5 OTHER)



3.2.3.40.1 Description

This window allows the operator to setup a JVMF R5 Other type unit in the current exercise.

3.2.3.40.2 Fields/Parameters

Unit Name - Any valid unit name can be entered into this field up to 64 characters.

Unit Reference Number - The URN is a number between 0 - 16777215. This number is used by AFATDS to identify units and it must be unique within each exercise.

Device - This is a pull-down menu, which enables the operator to choose the type of device. The valid types for VMF R5 Observer are FOS, MMS, MLRS, FF, ATHS, JSTARS, FBCB2, and PALADIN.

Echelon – This is a pull-down menu, which enables the operator to choose the echelon for the device. The valid types for VMF R5 are UNIT, SECTION, PLATOON, BATTERY, COMPANY, BATTALION, BRIGADE, DIVISION, CORPS.

Command HQ - By selecting "Select" a window is displayed that allows the operator to set the command unit (See Select Command HQ).

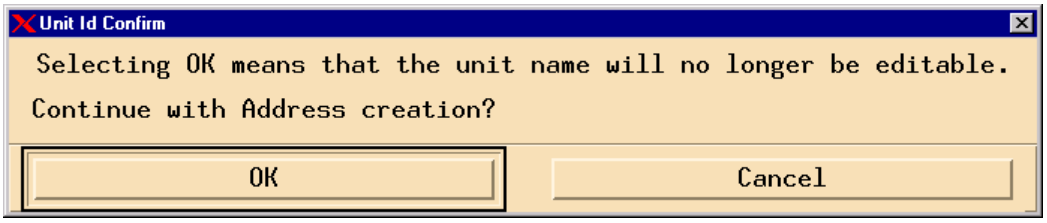
Location - This is the location in the exercise at which the unit is located. Any valid (UTM) coordinate is allowed in this field.

Unit Role - The operator has the option of setting a unit to Simulated (acted by SISTIM) or Real (configured on another machine connected to SISTIM).

Status - The operator has the option of setting the status of this unit to either Active or Inactive.

Net/Address Pairs in Use - A list of the Net/Address pairs that are currently in use by this unit.

New - Activation of this button displays a window (See Select Net/Address Pair (JVMF LAN)) that allows the operator to add a new net for this unit. (Note: A JVMF unit may also be placed on a UDP 220 net similar to a PK11 Unit (See Select Net/Address Pair (PK11 UDP/220A)). NOTE: If the operator chooses to add the Net/Address Pairs when the unit is first created the following warning will appear.



This warning is displayed to warn the operator that once a Net/Address is created the Unit Name can no longer be edited.

Delete - This option allows the operator to remove a highlighted Net/Address pair from the list.

OK - Activation of this button closes the Unit Setup window and saves any data entered in this window. (Note: Error messages may appear to notify the operator of incorrect or incomplete entries).

Close - This button closes the Unit Setup window and will not save any changes made to the unit.

3.2.3.40.3 Window Navigation

SISTIM - Select "Units" from the "Setup" menu.

Unit List - Activate the "New" button.

Unit Protocol Available - Activate the "OK" button with VMF R5 selected.

Unit Role Available - Activate the "OK" button with an appropriate type selected.

-Or-

SISTIM - Select "Units" from the "Setup" menu.

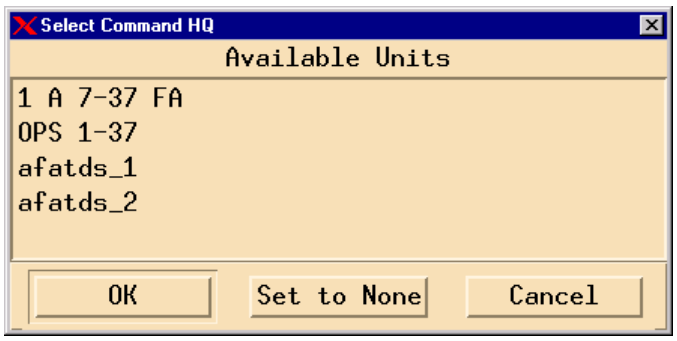
Unit List - Activate the "Edit" button with an appropriate JVMF type unit selected.

3.2.3.40.4 Accessible Windows

Select Command HQ

Select Net/Address Pair (JVMF LAN)

3.2.3.41 SELECT COMMAND HQ



3.2.3.41.1 Description

This window allows the operator to select a unit for command HQ.

3.2.3.41.2 Fields/Parameters

This window displays a list of the units appropriate for Command HQ.

OK - This button closes the window and inserts the highlighted unit into the Command HQ field on the previous Unit Setup window.

Set to None - This button will insert "NONE" into the Command HQ field on the Unit Setup window. Although in the case of PK11 Paladin and GDU/MCA units they should always have an AFATDS unit assigned as Command HQ.

Close - This button closes the Select Command HQ window.

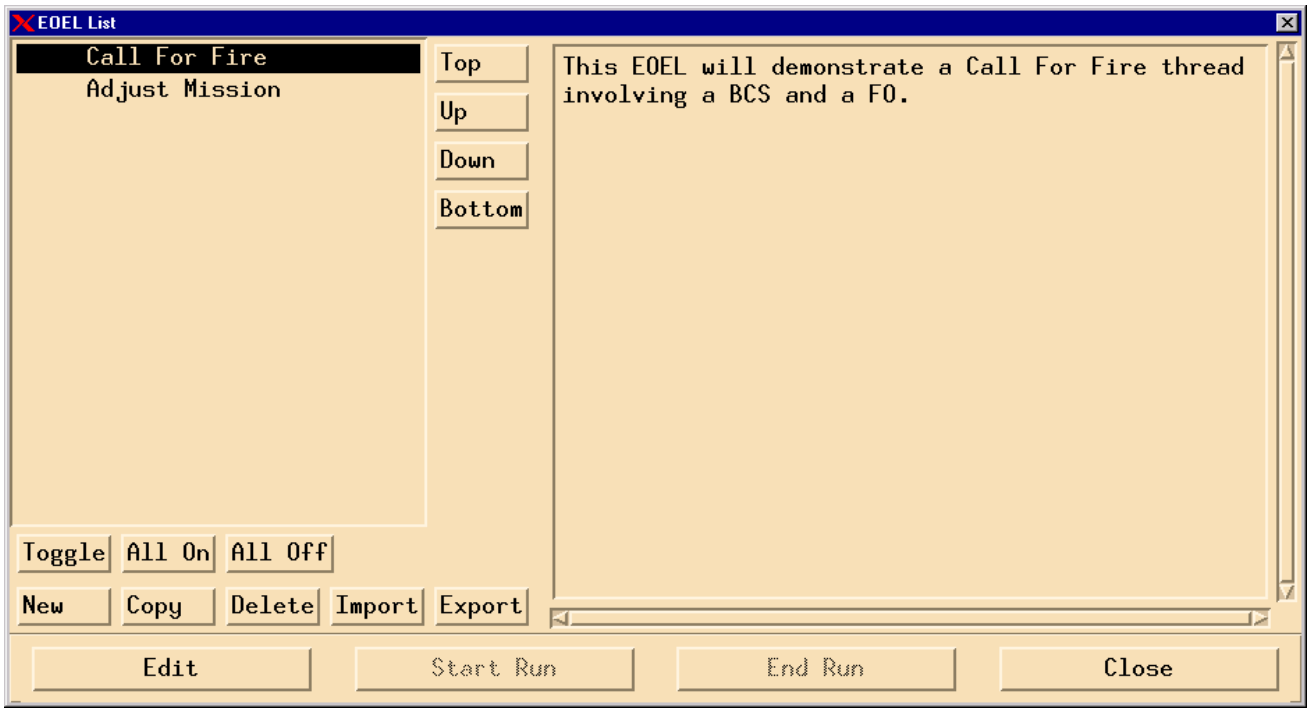
3.2.3.41.3 Window Navigation

All Unit Setup windows - Activate the "Select…" button.

3.2.3.41.4 Accessible Windows

None

3.2.3.42 EOEL LIST SETUP

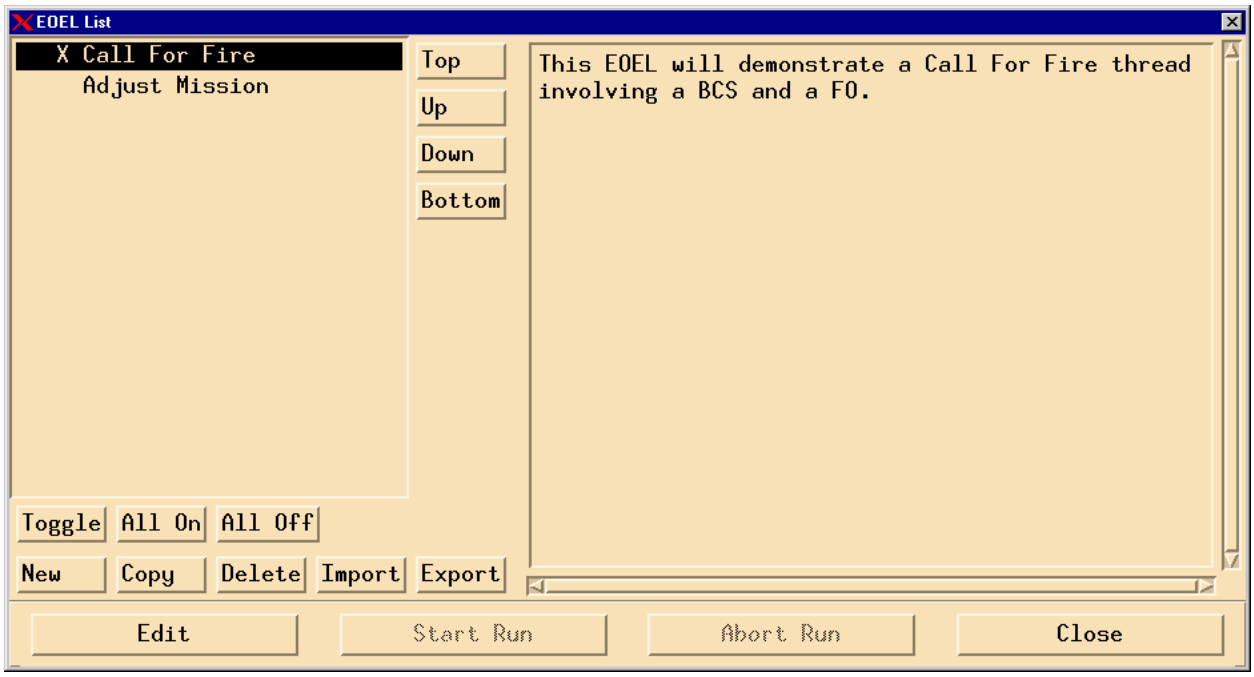


3.2.3.42.1 Description

This window allows the operator to create a list comprised of Event Ordered Event Lists. **After the EOELs have been created they may be ordered to the satisfaction of the operator and then displayed with a brief description of each EOEL.3.2.3.42.2 Fields/Parameters**

Name/Description – The large block on the top left contains the names of each EOEL already created. Each EOEL name must be unique. The large block on the top right contains the brief description of the corresponding (highlighted) EOEL.

Top/Up/Down/Bottom – Selecting these buttons allows the operator to arrange their list to suit their desired purpose. To move an EOEL to the top of the list, the EOEL must be highlighted then the “Top” button must be selected. To move an EOEL to the bottom of the list, the EOEL must be highlighted and the “Bottom” button must be selected. The Up and Down buttons allow the EOEL to be moved Up or Down one EOEL at a time.



Toggle – Selecting this button allows the operator to enable an EOEL. The operator must highlight the desired EOEL then select Toggle this will select that EOEL so that once the TOEL and EOEL are started the selected EOEL will be enabled. Once an EOEL is selected it is marked with an “X”.

All On – Selecting this button allows the operator to enable all the EOELs on the EOEL List.

All Off – Selecting this button allows the operator to disable all the EOELs on the EOEL List.

New – This button starts the procedure so that the operator can add a new EOEL to the list.

Copy – This button allows the operator to copy the contents of an existing EOEL into a new EOEL with a unique name.

Delete – This button allows the operator to delete an EOEL from the EOEL List.

Edit - This button allows the operator to edit an existing EOEL on the list.

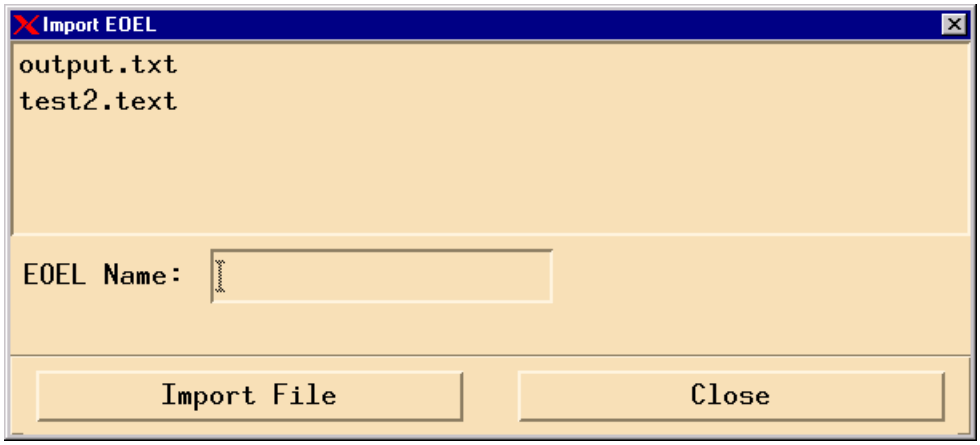
Start Run – This button allows the operator to put the EOEL in running mode (Note: This button will only activate if the TOEL is already in run mode).

Abort Run – This button allows the operator to put the EOEL in inactive mode (Note: This button will only activate if the TOEL and EOEL are already in run mode).

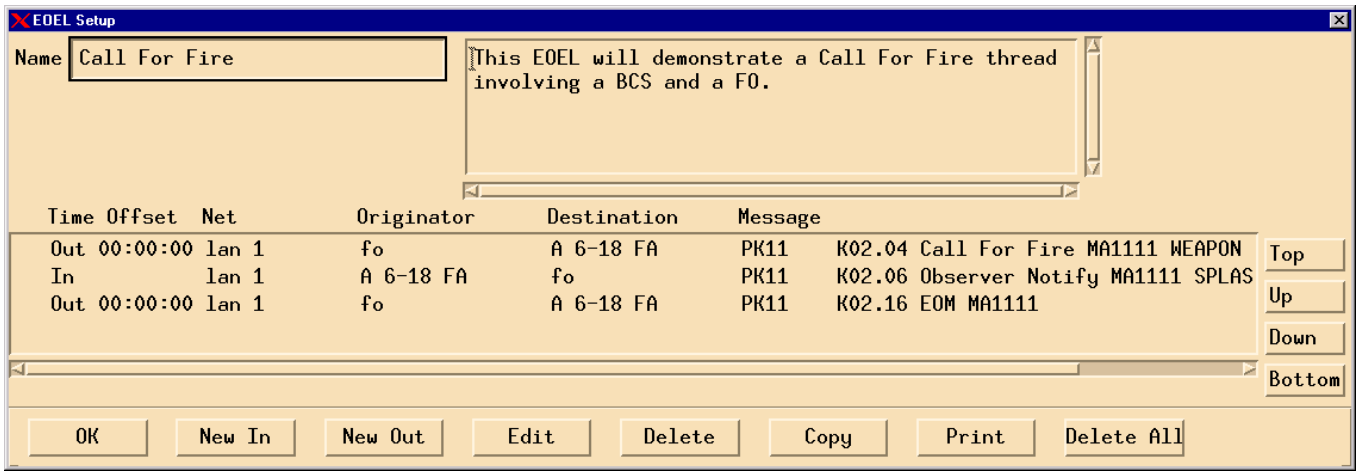
Close – This button allows the operator close the EOEL List window.

Export – This button starts a procedure similar to the Export TOEL. Export EOEL allows the operator to export a current EOEL into a formatted text file.

Import – This button starts a procedure similar to the Import TOEL. Import EOEL allows the operator to choose a pre-formatted text file and create a new EOEL with a unique name.



3.2.3.43 EOEL SETUP



Name - Any name , up to 30 alpha/numeric characters, is valid in this field.

Description – This text field allows the operator to input a brief functional description of the EOELs.

OK – This button closes the EOEL Setup window and the new EOEL will appear in the EOEL List window.

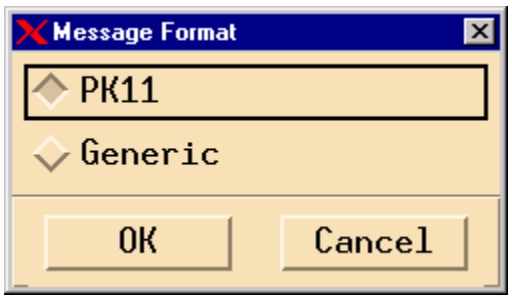
New In – This button gives the operator the opportunity to configure a new Incoming event with the option of specifying triggers. When this button is activated a window is displayed (See Message Protocol Available) that allows the operator to choose the protocol for the new message. Once a Message Protocol is selected an Available Message List will appear allowing the operator to view and select the valid message for PKG11, JVMF, USMTF, GDU/MCA, and Generic. Once a message has been selected the template will appear (See EOEL IN-Event Setup).

New Out – This button gives the operator the opportunity to configure a new Outgoing event. When this button is activated a window is displayed (See Message Protocol Available) that allows the operator to choose the protocol for the new message. Once a Message Protocol is selected an Available Message List will appear allowing the operator to view and select the valid message for PKG11, JVMF, USMTF, GDU/MCA, and Generic. Once a message has been selected the message template will appear.

Edit – This button allows the operator to edit an event that currently exists in the EOEL (Note: a message must be highlighted before this button can be activated). When this button is activated, the appropriate window is displayed depending on the message type and protocol.

Delete – This button deletes the highlighted event from the EOEL (Note: a message must be highlighted before this button can be activated). When the message has been deleted, the event is removed from the EOEL.

Copy – This button allows the operator to make a copy of an event that currently exists in the EOEL (Note: a message must be highlighted before this button can be activated). When this button is selected, if a Generic Format of the message exists, a Message Format window (See below) appears allowing the operator to specify whether or not they want the same protocol as the original (highlighted) message or a Generic copy of the highlighted message added to the EOEL. This copy is then added to the bottom of the EOEL.



Print – This button sends the highlighted event to the printer.

Delete All – This button allows the operator to remove all the events from the current EOEL. When this button is selected a confirmation window will appear. If the operator selects OK at this time all the events will be deleted.

Top/Up/Down/Bottom **– Selecting these buttons allows the operator to arrange their list to suit their desired purpose. To move an event to the top of the list, the event must be highlighted then the "Top" button must be selected. To move an event to the bottom of the list, the event must be highlighted and the "Bottom" button must be selected. The Up and Down buttons allow the event to be moved Up or Down one event at a time.3.2.3.43.1 Window Navigation**

SISTIM – Select "EOELs…" from the "Setup" menu.

-Or-

SISTIM– Select "Run Exercise" from the "TOEL" menu. Once the Exercise Controller window appears select "EOELs…" from the "Setup" menu.3.2.3.43.2 Accesible Windows

EOEL Setup

Import EOEL

Export EOEL

EOEL IN-Event Setup

Message Protocol Available

PK11 Message Template

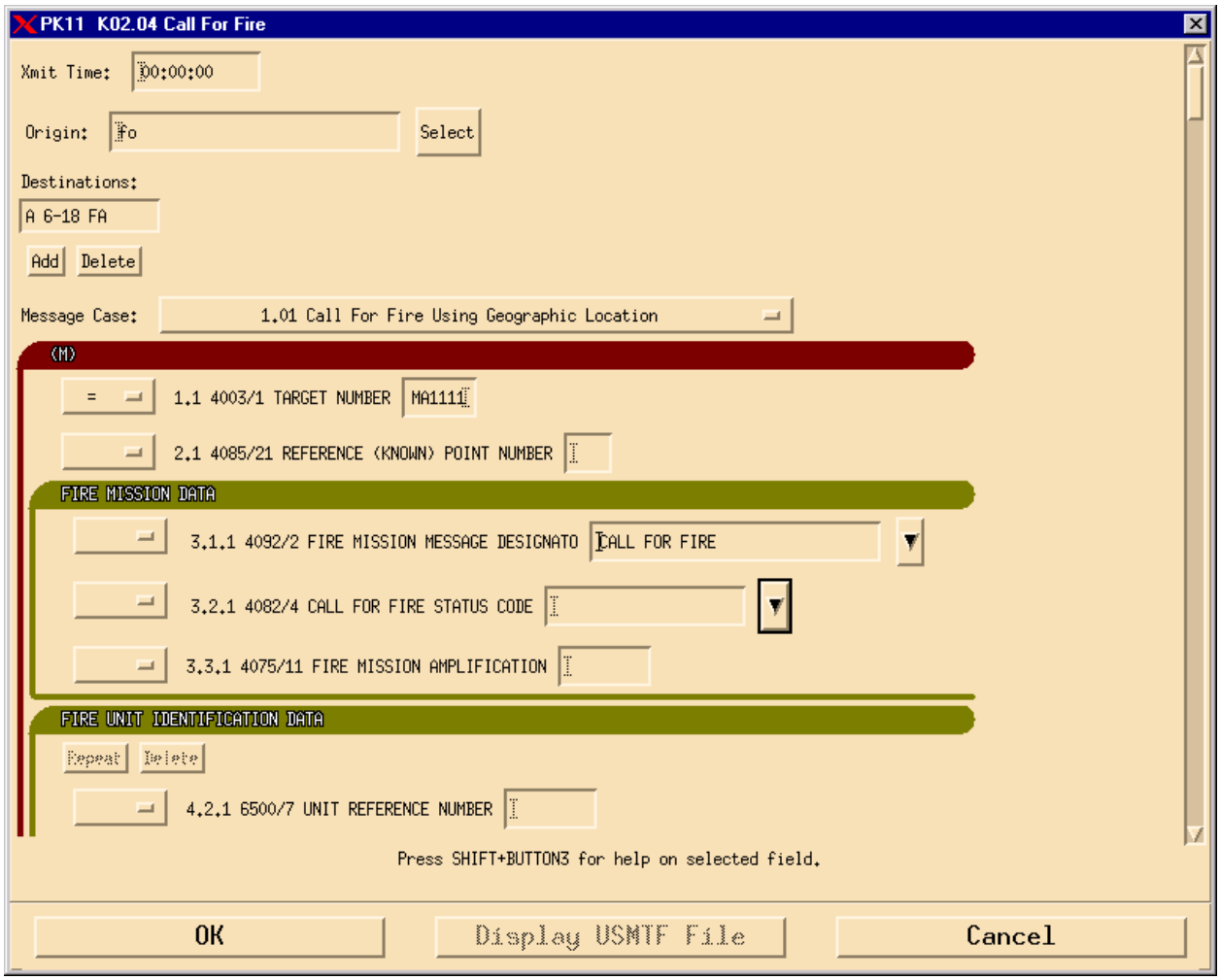
JVMF Message Template

USMTF Message Template

GDU/MCA Message Template

Generic Messages (Appendix E)

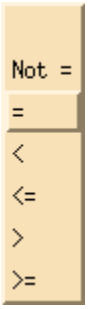
3.2.3.44 EOEL IN-EVENT SETUP



3.2.3.44.1 Description

This section is designed to give an example of how to setup an EOEL In-Event. The setup is extremely similar to composing an In/Outgoing message in the TOEL (i.e. PK11 Message Template), the distinct difference is the introduction of the "trigger". 3.2.3.44.2 Field/Parameters

Trigger – The button located to the left of each field is called a trigger. Triggers are conditions placed on incoming messages. When an incoming message meets all the criteria set by the operator's trigger, the next outgoing message is transmitted. Example: If the Target Number field has a trigger of "=" that means that no outgoing events will be transmitted until a message of the same protocol and message template comes in with the same Target Number.

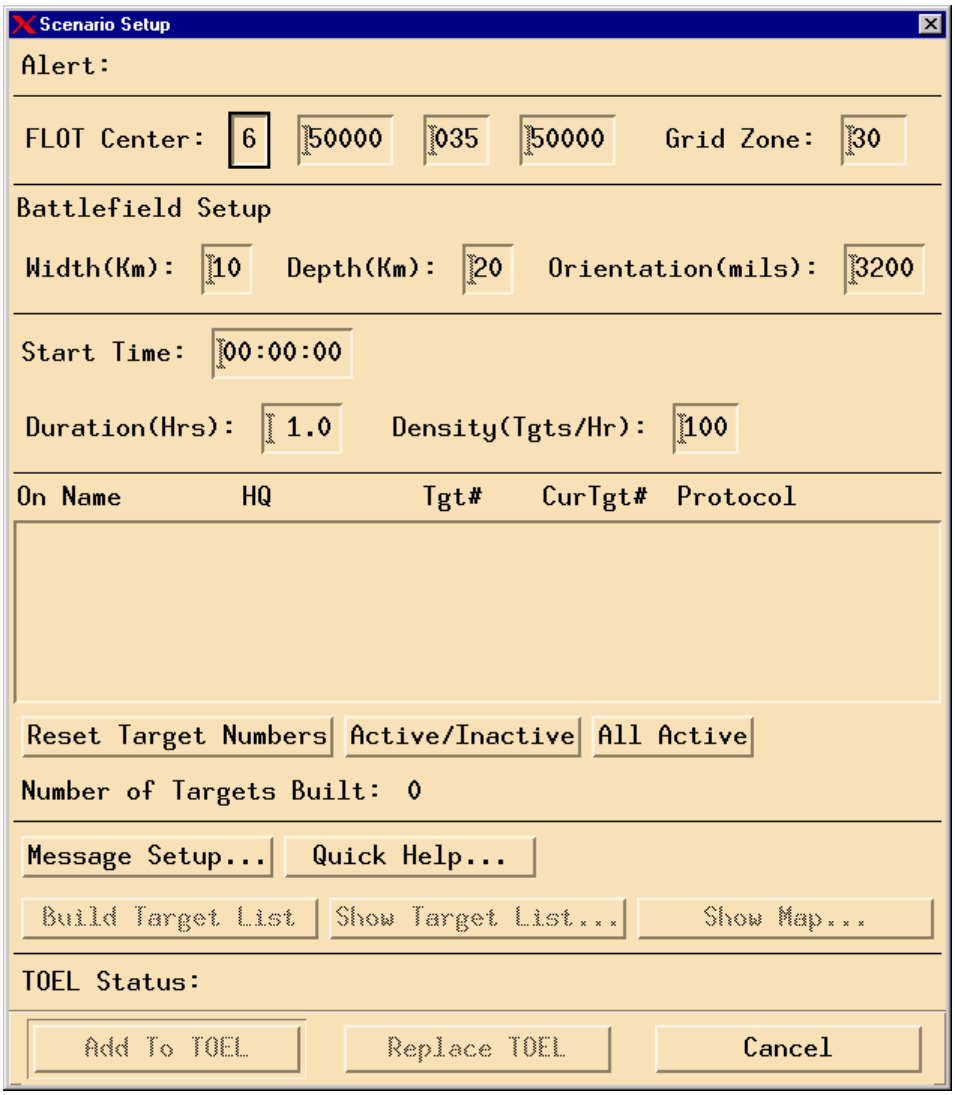


Trigger Options **– EOEL In-Events give you the options to set a trigger or condition from the preceding list.3.2.3.44.3 Window Navigation**

SISTIM– Select "EOELs…" from the "Setup" menu, select "Edit " or "New" from the EOEL List, then select "New In".3.2.3.44.4 Accesible Windows

NONE.

3.2.3.45 SCENARIO SETUP



3.2.3.45.1 Description

This window allows the operator to set the configuration parameters in preparation for generating a scenario.

3.2.3.45.2 Fields/Parameters

FLOT Center - The operator enters an easting/northing (UTM) location on which to center the FLOT.

Grid Zone – To convert from UTM coordinates to Lat/Long coordinates.

Battlefield Width (Km) - This parameter allows the operator to enter the width of the battlefield. This width must be between 2 and 99 Km.

Battlefield Depth (Km) – This parameter allows the operator to enter the depth of the FLOT measured in kilometers. The depth must be between 2 and 99 Km.

Battlefield Orientation (mils) - This parameter indicates the direction the friendly forces are oriented. The value entered here must be between 0 and 6399, with 0 depicting north and 3200 depicting south.

Start Time - Used to set the start time (HH: MM: SS) of the Time Ordered Events List (TOEL) for the current target list.

Duration (Hrs) - The operator enters the length, in hours, that the scenario is to last. This value must be between 1 and 99.

Density (tgts/hr) - This parameter indicates how many messages per hour (based on targets per hour) can be automatically generated and sent by the SISTIM. The value for this parameter must be between 0 and 600.

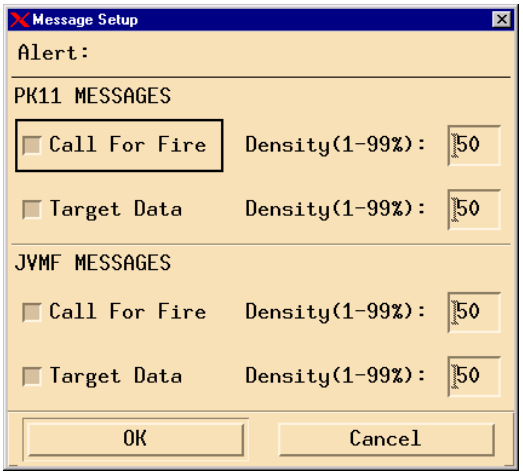
Reset Target Numbers - When pressed this button will recycle the target numbers starting with the initial number entered.

Active/Inactive -This button will change the state of a target from Active to Inactive or Inactive to Active.

All Active - Pressing this button will make all targets built in the Scenario Active.

Number of Targets Built – This field will display the number of targets generated in Target List.

Message Setup - Pressing this button launches the Message Setup window displayed below. This window allows the user to select/deselect Call For Fire and Target Data messages for both PK11 and JVMF protocols. Each message selection contains a Density field that enables the user to select the percentage of each message allocated during target generation.



Quick Help - This button launches a help document devoted to Scenario Setup only. It has been included in this document as Appendix C. This document is very helpful to assist anyone while they create a scenario.

Build Target List - Pressing this button automatically generates a new target list. After the list is generated a window is displayed showing the target list. (See Target List)

Show Target List - This button allows the operator view the target list constructed during the automatic scenario generation. When this button is activated, a window is displayed showing the target list. (See Target List)

Show Map - This button allows the operator to view the target list graphically in a window (See Target Map). The FLOT orientation, width, and depth of the scenario target area are displayed. This button is not available if the FLOT width is greater than 12km.

Add to TOEL – Add new targets to the existing TOEL.

Replace TOEL – To replace the current TOEL with a newly implemented TOEL.

Cancel - To cancel from the Scenario Setup without saving any changes.

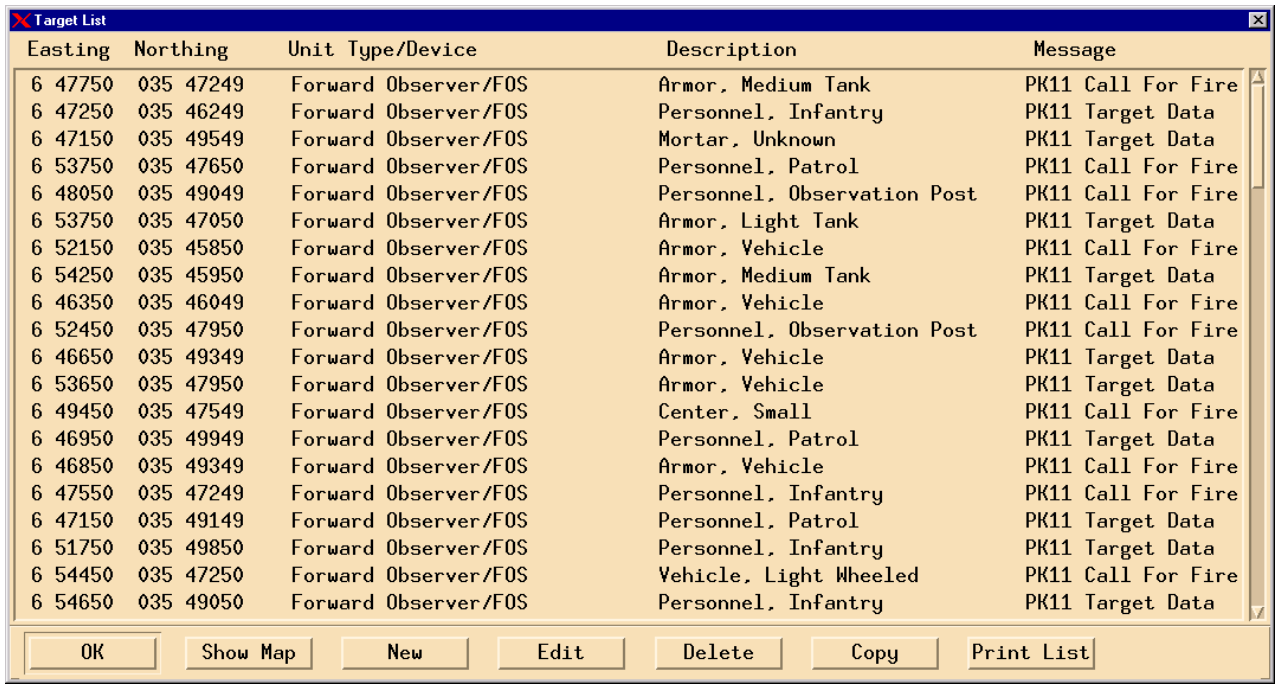
3.2.3.45.3 Window Navigation

SISTIM - Select "Scenario" from the "Setup" menu.

3.2.3.45.4 Accessible Windows

Target List Target Map

3.2.3.46 TARGET LIST



Easting	Northing	Unit Type/Device	Description	Message
6 47750	035 47249	Forward Observer/FOS	Armor, Medium Tank	PK11 Call For Fire
6 47250	035 46249	Forward Observer/FOS	Personnel, Infantry	PK11 Target Data
6 47150	035 49549	Forward Observer/FOS	Mortar, Unknown	PK11 Target Data
6 53750	035 47650	Forward Observer/FOS	Personnel, Patrol	PK11 Call For Fire
6 48050	035 49049	Forward Observer/FOS	Personnel, Observation Post	PK11 Call For Fire
6 53750	035 47050	Forward Observer/FOS	Armor, Light Tank	PK11 Target Data
6 52150	035 45850	Forward Observer/FOS	Armor, Vehicle	PK11 Call For Fire
6 54250	035 45950	Forward Observer/FOS	Armor, Medium Tank	PK11 Target Data
6 46350	035 46049	Forward Observer/FOS	Armor, Vehicle	PK11 Call For Fire
6 52450	035 47950	Forward Observer/FOS	Personnel, Observation Post	PK11 Call For Fire
6 46650	035 49349	Forward Observer/FOS	Armor, Vehicle	PK11 Target Data
6 53650	035 47950	Forward Observer/FOS	Armor, Vehicle	PK11 Target Data
6 49450	035 47549	Forward Observer/FOS	Center, Small	PK11 Call For Fire
6 46950	035 49949	Forward Observer/FOS	Personnel, Patrol	PK11 Target Data
6 46850	035 49349	Forward Observer/FOS	Armor, Vehicle	PK11 Call For Fire
6 47550	035 47249	Forward Observer/FOS	Personnel, Infantry	PK11 Call For Fire
6 47150	035 49149	Forward Observer/FOS	Personnel, Patrol	PK11 Target Data
6 51750	035 49850	Forward Observer/FOS	Personnel, Infantry	PK11 Target Data
6 54450	035 47250	Forward Observer/FOS	Vehicle, Light Wheeled	PK11 Call For Fire
6 54650	035 49050	Forward Observer/FOS	Personnel, Infantry	PK11 Target Data

3.2.3.46.1 Description

This window allows the operator to view the generated targets, view the target map, or print the Target List.

3.2.3.46.2 Fields/Parameters

Easting/Northing Description Message - This is a list of the targets generated for the scenario. It displays the location of the target on the map, the target type, and the type of message.

OK - This button closes the Target List window

Show Map - This button displays the map of the targets if the FLOT width is 12 km or less. (See Target Map).

New – This button allows the operator to create a new target. The Target Editor window will appear.

Edit – This button will allow the operator to edit an existing target.

Delete – This button will allow the operator to delete an existing target.

Copy – This button will allow the operator to copy an existing target.

Print List - This button prints the Current Target list.

3.2.3.46.3 Window Navigation

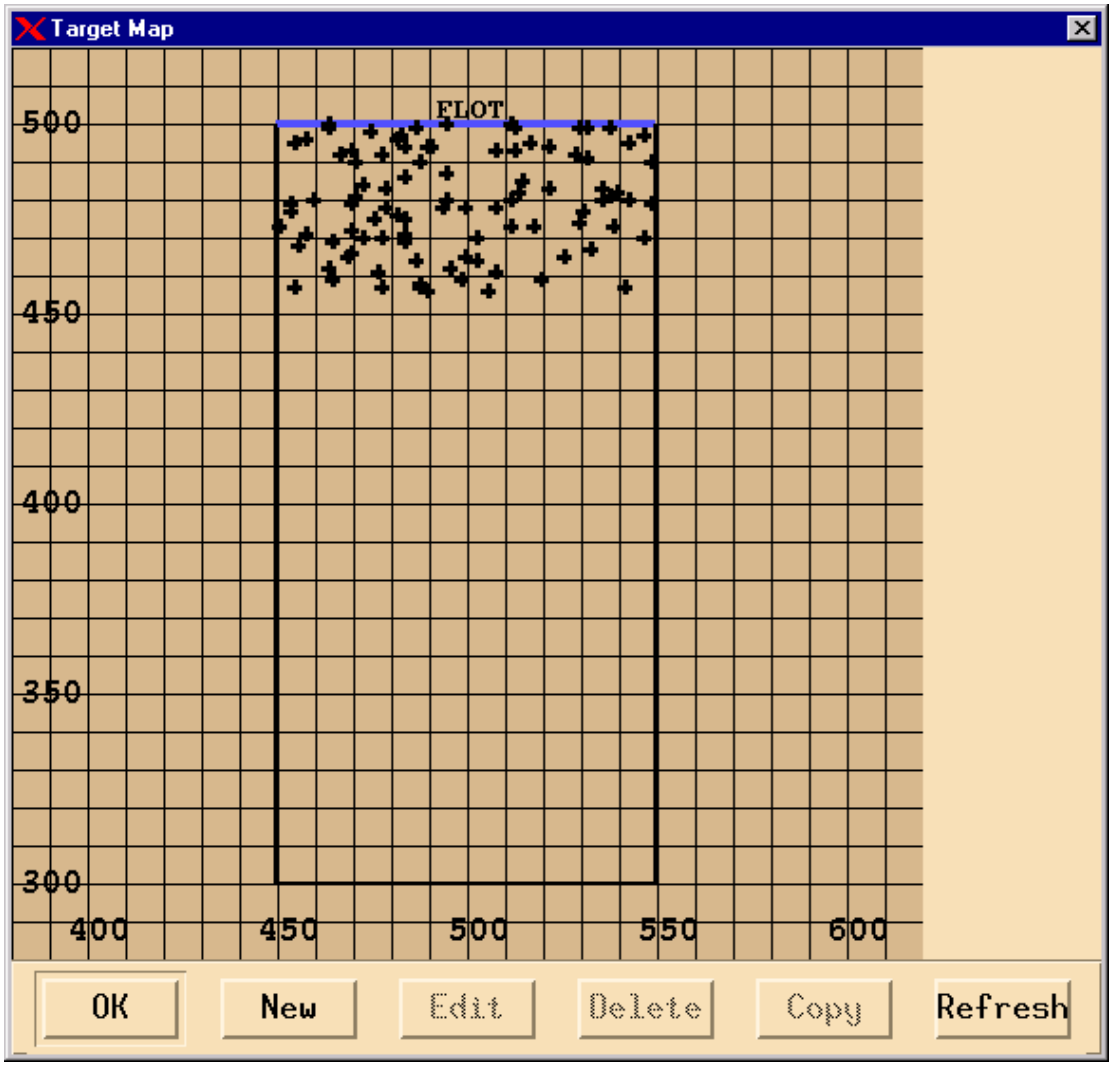
SISTIM - Select "Scenario" from the "Setup" menu.

Scenario Setup - Activate the "Show Target List" button.

3.2.3.46.4 Accessible Windows

Target Map Target Editor

3.2.3.47 TARGET MAP



3.2.3.47.1 Description

This window shows a graphical representation of the targets including FLOT orientation, width, and depth of the generated target area. The targets generated for the scenario are shown massed using parameters previously entered by the operator. (See Scenario Setup).

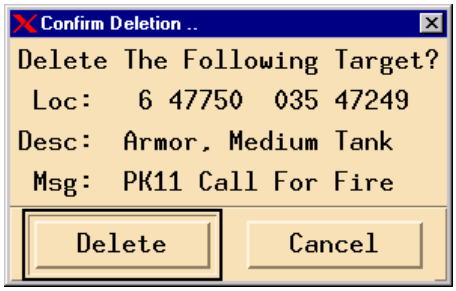
3.2.3.47.2 Fields/Parameters

OK - This button closes the Map.

New – This button allows the operator to add a new target to the map using the Target Editor Window. (See Target Editor).

Edit – This button allows the operator to edit an existing target on the map using the Target Editor Window. (See Target Editor).

Delete – This button deletes targets off the map. The confirmation window shown below will appear upon selecting this button.



Copy – This button allows the operator to copy an existing target from the map. This will also bring up the Target Editor Window (See Target Editor) allowing the operator to modify the target before copying.

Refresh - This button refreshes the map after it has been edited.

MAP FUNCTIONS

Move a target - Click and hold the middle mouse/trackball button on the desired target. Move the target to the desired location on the map and release the mouse trackball button.

Edit a Target - Double clicking on a target will open the Target Editor window. This window allows the operator to view TGT type/subtype and location. The operator can change the target location and modify the target in the database.

3.2.3.47.3 Window Navigation

SISTIM - Select "Scenario Setup" from the "Setup" menu.

Scenario Setup - Activate the "Show TGT List" button.

Target List - Activate the "Show Map" button.

-Or-

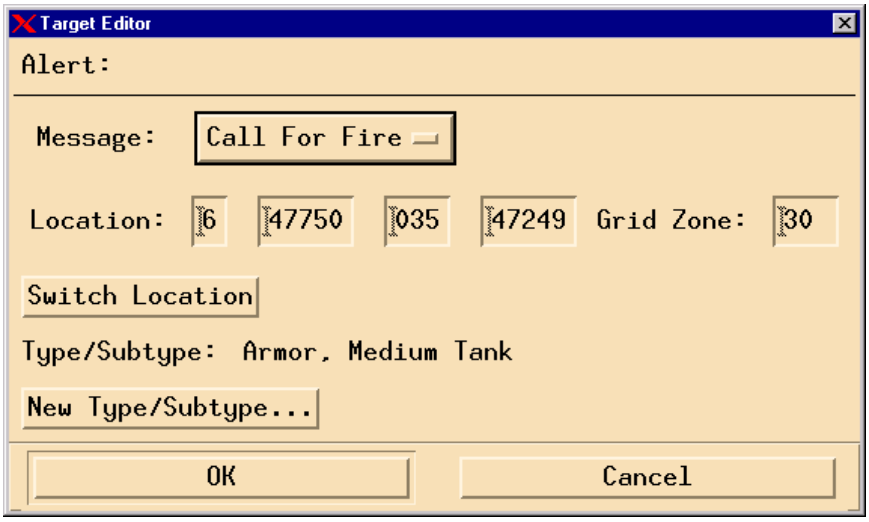
SISTIM - Select "Scenario Setup" from the "Setup" menu.

Scenario Setup - Activate the "Show Map" button.

3.2.3.47.4 Accessible Windows

Target Editor

3.2.3.48 TARGET EDITOR



3.2.3.48.1 Description

This window allows the operator to enter data for a scenario target.

3.2.3.48.2 Fields/Parameters

Message - This button allows the operator to select a message type.

Location: - Target Location in UTM entered as long coordinates (easting and northing).

Switch Location - This button switches the Target Location coordinates from UTM, long coordinates, to Lat/Long coordinates, shown below is the Target Editor Window in Lat/Long Format.

OK - This button closes the Target Editor window, saving changes to the Target's location.

Cancel - This button closes the window without saving any changes.

3.2.3.48.3 Window Navigation

SISTIM - Select "Scenario" from the "Setup" Menu.

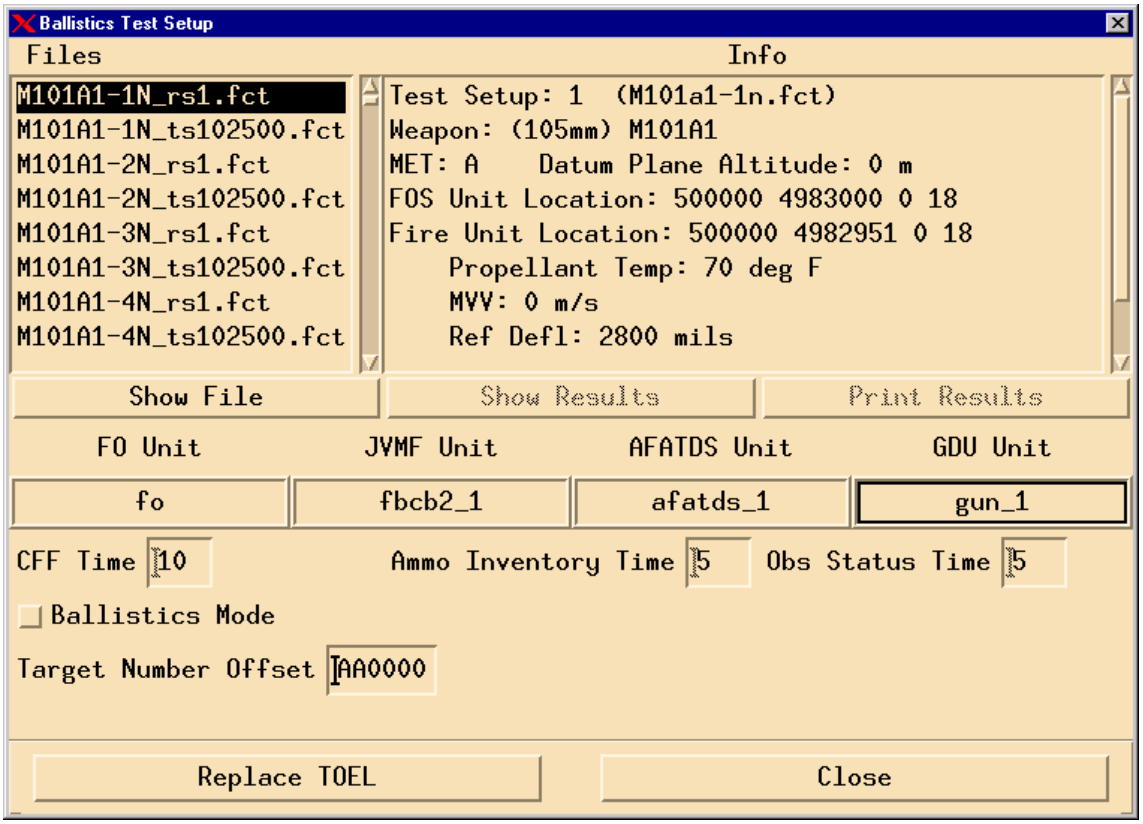
Scenario Setup - Activate the "Show Tgt List" button.

Target List - Activate the "New" or "Edit" button.

3.2.3.48.4 Accessible Windows

None

3.2.3.49 BALLISTICS TEST SETUP



3.2.3.49.1 Description

This window allows the operator to select how to handle message validation and viewing for both incoming and outgoing messages of all formats.

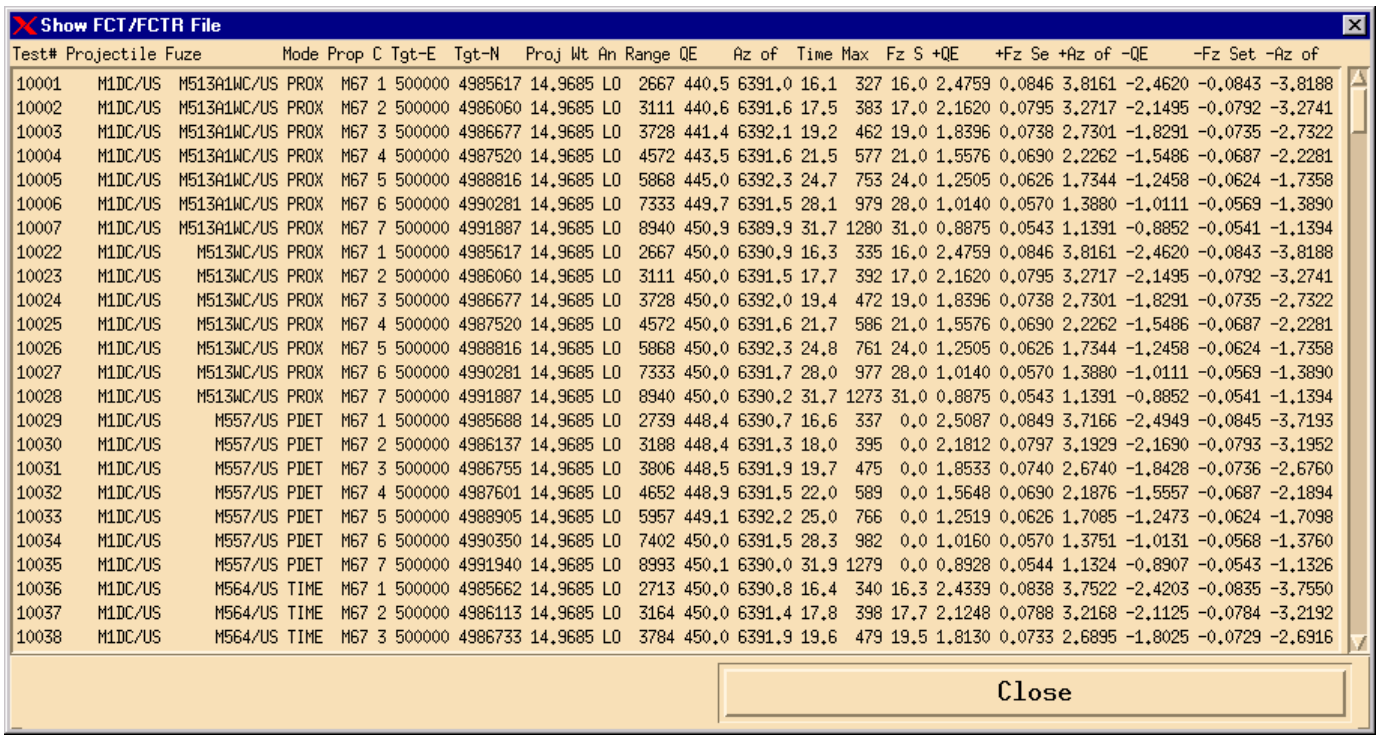
3.2.3.49.2 Fields/Parameters

Files/Info - The Files list to the right lists the FCT test files available to be loaded, and the Info Area to the left has a description of the selected FCT file.

CFF Time/Ammo Time/Status Time – These 3 fields allow the operator to choose the amount of time between Call for Fires, Inventory Messages, and Status Messages.

FO Unit/JVMF Unit/AFATDS Unit/GDU Unit - These selectable areas allow the operator to choose the appropriate units to be used in the ballistics test. When selected the following window is displayed which shows available units that can be used.

Show File - This button displays a preview window of the selected FCT file as displayed in the following window.



Test#	Projectile	Fuze	Mode	Prop	C	Tgt-E	Tgt-N	Proj Wt	An	Range	QE	Az of	Time	Max	Fz	S	+QE	+Fz	Se	+Az of	-QE	-Fz	Set	-Az of
10001	M1DC/US	M513A1WC/US	PROX	M67	1	500000	4985617	14.9685	LO	2667	440.5	6391.0	16.1	327	16.0	2.4759	0.0846	3.8161	-2.4620	-0.0843	-3.8188			
10002	M1DC/US	M513A1WC/US	PROX	M67	2	500000	4986060	14.9685	LO	3111	440.6	6391.6	17.5	383	17.0	2.1620	0.0795	3.2717	-2.1495	-0.0792	-3.2741			
10003	M1DC/US	M513A1WC/US	PROX	M67	3	500000	4986677	14.9685	LO	3728	441.4	6392.1	19.2	462	19.0	1.8396	0.0738	2.7301	-1.8291	-0.0735	-2.7322			
10004	M1DC/US	M513A1WC/US	PROX	M67	4	500000	4987520	14.9685	LO	4572	443.5	6391.6	21.5	577	21.0	1.5576	0.0690	2.2262	-1.5486	-0.0687	-2.2281			
10005	M1DC/US	M513A1WC/US	PROX	M67	5	500000	4988816	14.9685	LO	5868	445.0	6392.3	24.7	753	24.0	1.2505	0.0626	1.7344	-1.2458	-0.0624	-1.7358			
10006	M1DC/US	M513A1WC/US	PROX	M67	6	500000	4990281	14.9685	LO	7333	449.7	6391.5	28.1	979	28.0	1.0140	0.0570	1.3880	-1.0111	-0.0569	-1.3890			
10007	M1DC/US	M513A1WC/US	PROX	M67	7	500000	4991887	14.9685	LO	8940	450.9	6389.9	31.7	1280	31.0	0.8875	0.0543	1.1391	-0.8852	-0.0541	-1.1394			
10022	M1DC/US	M513WC/US	PROX	M67	1	500000	4985617	14.9685	LO	2667	450.0	6390.9	16.3	335	16.0	2.4759	0.0846	3.8161	-2.4620	-0.0843	-3.8188			
10023	M1DC/US	M513WC/US	PROX	M67	2	500000	4986060	14.9685	LO	3111	450.0	6391.5	17.7	392	17.0	2.1620	0.0795	3.2717	-2.1495	-0.0792	-3.2741			
10024	M1DC/US	M513WC/US	PROX	M67	3	500000	4986677	14.9685	LO	3728	450.0	6392.0	19.4	472	19.0	1.8396	0.0738	2.7301	-1.8291	-0.0735	-2.7322			
10025	M1DC/US	M513WC/US	PROX	M67	4	500000	4987520	14.9685	LO	4572	450.0	6391.6	21.7	586	21.0	1.5576	0.0690	2.2262	-1.5486	-0.0687	-2.2281			
10026	M1DC/US	M513WC/US	PROX	M67	5	500000	4988816	14.9685	LO	5868	450.0	6392.3	24.8	761	24.0	1.2505	0.0626	1.7344	-1.2458	-0.0624	-1.7358			
10027	M1DC/US	M513WC/US	PROX	M67	6	500000	4990281	14.9685	LO	7333	450.0	6391.7	28.0	977	28.0	1.0140	0.0570	1.3880	-1.0111	-0.0569	-1.3890			
10028	M1DC/US	M513WC/US	PROX	M67	7	500000	4991887	14.9685	LO	8940	450.0	6390.2	31.7	1273	31.0	0.8875	0.0543	1.1391	-0.8852	-0.0541	-1.1394			
10029	M1DC/US	M557/US	PDET	M67	1	500000	4985688	14.9685	LO	2739	448.4	6390.7	16.6	337	0.0	2.5087	0.0849	3.7166	-2.4949	-0.0845	-3.7193			
10030	M1DC/US	M557/US	PDET	M67	2	500000	4986137	14.9685	LO	3188	448.4	6391.3	18.0	395	0.0	2.1812	0.0797	3.1929	-2.1690	-0.0793	-3.1952			
10031	M1DC/US	M557/US	PDET	M67	3	500000	4986755	14.9685	LO	3806	448.5	6391.9	19.7	475	0.0	1.8533	0.0740	2.6740	-1.8428	-0.0736	-2.6760			
10032	M1DC/US	M557/US	PDET	M67	4	500000	4987601	14.9685	LO	4652	448.9	6391.5	22.0	589	0.0	1.5648	0.0690	2.1876	-1.5557	-0.0687	-2.1894			
10033	M1DC/US	M557/US	PDET	M67	5	500000	4988905	14.9685	LO	5957	449.1	6392.2	25.0	766	0.0	1.2519	0.0626	1.7085	-1.2473	-0.0624	-1.7098			
10034	M1DC/US	M557/US	PDET	M67	6	500000	4990350	14.9685	LO	7402	450.0	6391.5	28.3	982	0.0	1.0160	0.0570	1.3751	-1.0131	-0.0568	-1.3760			
10035	M1DC/US	M557/US	PDET	M67	7	500000	4991940	14.9685	LO	8993	450.1	6390.0	31.9	1279	0.0	0.8928	0.0544	1.1324	-0.8907	-0.0543	-1.1326			
10036	M1DC/US	M564/US	TIME	M67	1	500000	4985662	14.9685	LO	2713	450.0	6390.8	16.4	340	16.3	2.4339	0.0838	3.7522	-2.4203	-0.0835	-3.7550			
10037	M1DC/US	M564/US	TIME	M67	2	500000	4986113	14.9685	LO	3164	450.0	6391.4	17.8	398	17.7	2.1248	0.0788	3.2168	-2.1125	-0.0784	-3.2192			
10038	M1DC/US	M564/US	TIME	M67	3	500000	4986733	14.9685	LO	3784	450.0	6391.9	19.6	479	19.5	1.8130	0.0733	2.6895	-1.8025	-0.0729	-2.6916			

Show Results - This button shows the current Ballistics test results.

Print Results - This button prints the current Ballistics test results.

Replace TOEL - Activating this button will replace the current exercise TOEL with the selected FCT test file.

Close - This button closes the window and returns to the SISTIM Main window.

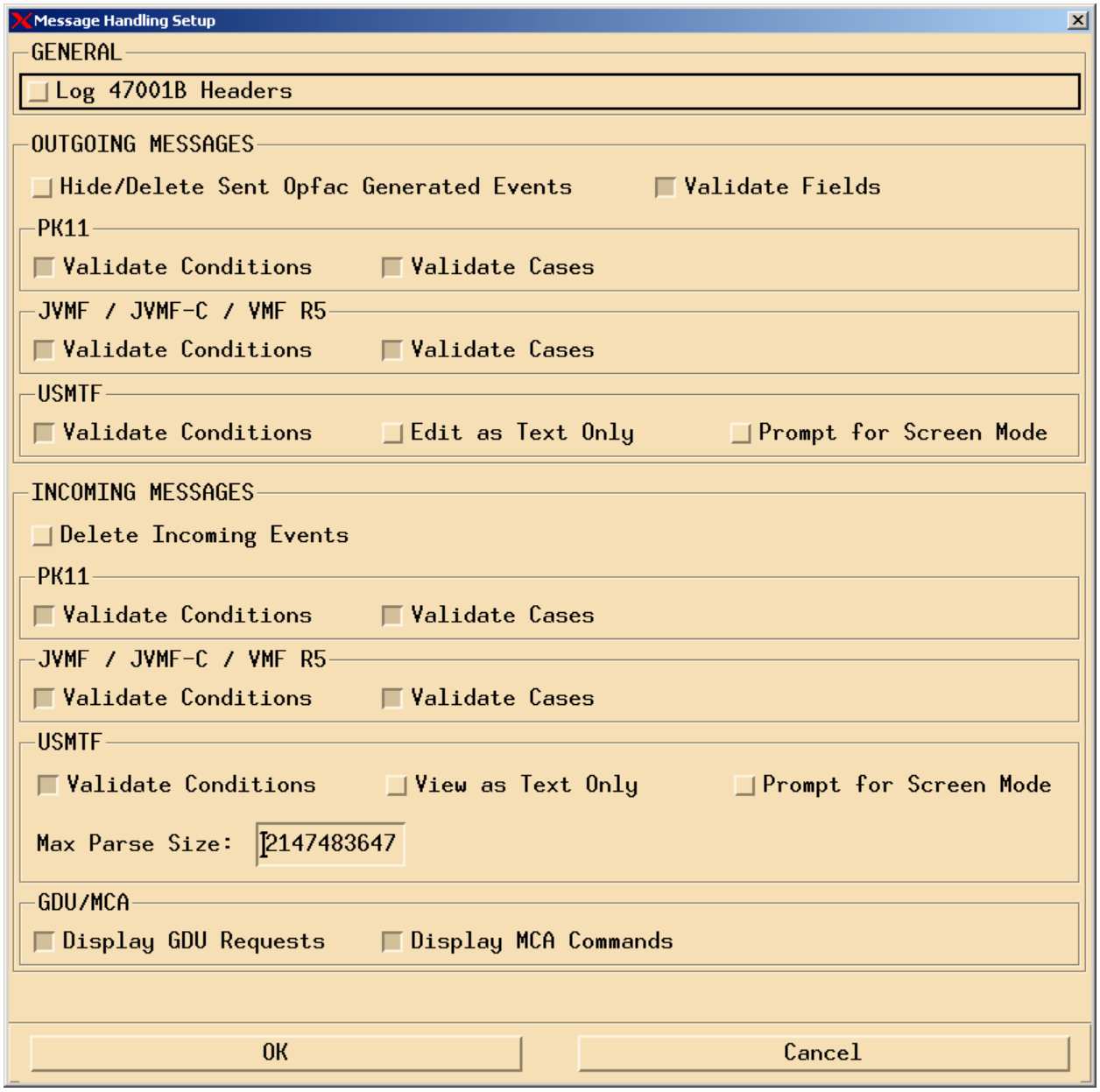
3.2.3.49.3 Window Navigation

SISTIM - Select "Ballistics" from the "Setup" Menu.

3.2.3.49.4 Accessible Windows

None

3.2.3.50 MESSAGE HANDLING SETUP



3.2.3.50.1 Description

This window allows the operator to select how to handle message validation and viewing for both incoming and outgoing messages of all formats.

3.2.3.50.2 Fields/Parameters

Log 47001B Headers - If selected 47001B headers will be written to the message log.

Outgoing Messages Hide/Delete Sent Opfac Generated Events - If this is selected those messages generated by SISTIM for simulated units will not be displayed on the Outgoing TOEL.

Incoming Messages Delete Incoming Events - When selected Incoming Events will not be displayed on the TOEL.

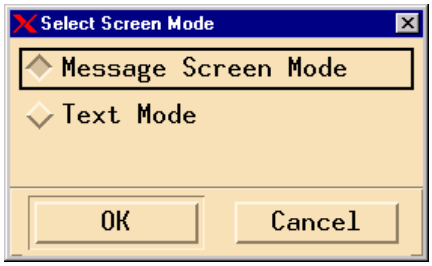
PK11 Validate Conditions/Cases - These selections for both incoming and outgoing messages allow the operator to choose whether to check messages against the PK11 conditions and cases database. Often this can be helpful to assist the operator to ensure a correct message.

JVMF / JMVF-C / VMF R Validate Conditions/Cases - These selections for both incoming and outgoing messages allow the operator to choose whether to check messages against the JVMF conditions and cases database. Often this can be helpful to assist the operator to ensure a correct message.

USMTF Validate Conditions - This selection for both incoming and outgoing messages allow the operator to choose whether to check messages against the USMTF conditions database. Often this can be helpful to assist the operator to ensure a correct message.

USMTF View as Text - This selection allows the operator to view the USMTF Messages in the formatted text only. This is often helpful to quickly view incoming messages and to allow pasting existing text messages for outgoing use.

USMTF Prompt for Screen Mode - This selection allows the operator to choose whether to view a message as text or as for each message opened. Each time a USMTF message is opened the following window is displayed. NOTE: Although the operator may choose to view USMTF messages in "Screen Mode", SISTIM by default will not display any message over 5000 bytes in screen mode. The message can still be parsed for correctness.



Max Parse Size - On some occasions SISTIM may receive a very large message which can sometimes take a lot of time to parse. Therefore SISTIM has included this feature to allow the operator to specify the largest message SISTIM will parse. Any message larger than this size received by SISTIM will not be parsed.

Display GDU Requests - This selection allows the operator to choose whether to display GDU Requests received from AFATDS. It is often a good idea to turn off this selection since AFATDS sends Requests at about 1 every 2 to 3 seconds.

Display MCA Commands - This selection allows the operator to choose whether to display MCA Commands received from AFATDS.

OK - This button closes the Message Handling Setup window.

Cancel - This button closes the window without saving any changes.

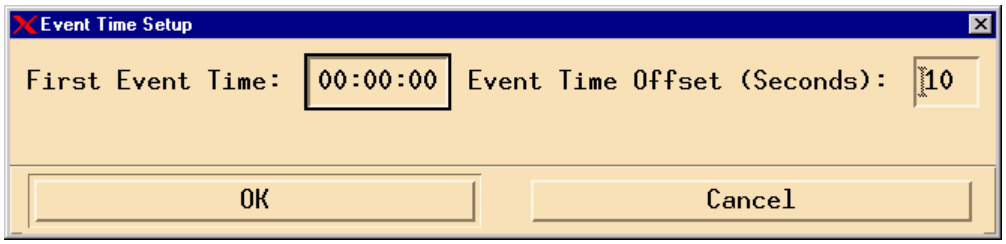
3.2.3.50.3 Window Navigation

SISTIM - Select "Message Handling" from the "Setup" Menu.

3.2.3.50.4 Accessible Windows

None

3.2.3.51 EVENT TIMES



3.2.3.51.1 Description

This window allows the operator to modify the times of all events in the current TOEL. By choosing a start time and offset and selecting OK the TOEL will be ordered according to those parameters.

3.2.3.51.2 Fields/Parameters

First Event Time - This is the time at which the first Event will be sent

Event Time Offset - All subsequent events will have this offset used to calculate its transmission time.

OK - This button closes the Event Times window and will modify the TOEL.

Cancel - This button closes the window without saving any changes.

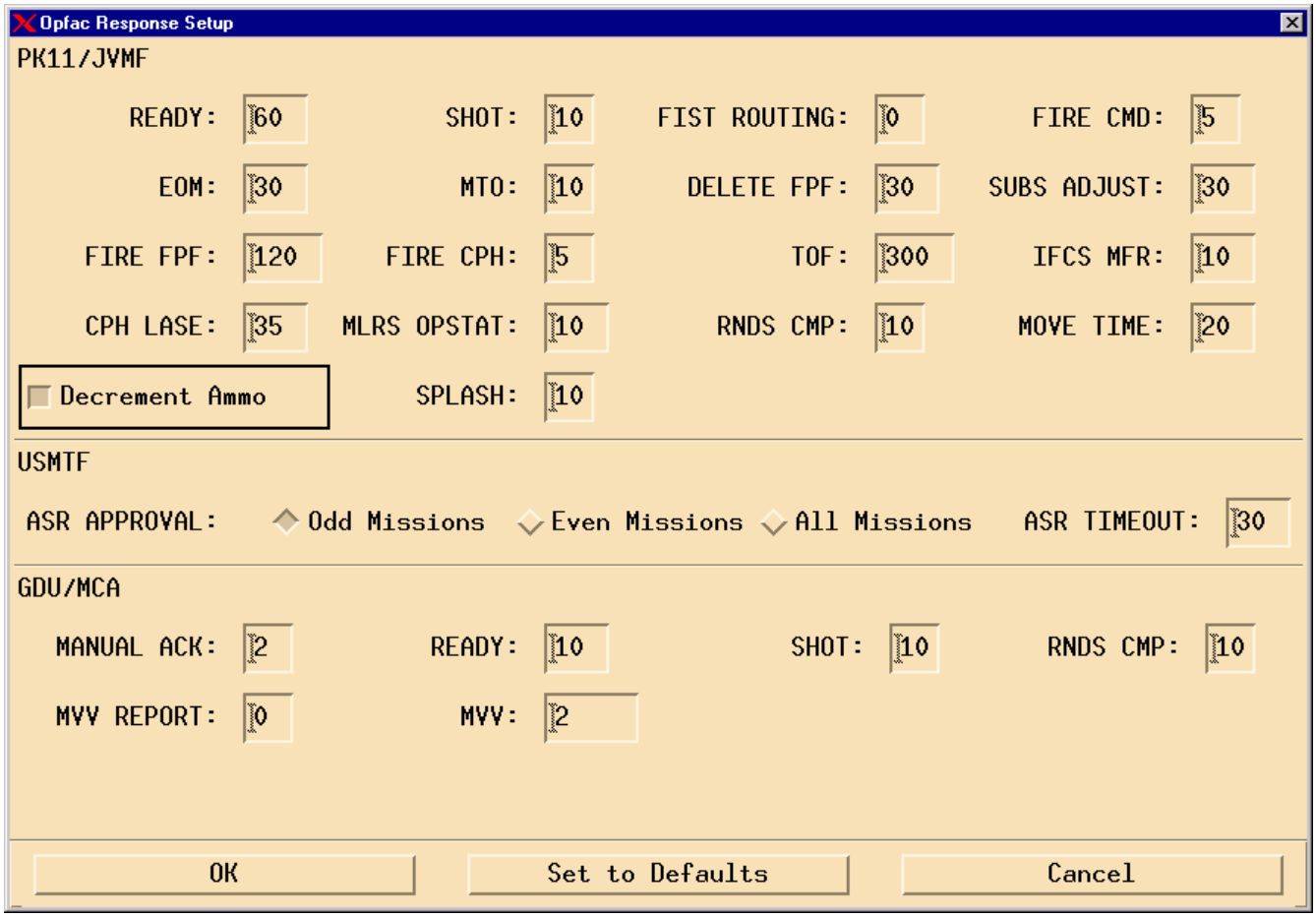
3.2.3.51.3 Window Navigation

SISTIM - Select "Event Times" from the "Setup" Menu.

3.2.3.51.4 Accessible Windows

None

3.2.3.52 OPFAC RESPONSES



3.2.3.52.1 Description

This window allows the operator to view and modify the time that SISTIM will delay before sending out an OPFAC generated response for the events listed on the window. The ASR Approval radio buttons allow the operator to specify whether ASR missions with odd, even, or all request numbers will be approved.

3.2.3.52.2 Fields/Parameters

Field - If the operator clicks inside of any parameter field a more detailed description of that message will be displayed.

Set to Defaults - This button returns all values back to the default.

OK - This button closes the Opfac Response Times window.

Cancel - This button closes the window without saving any changes.

3.2.3.52.3 Window Navigation

SISTIM - Select "Opfac Response Times" from the "Setup" Menu.

3.2.3.52.4 Accessible Windows

None

3.2.3.53 MISSION LOGGING SETUP

3.2.3.53.1 Description

This window allows the operator to log to a file all the messages generated during Opfac Logic. Once the messages are logged they may then be sorted by various unique characteristics.

3.2.3.53.2 Fields/Parameters

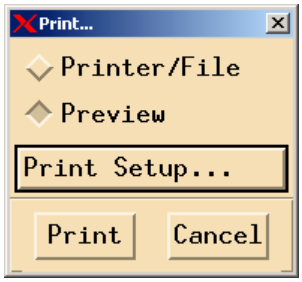
Perform Mission Logging – This button allows the operator to turn Mission Logging On/Off.

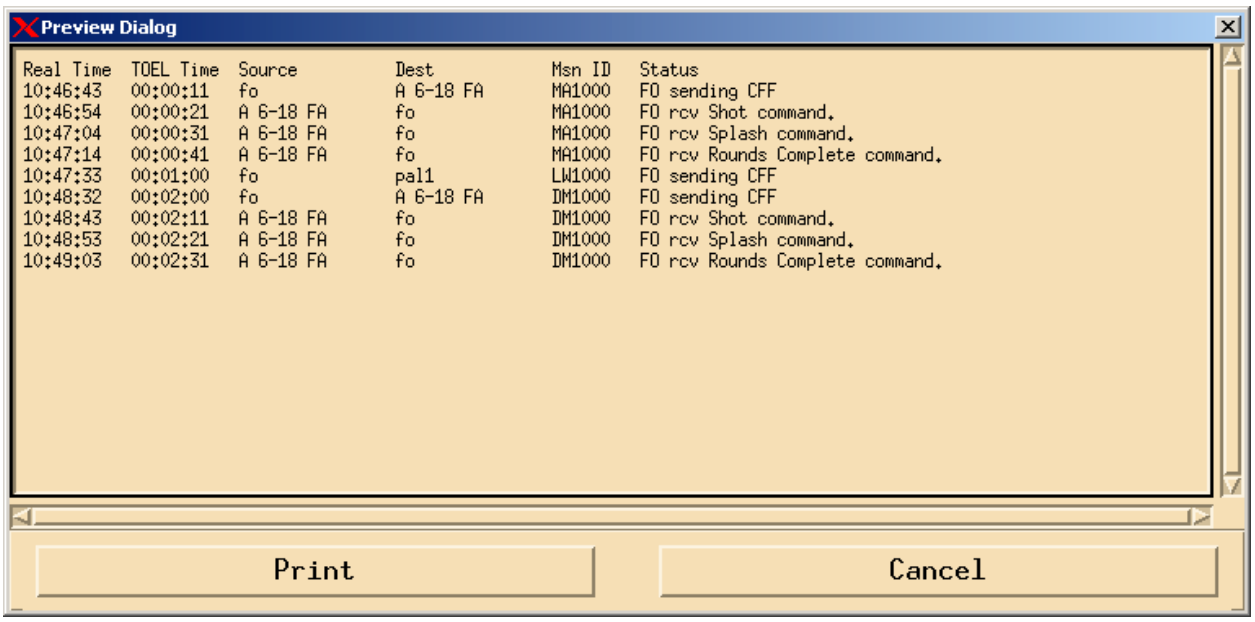
Mission Log File – This field allows the operator to specify a Log Name.

Sort by – This pull-down allows the operator to select a method of sorting. The options are: Mission ID, Source Unit, Dest Unit, Real Time, and TOEL Time.

OK - This button saves the Mission Logging Setup window setting and closes the window.

Generate Report – This button allows the operator to select to either Print directly to a file or printer or preview the log generated.





Reset Log – This button allows the operator to reset or clear the Message Log.

Cancel - This button closes the window without saving any changes.

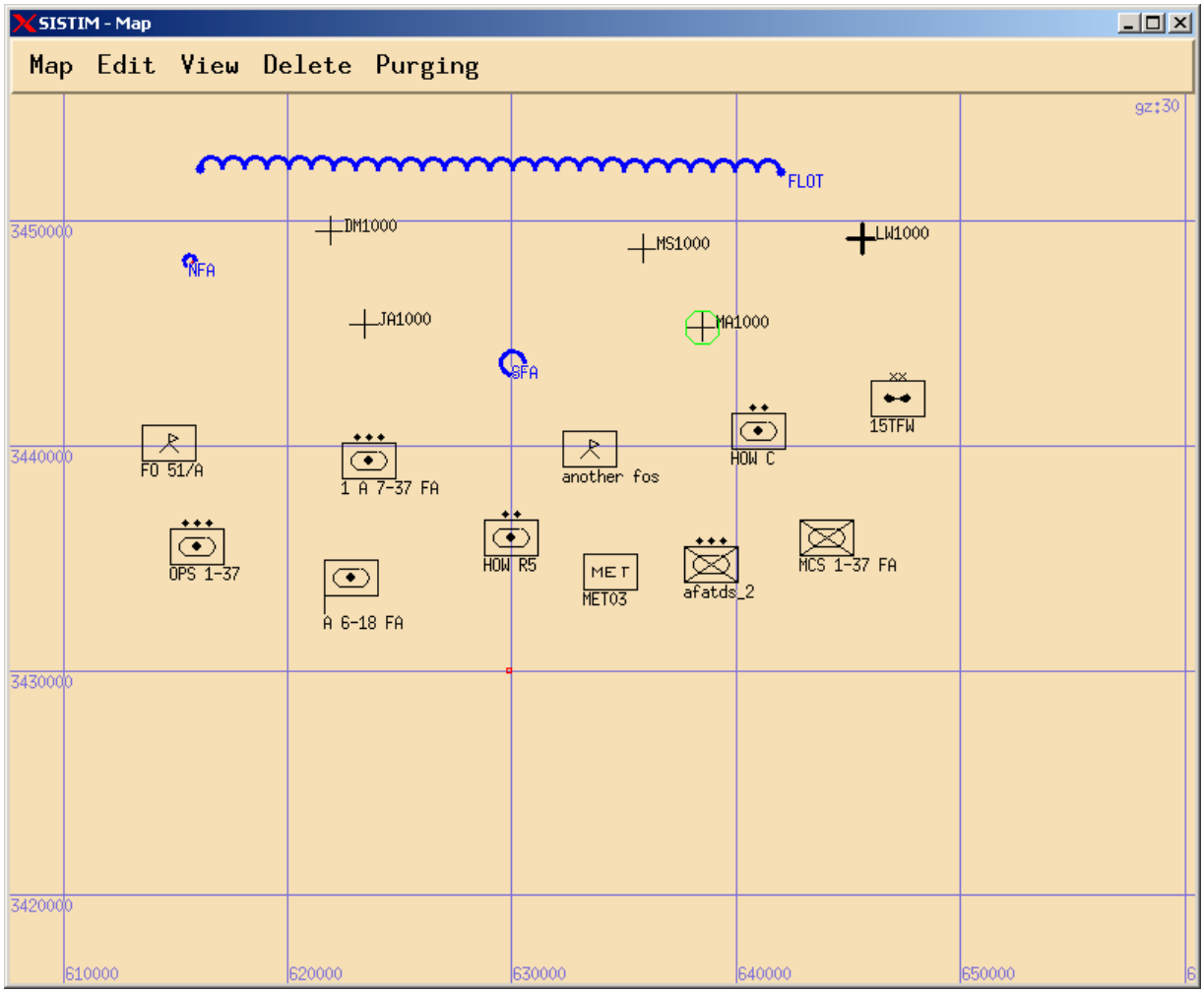
3.2.3.53.3 Window Navigation

SISTIM - Select "Mission Logging…" from the "Setup" Menu.

3.2.3.53.4 Accessible Windows

None

3.2.3.54 MAP



3.2.3.54.1 Description

This window shows a graphical representation of the units, targets, and geometries created by the user as well as received from AFATDS. The elements generated are automatically placed on the map unless otherwise specified. Map elements may be manipulated through the map or through the Event List.

3.2.3.54.2 Manuevers/Hot Keys

Left Mouse Button – Selecting the left mouse button while operating within the map will simply relocate the focus of your selection indicator (the small red circle). The selection indicator allows you to highlight elements on the map.

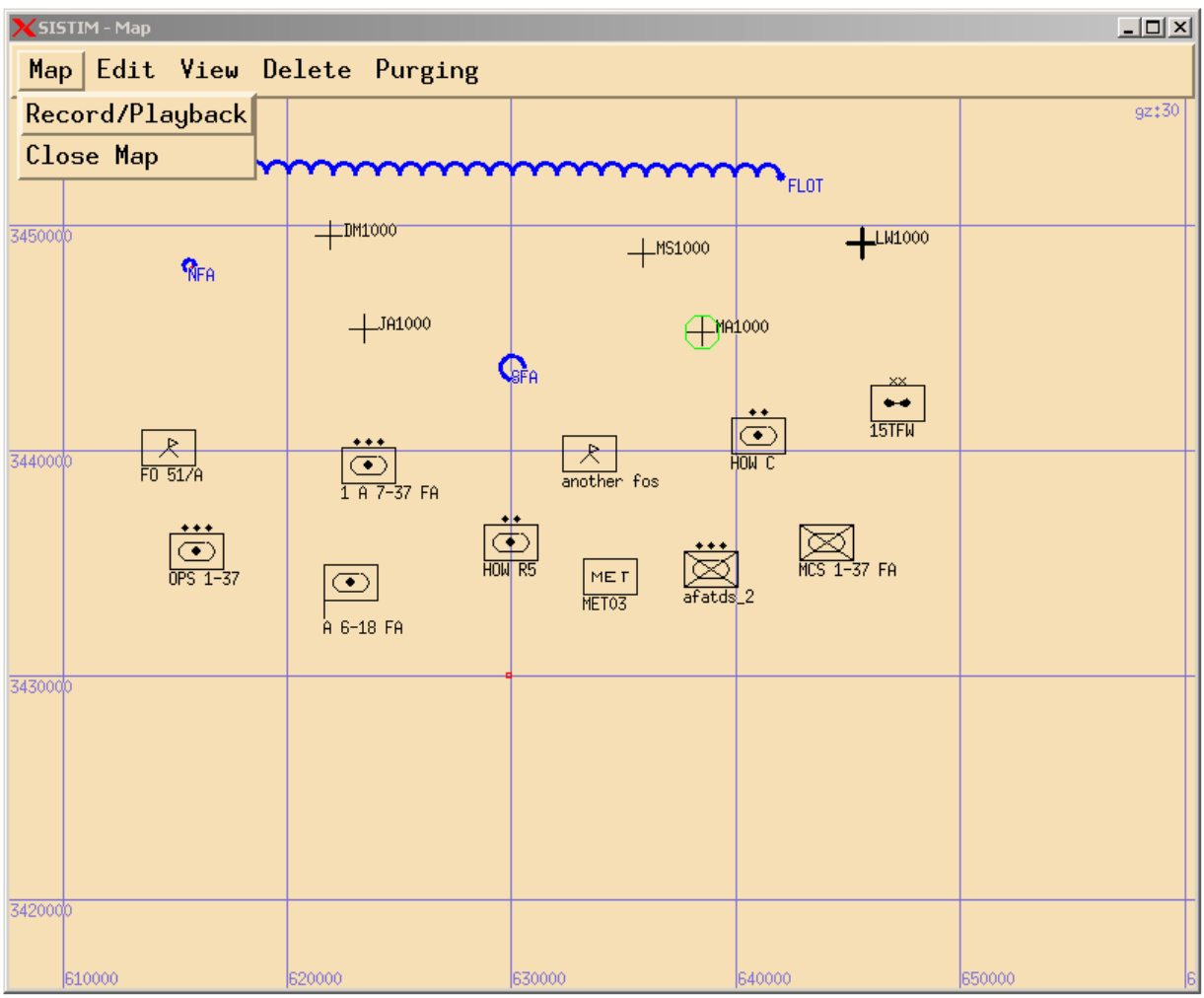
Middle Mouse Button – Depressing (and holding down) the middle mouse button allows you to drag the map.

Right Mouse Button – The right mouse button is only effective if an element on the map has already been selected (See Left Mouse Button). Once an element has been selected from the map it can be Edited and Deleted from the map via a pop-up that is activated by depressing the right mouse button.

Shift+Right Mouse Button – Depressing both the shift key and the right mouse button allows the operator to grab a location off the map. This location can either be used to center the map or to specify a target or unit location.

Shift+Left Mouse Button – Depressing both the shift key and the left mouse button allows the operator to paste a location taken from the map into its respective field (See Shift+Right Mouse Button).

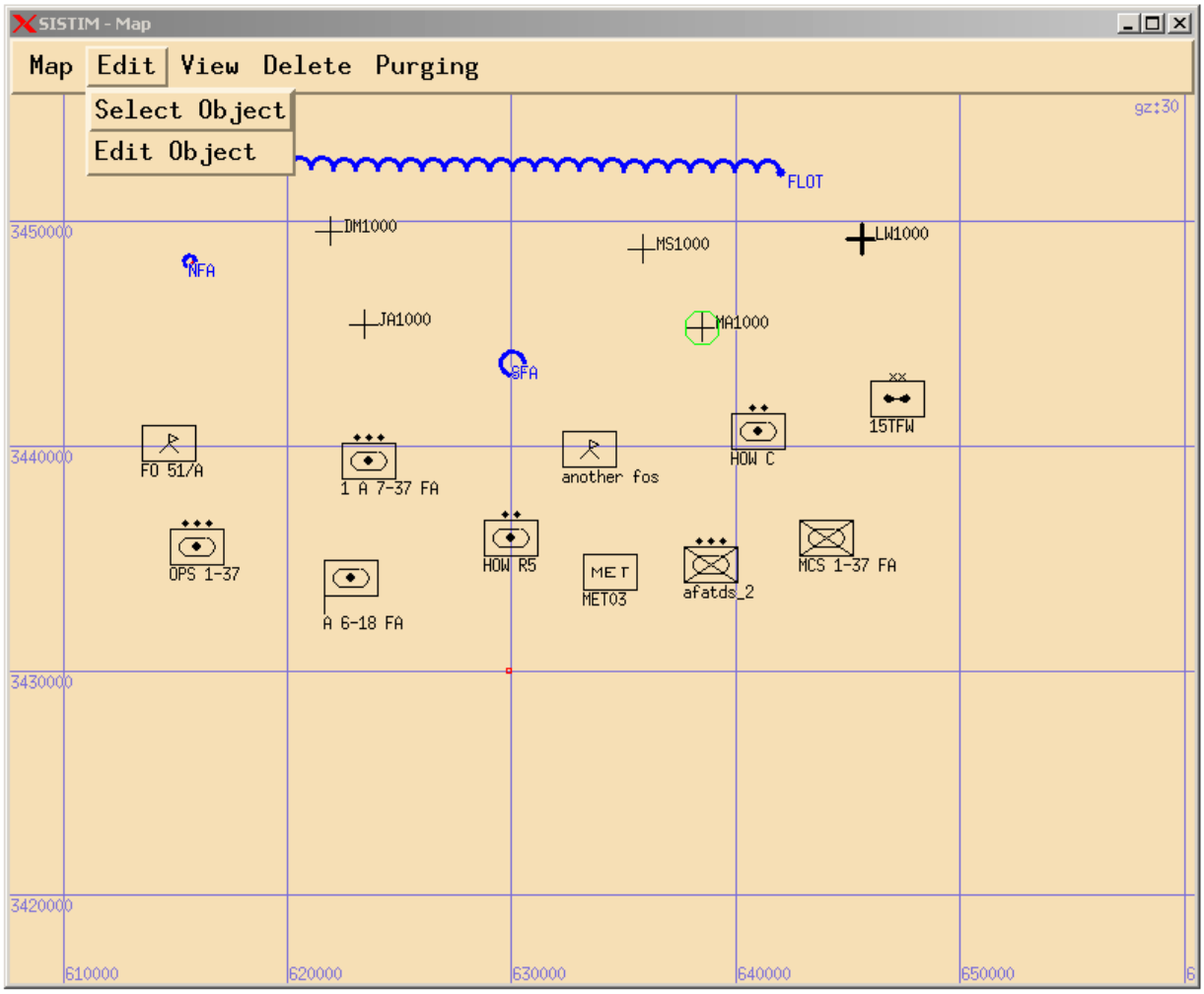
MAP MENU



Record/Playback – This option displays a Record/Playback Controller dialog. (See Record/Playback).

Close Map – This option will close the Map window.

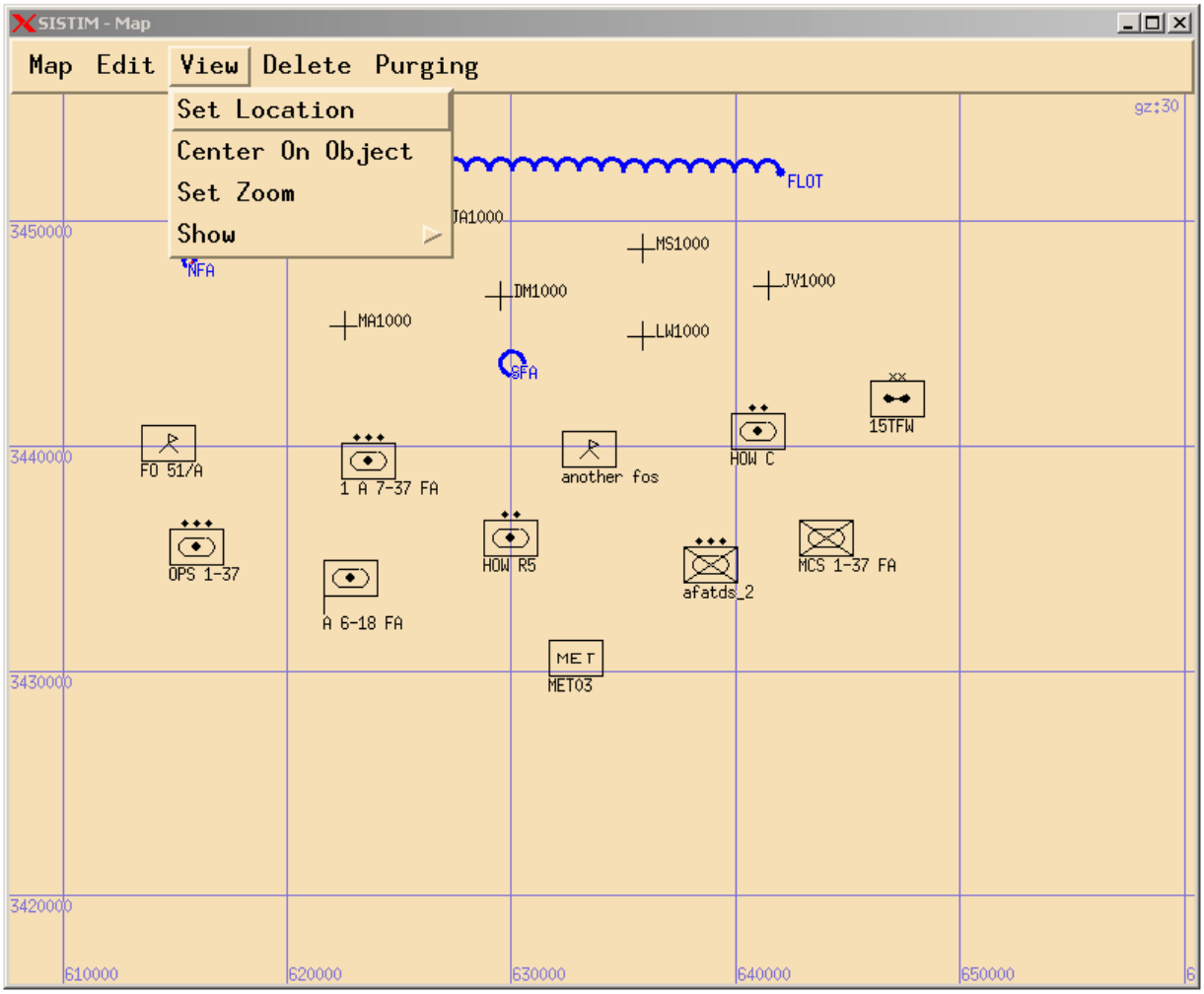
EDIT MENU



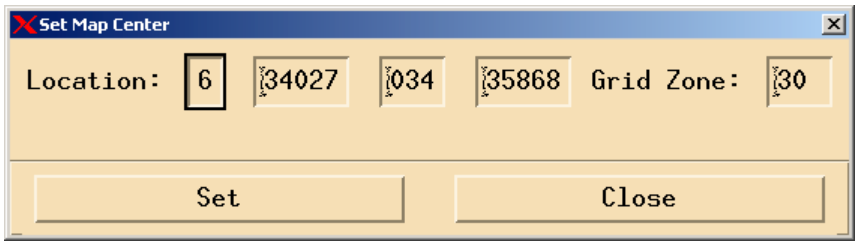
Select Object – This option displays a window that allows the operator to select an element from a list. Once an element is selected it will be highlighted on the map.

Edit Object – This option allows the operator the edit the element hightlighed on the map.

VIEW MENU

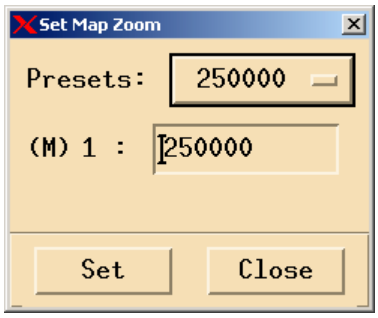


Set Location – This option displays the following dialog so that the operator may specify the center of the map.

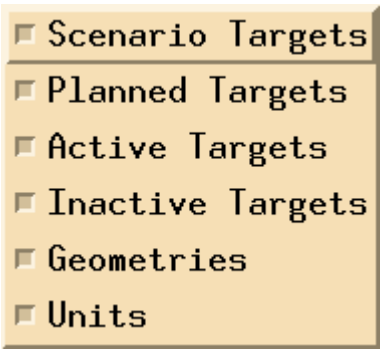


Center On Object – This option allows the operator the center the map according to the location of the highlighted element.

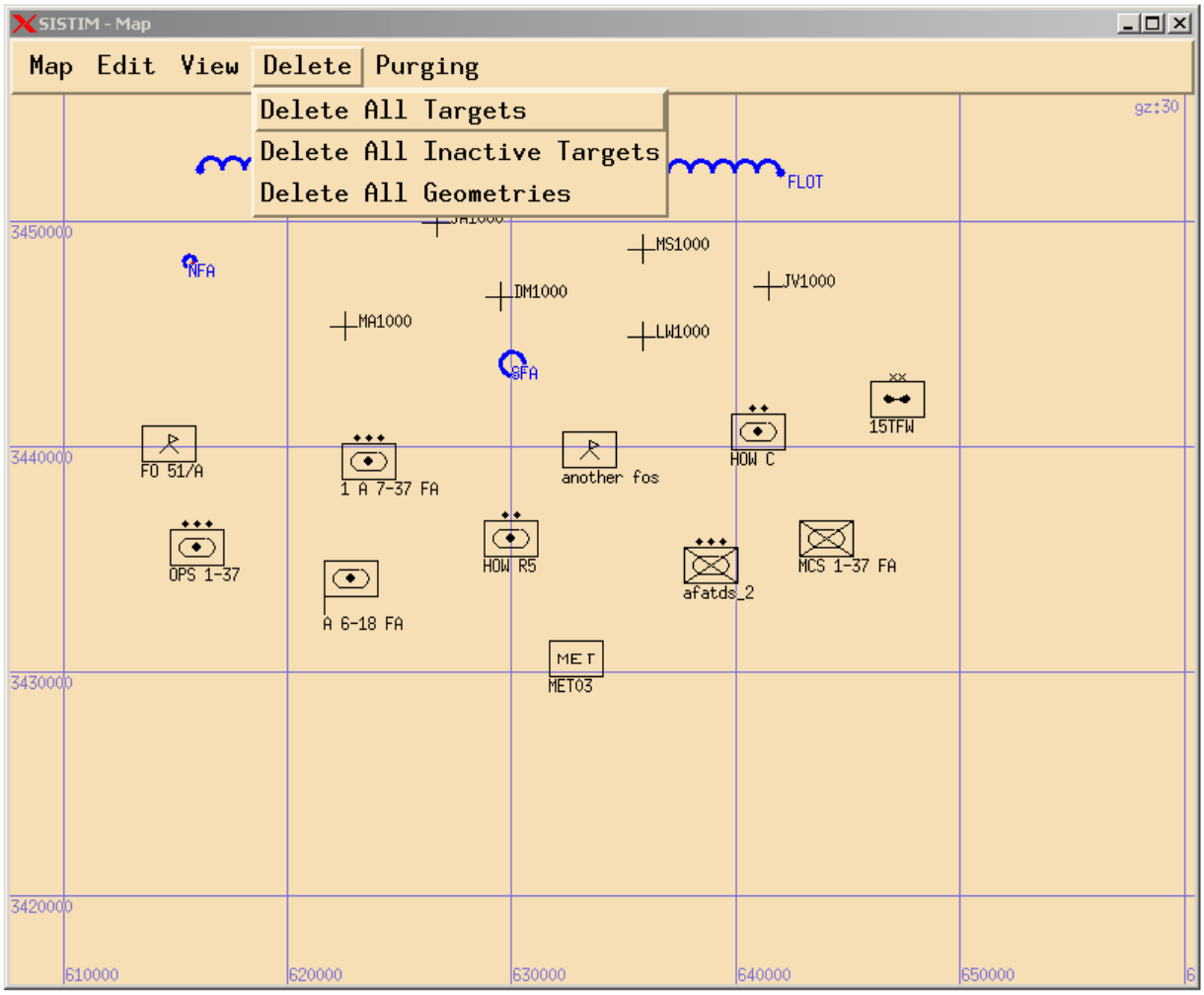
Set Zoom – This option provides a pop-up menu for the operator that allows the operator to set the resolution of the map by zooming in or out from the map.



Show – This options provides a pull-down that displays the various layers that can be displayed on the map.



DELETE MENU

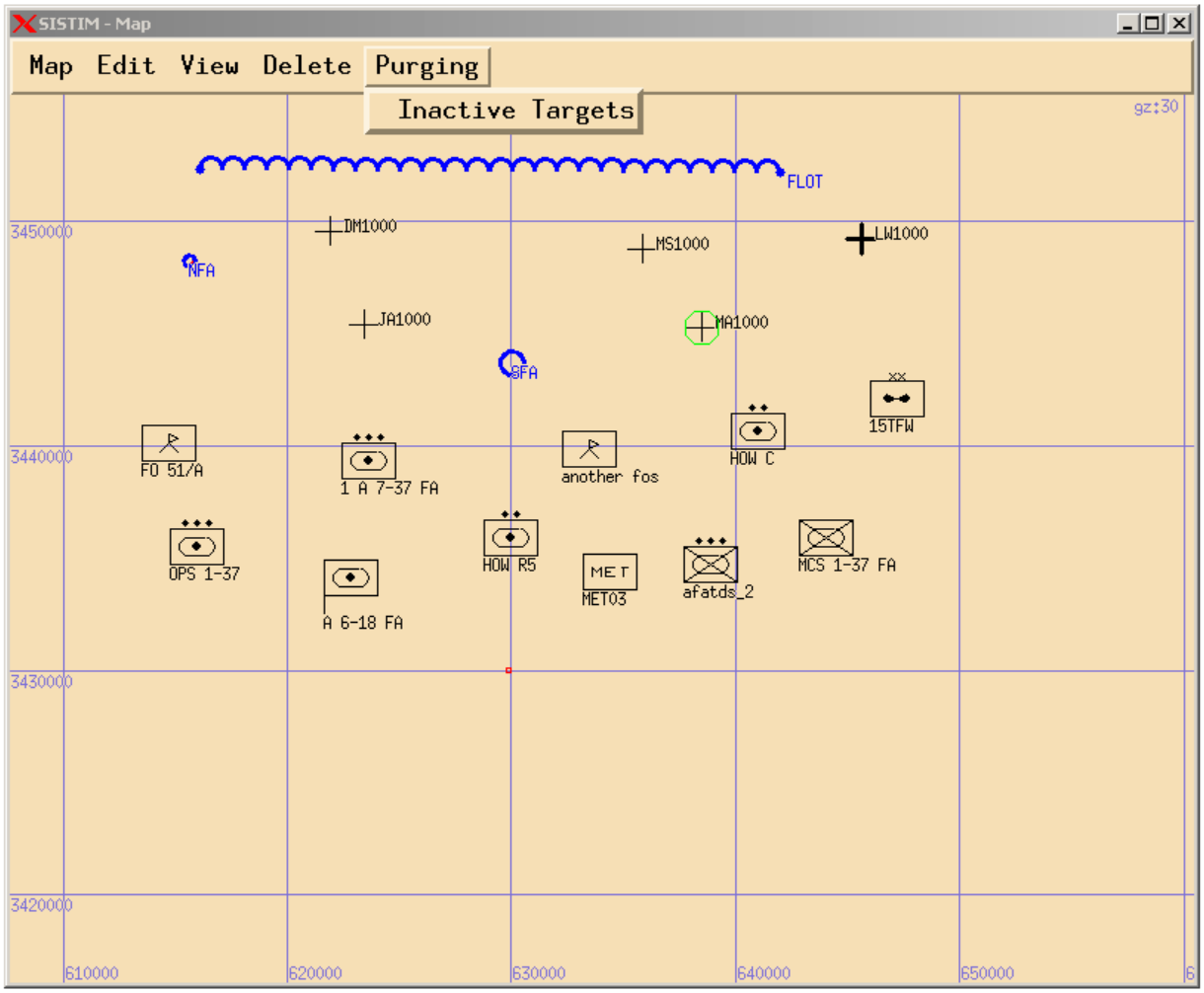


Delete All Targets – This option allows the operator to delete all targets from the map.

Delete All Inactive Tagets – This option allows the operator to delete inactive targets only, from the map.

Delete All Geometries – This option allows the operator to delete all geometries from the map.

Purging



Inactive Targets – This option will the operator the option to purge targets from the map as they become inactive.

3.2.3.54.3 Window Navigation

SISTIM – Select “Open Map” from the “Map” menu.

3.2.3.54.4 Accessible Windows

Record / Playback

Select Object

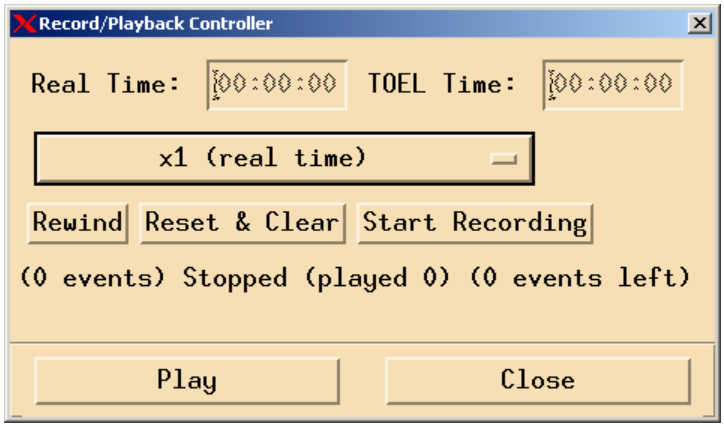
Unit Setup

Generic Message Templates

Set Map

Set Zoom

3.2.3.55 RECORD/PLAYBACK CONTROLLER



3.2.3.55.1 Description

This window allows the operator to record a sequence of events from the map as well as play them back at various speeds. The Record/Playback feature will capture geometry, unit, and target creation as well as moves/updates.

3.2.3.55.2 Fields/Parameters

Real Time – This field represents the “real” time of the events reproduced.

TOEL Time – This field represents the TOEL time of the events reproduced.

Playback Scale Pulldown – This pull-down allows the operator to specify the rate at which the events are played back.

Rewind – This button allows the operator to rewind the events.

Reset & Clear – This button will clear the Record/Playback buffer.

Start Recording – This button must be depressed in order to begin recording.

Stopped (Events, Played, Events Left) –Play – There fields track the progress of the playback.

Play - This button will play as well as pause the playback sequence.

Close – This option will close the Record/Playback Controller.

3.2.3.55.3 Window Navigation

SISTIM Map – Select “Record/Playback” from the “Map” menu.

3.2.3.55.4 Accessible Windows

None

3.2.3.56 SELECT MAP OBJECT

3.2.3.56.1 Description

This window displays all the targets, units and geometries displayed on the map. Through the use of this window the operator has the capability to highlight and center the map around the selected map element.

3.2.3.56.2 Field/Parameters

Center – This option will allow you to center the map according to the highlighted element.

Close – This option will close the Select Map Object.

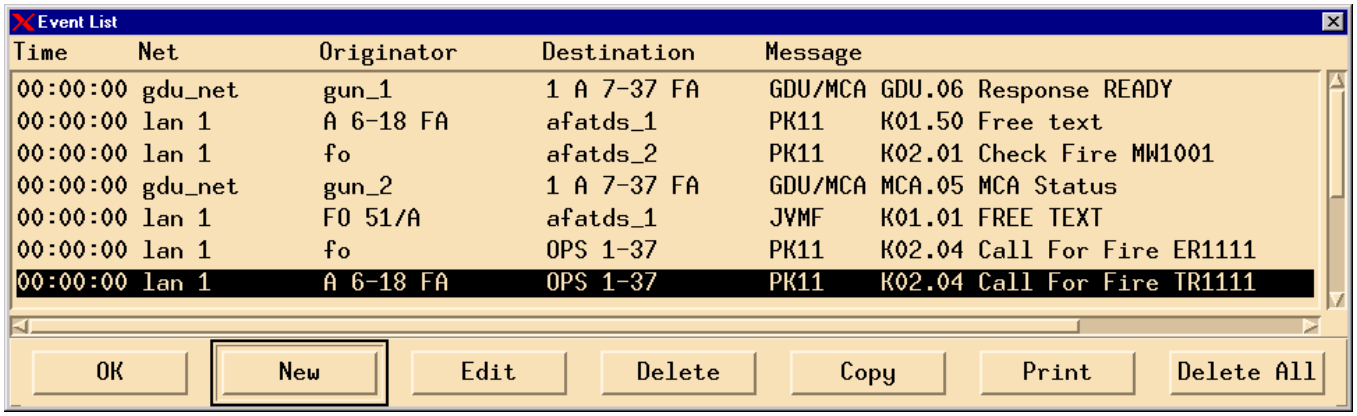
3.2.3.56.3 Window Navigation

SISTIM Map – Select “Select Object” from the “Edit” menu.

3.2.3.56.4 Accessible Windows

None

3.2.3.57 EVENT LIST



3.2.3.57.1 Description

This window allows the operator to edit the event list that has been generated for the scenario. This window also allows the operator to add messages.

3.2.3.57.2 Fields/Parameters

Time/Net/Originator/Destination/Message - This list shows the messages that have been generated for the current scenario. The list shows the scenario time that the message will be transmitted, on which net it will be transmitted, the originating unit of the message, the destination unit, and a brief synopsis of the message type and message name.

OK - This button closes the Event List window. All changes made on the window will be saved.

New - This button allows the operator to create new events for the scenario. When this button is activated a window is displayed (See Message Protocol Available) that allows the operator to choose the protocol for the new message.

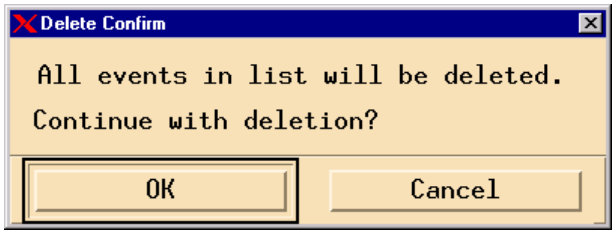
Edit - This button allows the operator to edit an event that currently exists in the Event List (Note: a message must be highlighted before this button can be activated). When this button is activated, the appropriate window is displayed depending on the message type and protocol. (See the appropriate section for the type of message; PK11 Message Template, JVMF Message Template, USMTF Message Template, GDU/MCA Message Template, or Appendix E Generic Messages). A double click action defaults to this Edit operation.

Delete - This button deletes the highlighted event from the Event List (Note: a message must be highlighted before this button can be activated). When the message has been deleted, the event is removed from the Event List.

Copy - This button allows the operator to copy an event that currently exists in the Event List (Note: a message must be highlighted before this button can be activated). When this button is activated, a copy of the highlighted message is added to the Event List. The copy of the message is added to the Event List in the position immediately following the highlighted message.

Print - This button sends the highlighted event to the printer.

Delete All - This button allows the operator to remove all of the events from the current Event List for the current exercise all. When this button is selected the operator is presented with the following confirmation window.



3.2.3.57.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

-Or-

SISTIM - Select "Scenario" from the "Setup" menu

Scenario Setup - Activate the "Build Event List" button.

3.2.3.57.4 Accessible Windows

Message Protocol Available PK11 Message Template

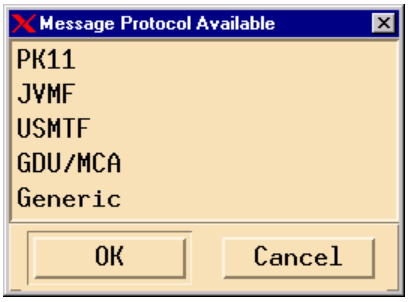
JVMF Message Template

USMTF Message Template

GDU/MCA Message Template

Generic Messages (Appendix E)

3.2.3.58 MESSAGE PROTOCOL AVAILABLE



3.2.3.58.1 Description

This window allows the operator to select the protocol desired for the Event List.

3.2.3.58.2 Fields/Parameters

OK - This button closes the Protocol Available List window and displays the Available Message List window associated with the protocol type highlighted. (See the associated sections for each available message type; Available Message List, JVMF Available Message List, USMTF Available Message List, GDU/MCA Available Message List, or Appendix E Generic Messages).

Close- This button closes the Message Protocol Available List window.

3.2.3.58.3 Window Navigation

SISTIM - Select "Edit Event List" from the "TOEL" menu.

Event List - Activate the "New" button.

-Or-

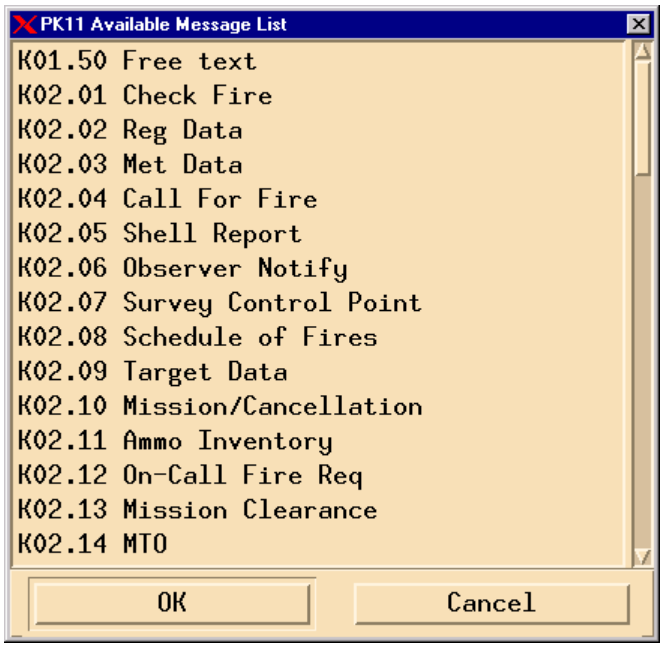
SISTIM - Select "Run Exercise" from the "TOEL" menu

Exercise Controller - Select “New” from the “Outgoing” menu.

3.2.3.58.4 Accessible Windows

PK11 Available Message List JVMF Available Message List USMTF Available Message List GDU/MCA Available Message List Generic Available Message List

3.2.3.59 PK11 AVAILABLE MESSAGE LIST



3.2.3.59.1 Description

This window displays a list of the PK11 types of messages available for the operator to enter into the Event List.

3.2.3.59.2 Fields/Parameters

OK - This button closes the PK11 Available Message List window and displays the message template (See for instructions on entering a new PK11 message) associated with the message type highlighted. The double click action defaults to this edit operation.

Close - This button closes the Available Messages window.

3.2.3.59.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "New" button.

Message Protocol Available - Activate the "OK" button with "PK11" selected.

-Or-

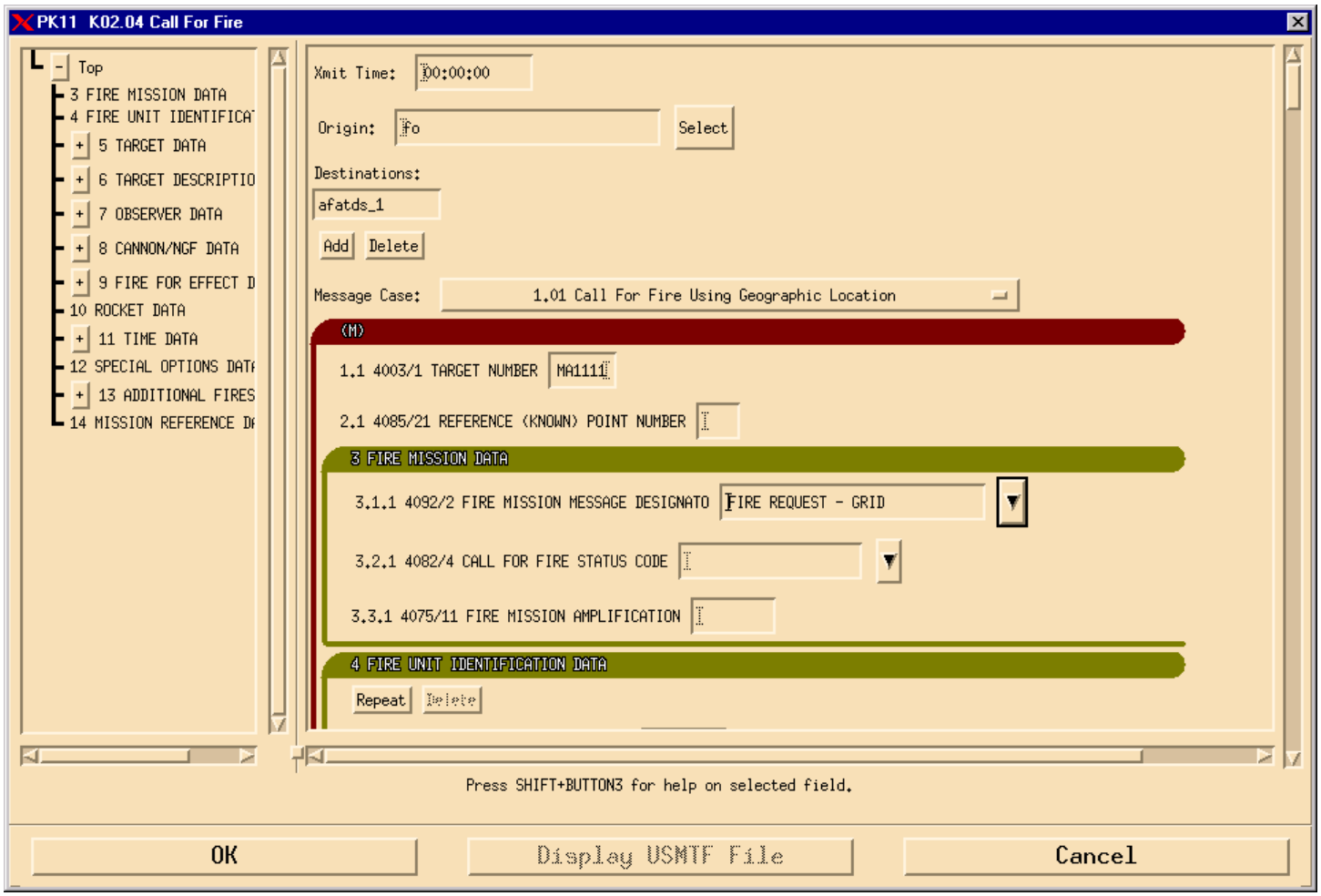
SISTIM - Select "Run Exercise" from the "TOEL" menu

Exercise Controller - Select “New-PK11” from the “Outgoing” menu.

3.2.3.59.4 Accessible Windows

PK11 Message Template

3.2.3.60 PK11 MESSAGE TEMPLATE



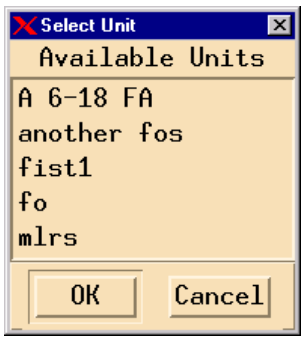
3.2.360.1 Description

This section is designed to give an example of how to setup a PK11 message. Common fields are described below, further information on valid data can be obtained from the PK11 Message Specification or by activating the help feature inside of each field. Most PK11 messages continue beyond the visible window, therefore be sure to use the scroll bar for additional fields. The PK11 interface will display an error message if the operator attempts to activate the "OK" button with an invalid message.

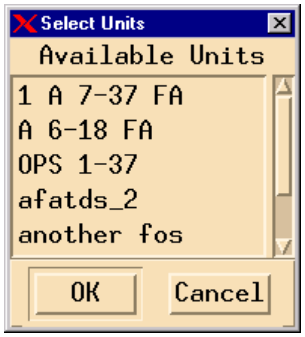
3.2.3.60.2 Fields/Parameters

Xmit Time - This field shows the time (hh:mm:ss format) at which the message will be transmitted to the destination unit.

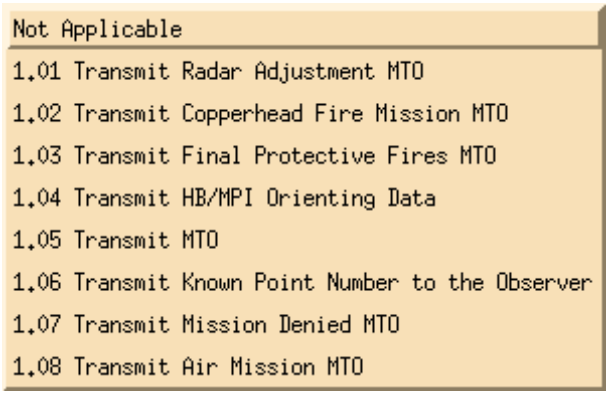
Origin - This field allows the operator to select the transmitting unit for the message. By selecting the "Select" button the Select Units window below is displayed that prompts the operator to select from a list of available units.



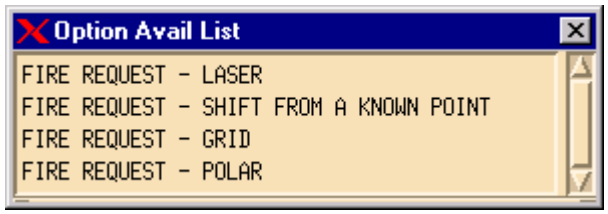
Destinations - This field allows the operator to select the unit/units that will receive the message. By selecting the "Add" button the Select Units window below is displayed that prompts the operator to select from a list of available units. Selecting the "Delete" button will remove a highlighted unit from the destination list.

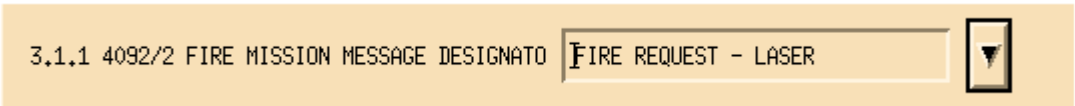


Message Case - The PK11 message specification contains many different cases, which allows one message to accomplish several different meanings. Therefore SISTIM has included the Message Case feature to assist an operator in creating a message based on one specific case. By choosing the desired case SISTIM will assist the operator by specifying the fields that should and should not be used.



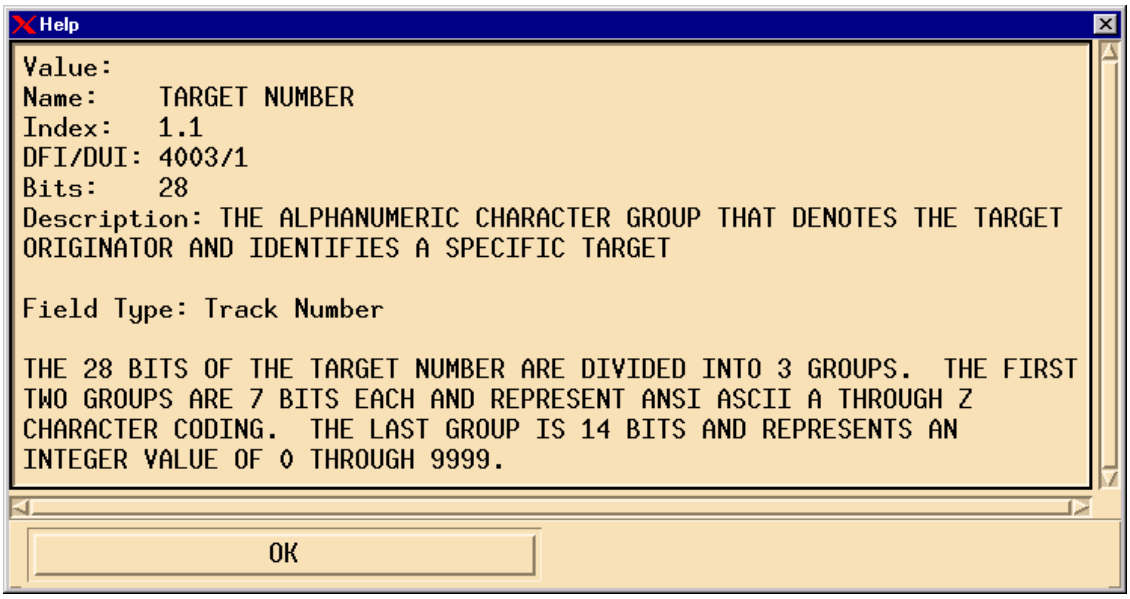
Option List Example - Several fields in PK11 messages contain pull down buttons, which activate a window that will allow the operator to choose a selection from a list. In this type of selection once the operator mouse+clicks on the desired choice the window closes and that value is entered into the field.





Coordinate Example - Several PK11 messages contain a location or coordinate field. In order to assist in entering location, the operator can activate the LAT/LONG Setup window by "BUTTON3" clicking on the location field.

Help - In order to assist the operator with entering proper data into messages the message templates have a help interface. By activating "SHIFT + BUTTON3" on a field, a window will be displayed which shows the valid data for that field.



3.2.3.60.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "New" button.

Message Protocol Available - Activate the "OK" button with "PK11" selected.

PK11 Message Available List - Activate the "OK" button with the desired message selected.

-Or-

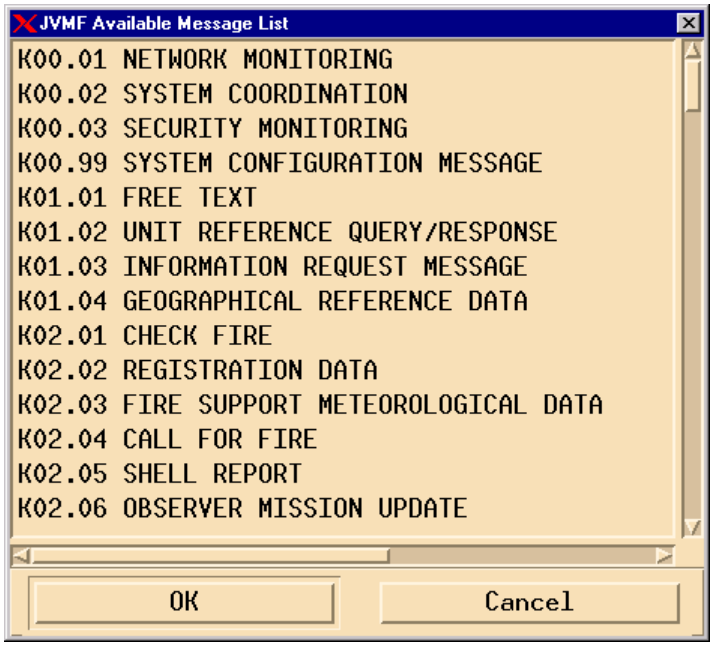
SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "Edit" button with a "PK11" message selected.

3.2.3.60.4 Accessible Windows

LAT/LONG Setup

3.2.3.61 JVMF AVAILABLE MESSAGE LIST



3.2.3.61.1 Description

This window displays a list of the JVMF types of messages available for the operator to enter into the Event List.

3.2.3.61.2 Fields/Parameters

OK - This button closes the JVMF Available Message List window and displays the message template associated with the message type highlighted. The double click action defaults to this edit operation.

Close- This button closes the Available Messages window.

3.2.3.61.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "New" button.

Message Protocol Available - Activate the "OK" button with "JVMF" selected.

-Or-

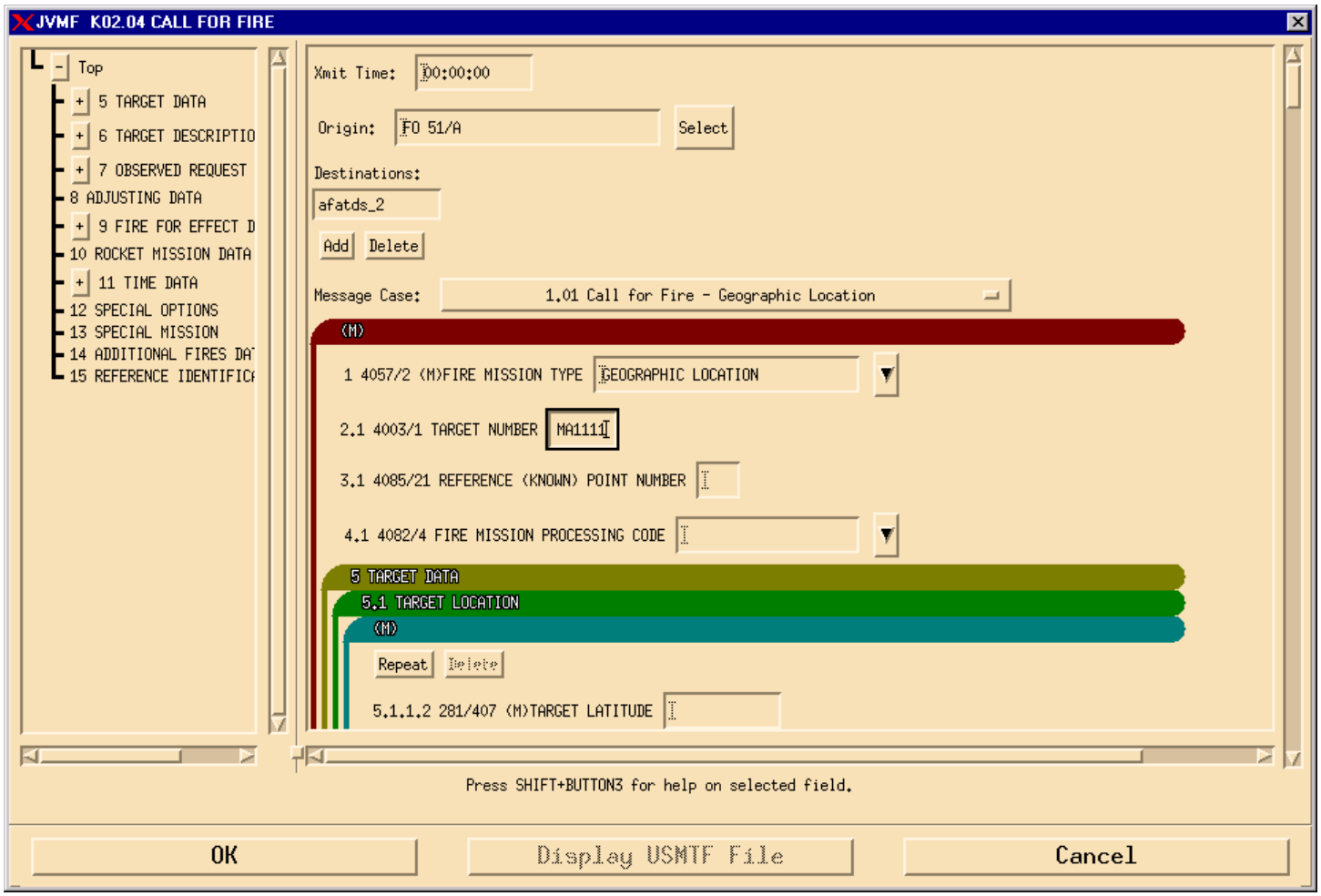
SISTIM - Select "Run Exercise" from the "TOEL" menu

Exercise Controller - Select “New-JVMF” from the “Outgoing" menu.

3.2.3.61.4 Accessible Windows

JVMF Message Template

3.2.3.62 JVMF MESSAGE TEMPLATE



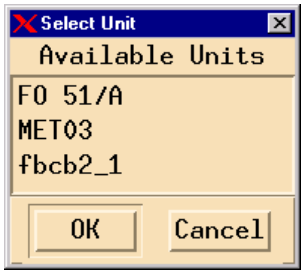
3.2.3.62.1 Description

This section is designed to give an example of how to setup a JVMF message. Common fields are described below, further information on valid data can be obtained from the JVMF Message Specification or by activating the help feature inside of each field. Most JVMF messages continue beyond the visible window, therefore be sure to use the scroll bar for additional fields. The JVMF interface will display an error message if the operator attempts to activate the "OK" button with an invalid message.

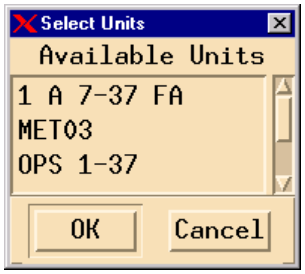
3.2.3.62.2 Fields/Parameters

Xmit Time - This field shows the time (hh:mm:ss format) at which the message will be transmitted to the destination unit.

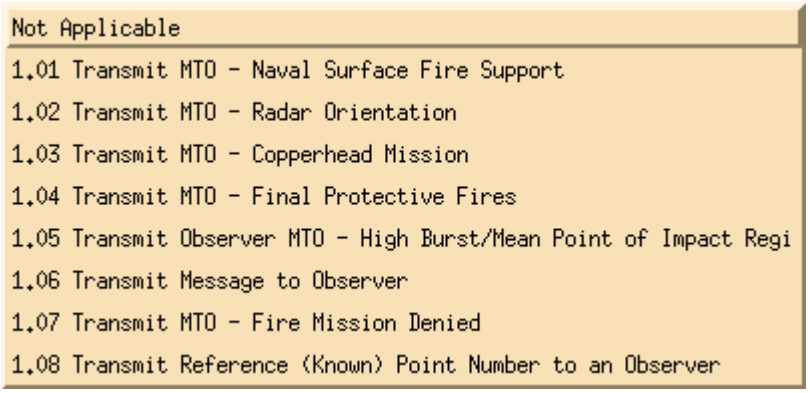
Origin - This field allows the operator to select the transmitting unit for the message. By selecting the "Select" button the Select Units window below is displayed that prompts the operator to choose from a list of available units.



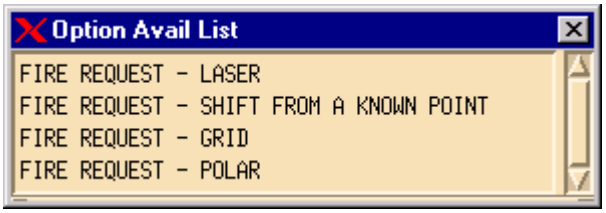
Destinations - This field allows the operator to select the unit/units that will receive the message. By selecting the "Add" button the Select Units window below is displayed that prompts the operator to select from a list of available units. Selecting the "Delete" button will remove a highlighted unit from the destination list.



Message Case - The JVMF message specification contains many different cases, which allows one message to accomplish several different meanings. Therefore SISTIM has included the Message Case feature to assist an operator in creating a message based on one specific case. By choosing the desired case SISTIM will assist the operator by specifying the fields that should and should not be used.

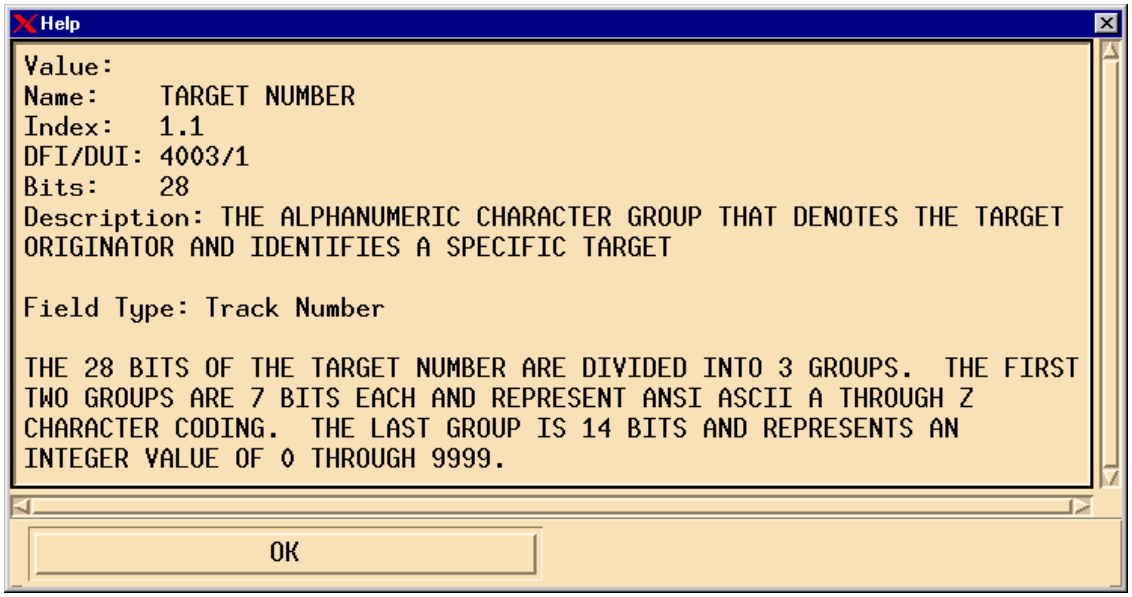


Option List Example - Several fields in JVMF messages contain pull down buttons, which activate a window that will allow the operator to choose a selection from a list. In this type of selection once the operator mouse+clicks on the desired choice the window closes and that value is entered into the field.



Coordinate Example - Several JVMF messages contain a location or coordinate field. In order to assist in entering location, the operator can activate the LAT/LONG Setup window by "BUTTON3" clicking on the location field.

Help - In order to assist the operator with entering proper data into messages the message templates have a help interface. By activating "SHIFT + BUTTON3" on a field, a window will be displayed which shows the valid data for that field.



3.2.3.62.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "New" button.

Message Protocol Available - Activate the "OK" button with "JVMF" selected.

JVMF Message Available List - Activate the "OK" button with the desired message selected.

-Or-

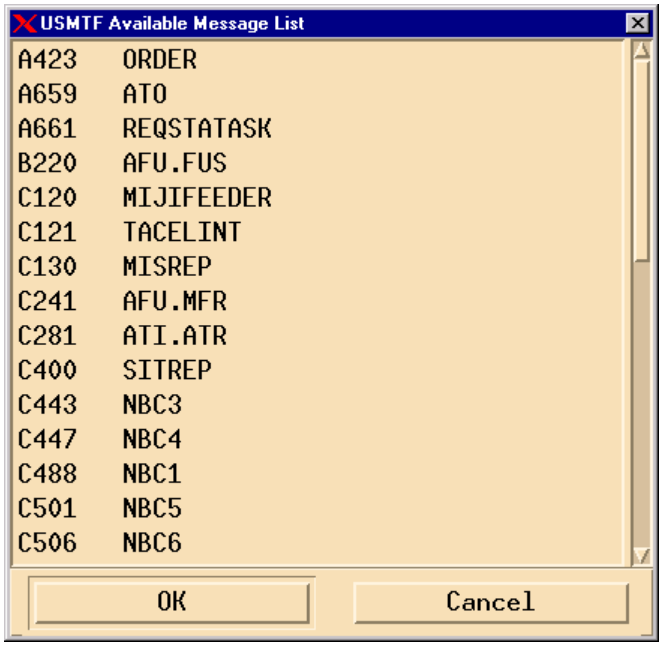
SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "Edit" button with a "JVMF" message selected.

3.2.3.62.4 Accessible Windows

LAT/LONG Setup

3.2.3.63 USMTF AVAILABLE MESSAGE LIST



3.2.3.63.1 Description

This window displays a list of the USMTF types of messages available for the operator to enter into the Event List.

3.2.3.63.2 Fields/Parameters

OK - This button closes the USMTF Available Message List window and displays the message template associated with the message type highlighted. The double click action defaults to this edit operation.

Close - This button closes the Available Messages window.

3.2.3.63.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Events List - Activate the "New" button.

Message Protocol Available - Activate the "OK" button with "USMTF" selected.

-Or-

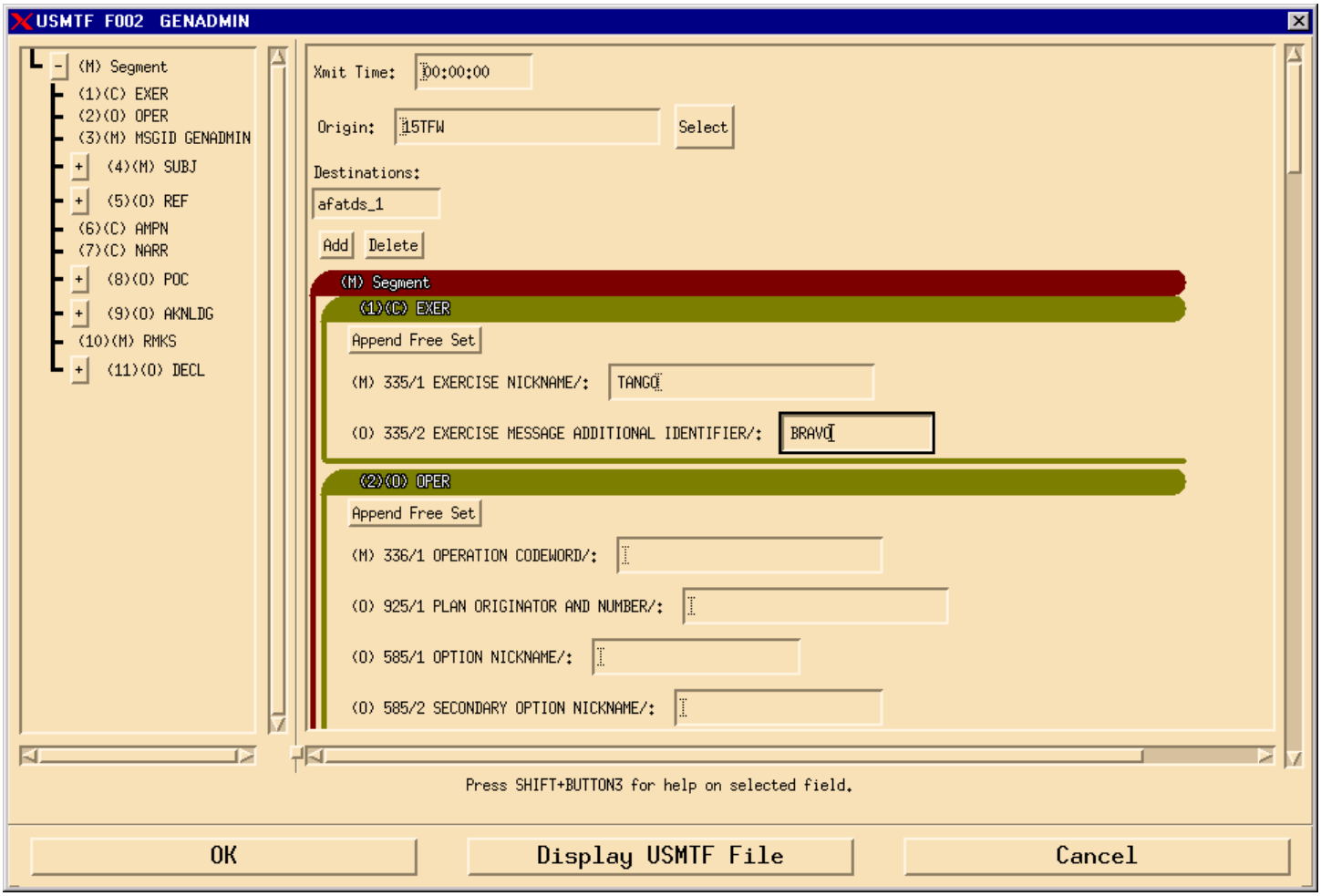
SISTIM - Select "Run Exercise" from the "TOEL" menu

Exercise Controller - Select “New-USMTF” from the “Outgoing" menu.

3.2.3.63.4 Accessible Windows

USMTF Message Template

3.2.3.64 USMTF MESSAGE TEMPLATE



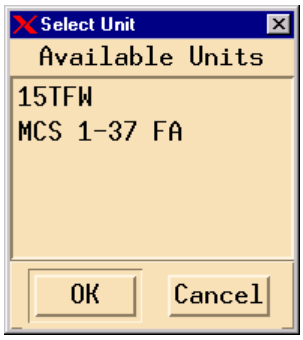
3.2.3.64.1 Description

This section is designed to give an example of how to setup a USMTF message. Common fields are described below, further information on valid data can be obtained from the USMTF Message Specification. SISTIM has attempted to be as helpful when creating USMTF messages as it can. When the operator exits a field the system will check for correctness of that field. If the field is in error a message will appear at the bottom of the USMTF Message Template. Also when the operator clicks either "OK" or "Display USMTF File" the entire message will be checked for correctness. In addition to individual fields the USMTF interface will check the conditions database for the current message if "Validate Conditions" is selected for USMTF in the Message Setup Window (See Message Handling Setup). An explanation of the error messages that can be displayed to validate USMTF conditions has been included in Appendix D as an excerpt from the *USMTF 6040 2000*.

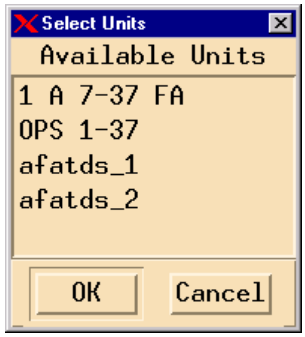
3.2.3.64.2 Fields/Parameters

Xmit Time - This field shows the time (hh:mm:ss format) at which the message will be transmitted to the destination unit.

Origin - This field allows the operator to select the transmitting unit for the message. By selecting the "Select" button the Select Units window below is displayed that prompts the operator to choose from a list of available units.



Destinations - This field allows the operator to select the unit/units that will receive the message. By selecting the "Add" button the Select Units window below is displayed that prompts the operator to choose from a list of available units. Selecting the "Delete" button will remove a highlighted unit from the destination list.



Display USMTF File - Activating this button brings up a window which allows the operator to type in a USMTF message or the operator can paste a text version of a USMTF message from an X-editor. At the top of this window there is a radio button that when activated will attempt to parse the message in the text area for correctness. If the operator chooses to deactivate this button his changes will be saved but not be checked for correctness by SISTIM. This can be useful when the operator wants to purposely send an incorrect message. By choosing the "Accept USMTF Text Changes" button, SISTIM will either parse and save the message or simply close the message based on whether the "Parse Message On Accept Changes" button is selected. If the operator chooses the "Cancel" button SISTIM will return to the USMTF Message Template window for the current message.

3.2.3.64.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "New" button.

Message Protocol Available - Activate the "OK" button with "USMTF" selected.

USMTF Message Available List - Activate the "OK" button with the desired message selected.

-Or-

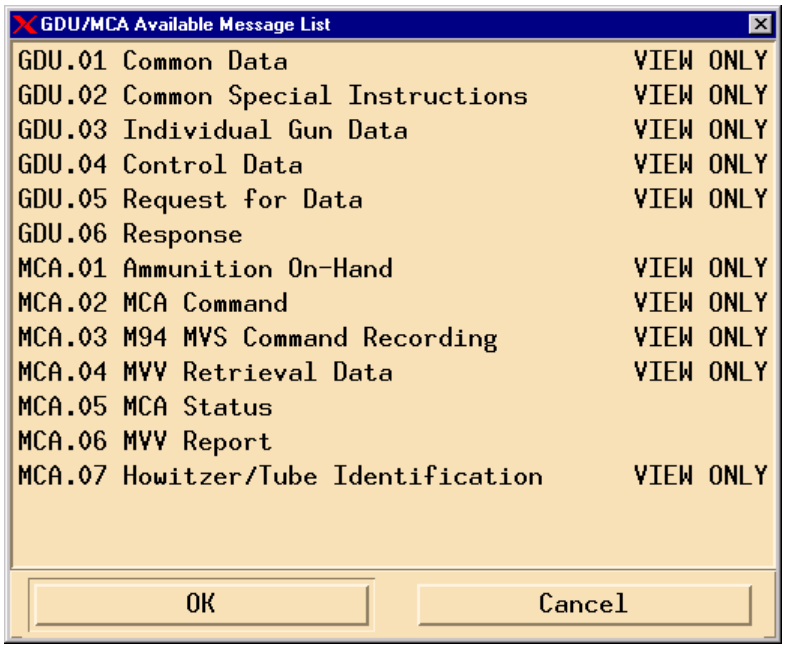
SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "Edit" button with a "USMTF" message selected.

3.2.3.64.4 Accessible Windows

None

3.2.3.65 GDU/MCA AVAILABLE MESSAGE LIST



3.2.3.65.1 Description

This window displays a list of the GDU/MCA types of messages available for the operator to enter into the Event List.

3.2.3.65.2 Fields/Parameters

OK - This button closes the GDU/MCA Available Message List window and displays the message template associated with the message type highlighted. The double click action defaults to this edit operation. (Note: Those messages that are denoted with "VIEW ONLY" can only be viewed and will not be able to be saved and transmitted, but the fields available in the message can be examined).

Close - This button closes the Available Messages window.

3.2.3.65.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Events List - Activate the "New" button.

Message Protocol Available - Activate the "OK" button with "GDU/MCA" selected.

-Or-

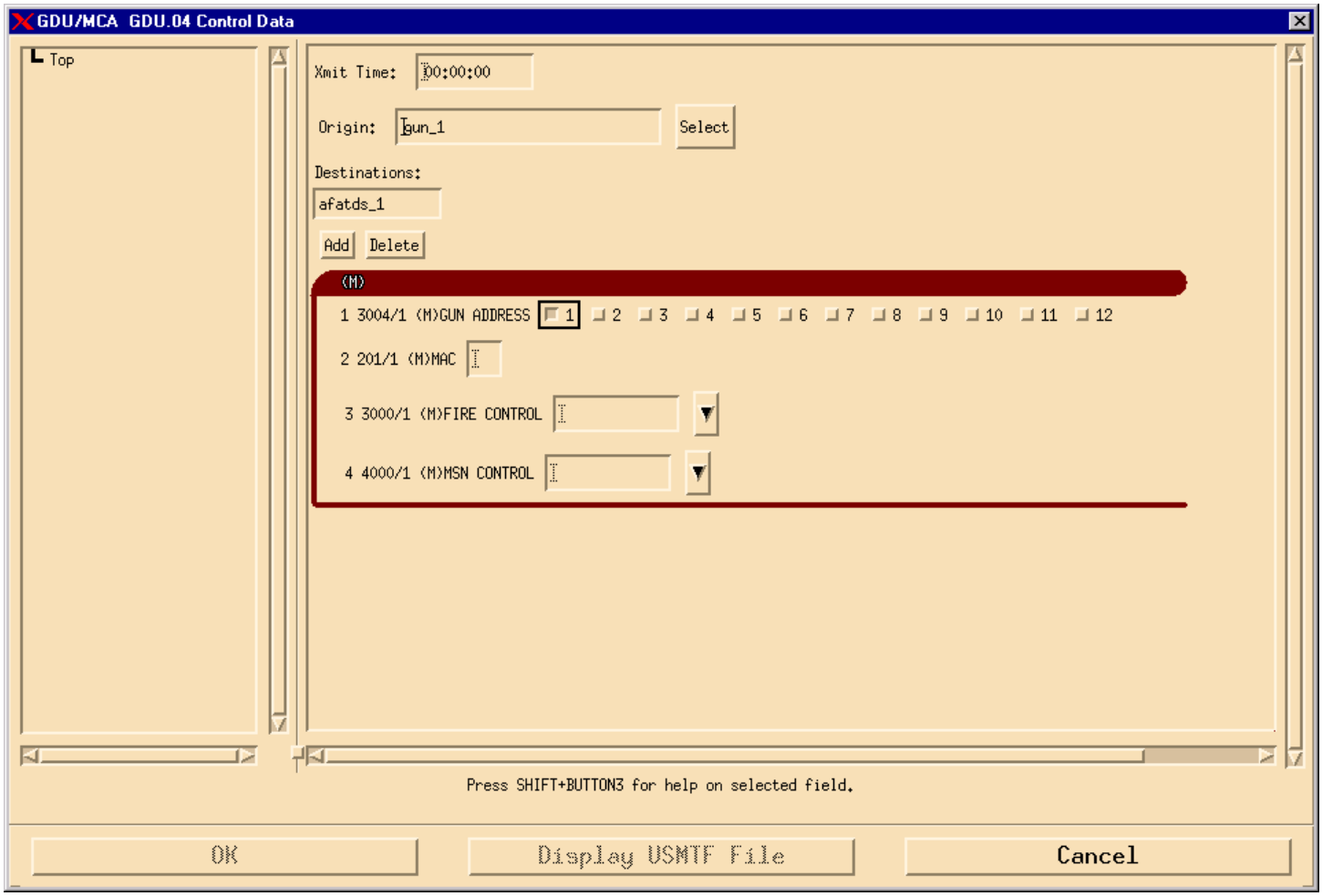
SISTIM - Select "Run Exercise" from the "TOEL" menu

Exercise Controller - Select “New-GDU/MCA” from the “Outgoing" menu.

3.2.3.65.4 Accessible Windows

GDU/MCA Message Template

3.2.3.66 GDUMCA MESSAGE TEMPLATE



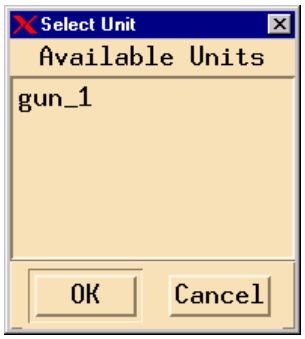
3.2.3.66.1 Description

This section is designed to give an example of how to setup a GDU/MCA message. Common fields are described below, further information on valid data can be obtained by activating the help feature inside of each field. The GDU/MCA interface will display an error message if the operator attempts to activate the "OK" button with an invalid message.

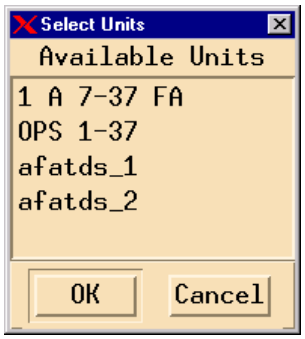
3.2.3669.2 Fields/Parameters

Xmit Time - This field shows the time (hh:mm:ss format) at which the message will be transmitted to the destination unit.

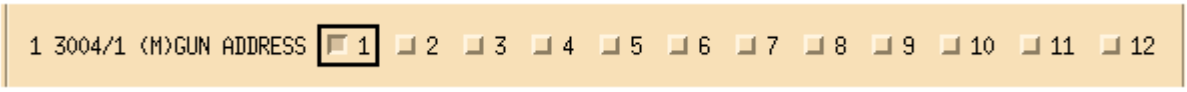
Origin - This field allows the operator to select the transmitting unit for the message. By selecting the "Select" button the Select Units window below is displayed that prompts the operator to select from a list of available units.



Destinations - This field allows the operator to select the unit/units that will receive the message. By selecting the "Add" button the Select Units window below is displayed that prompts the operator to select from a list of available units. Selecting the "Delete" button will remove a highlighted unit from the destination list.



Gun Address - These selectable radio buttons are used by the operator to select which GUNS to include in the message.



Help - In order to assist the operator with entering proper data into messages the message templates have a help interface. By activating "SHIFT + BUTTON3" on a field, a window will be displayed which shows the valid data for that field.

3.2.3.66.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "New" button.

Message Protocol Available - Activate the "OK" button with "PK11" selected.

GDUMCA Message Available List - Activate the "OK" button with the desired message selected.

-Or-

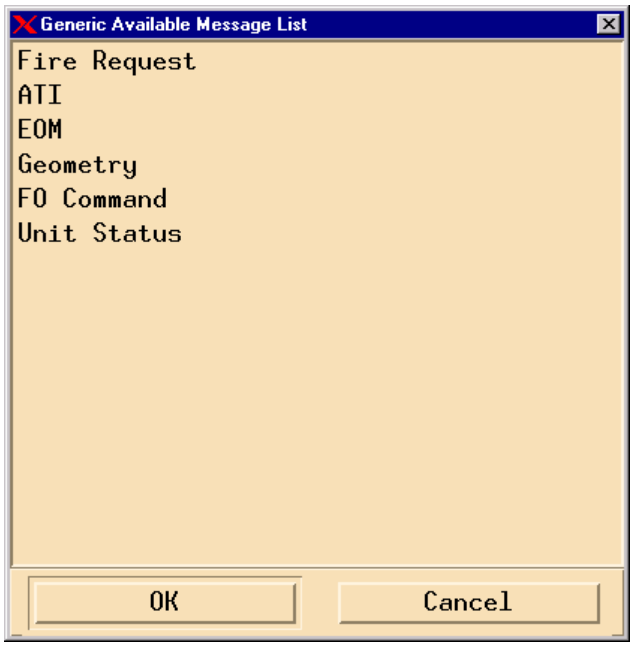
SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "Edit" button with a "GDU/MCA" message selected.

3.2.3.66.4 Accessible Windows

None

3.2.3.67 GENERIC AVAILABLE MESSAGE LIST



3.2.3.67.1 Description

This window displays a list of the Generic messages available for the operator to enter into the Event List. The Generic message has been described in detail in Appendix E. Please refer to that section to fully understand entering Generic messages into the TOEL.

3.2.3.67.2 Fields/Parameters

OK - This button closes the Generic Available Message List window and displays the message template selected (See Appendix E for specific instructions on each Generic message).

Close - This button closes the Available Messages window.

3.2.3.67.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Events List - Activate the "New" button.

Message Protocol Available - Activate the "OK" button with "Generic" selected.

-Or-

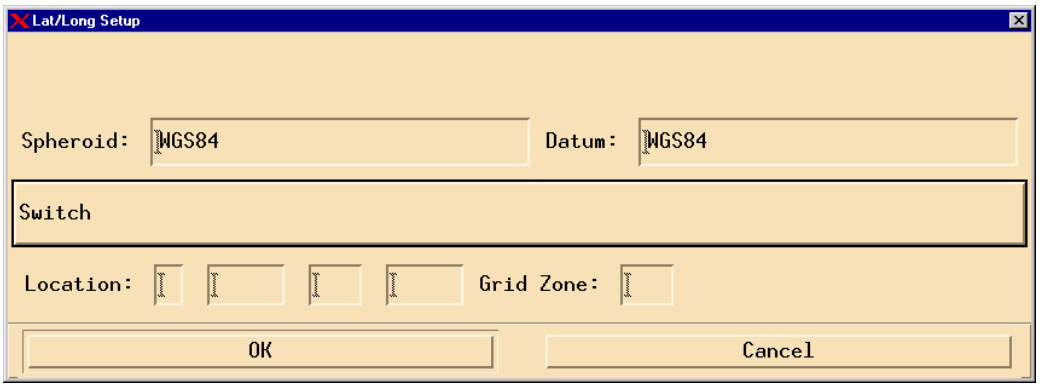
SISTIM - Select "Run Exercise" from the "TOEL" menu

Exercise Controller - Select “New-Generic” from the “Outgoing" menu.

3.2.3.67.4 Accessible Windows

Generic Messages (Appendix E)

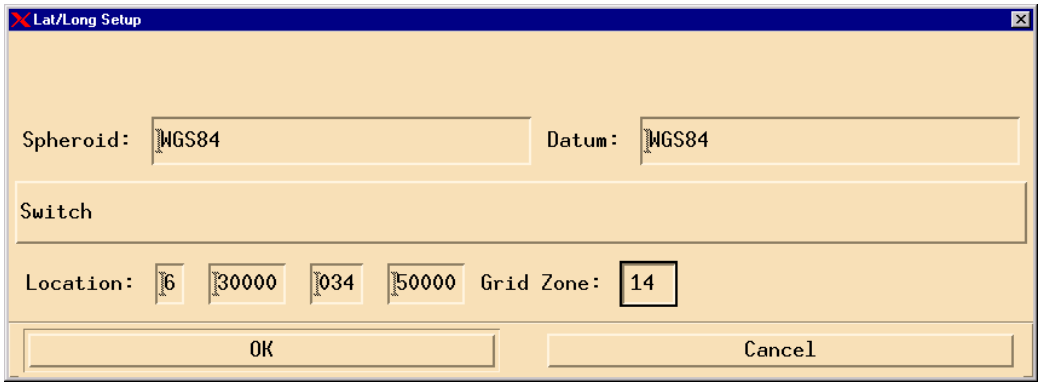
3.2.3.68 LAT/LONG SETUP



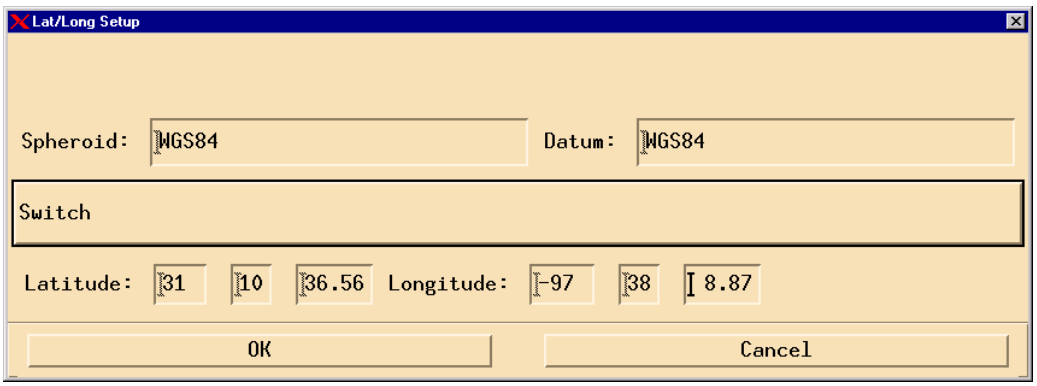
3.2.3.68.1 Description

The Lat/Long field is a specialized field used by several PK11 and JVMF messages. To access this screen the operator activates "BUTTON3" on the mouse in any location type field. The screen will by default come up in UTM format. Once a valid UTM is entered the operator can edit the location as UTM, or activate the Switch button and edit the location in Lat/Long format.

UTM FORMAT



LAT/LONG FORMAT



3.2.3.68.2 Fields/Parameters

Spheroid - The geometrical description used as the basis of the calculation of a coordinate system. (The default is usually set to WGS84).

Datum – A Datum is a reference point used as an origin for a coordinate system. (The default is usually set to WGS84).

Switch - Activating this button converts the location field between UTM and Lat/Long format.

Location - This field show is an editable field displayed in either UTM or Lat/Long format.

OK - This button closes the Lat/Long Setup window and places the data into to location field in the proper message format.

Cancel - This button closes the Lat/Long Setup window without making any changes to the location field.

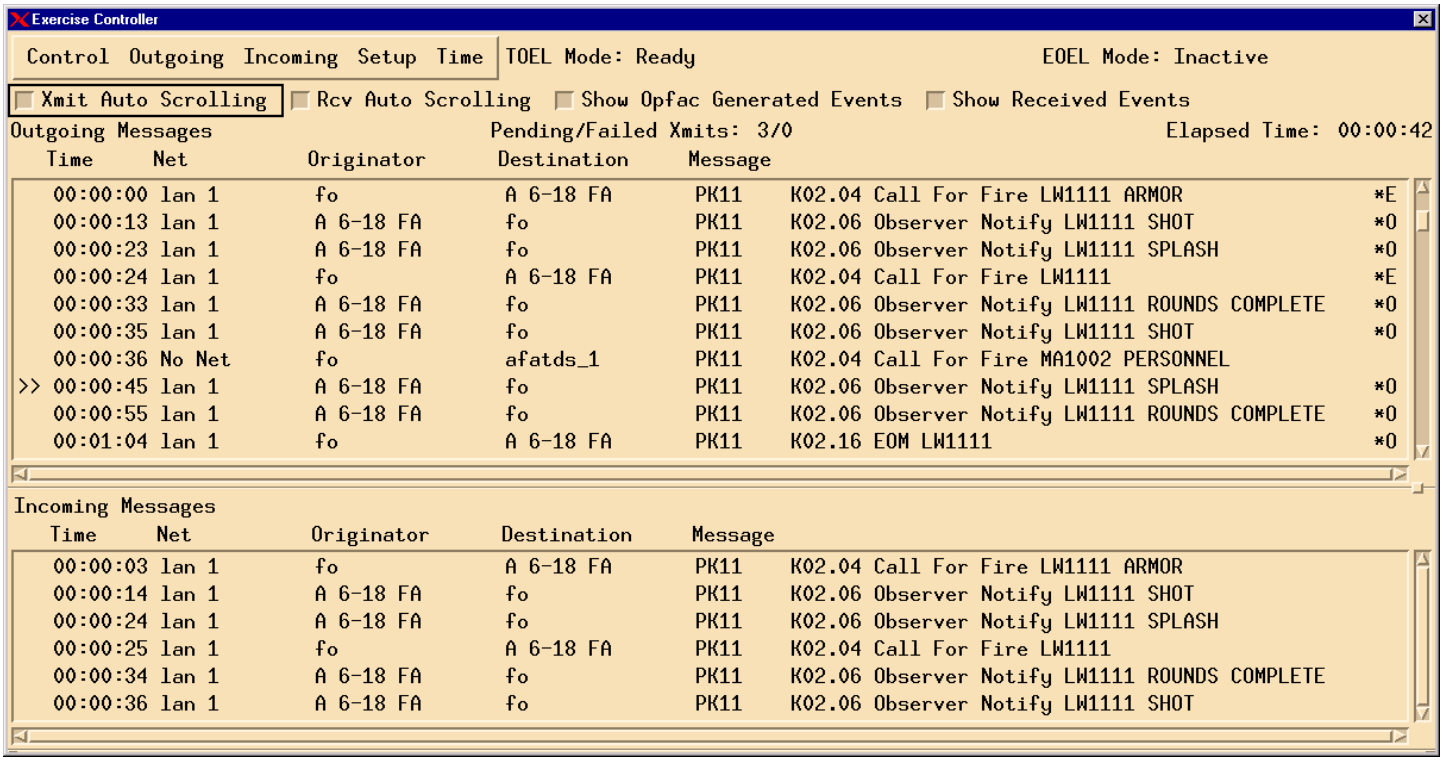
3.2.3.68.3 Window Navigation

See "Lat/Long Setup" Description

3.2.3.68.4 Accessible Windows

None

3.2.3.69 EXERCISE CONTROLLER



3.2.3.69.1 Description

This window allows the operator to manipulate an exercise that is being executed. From this window the operator may start or stop the execution of the exercise, view/edit outgoing messages, view incoming messages, check on failed transmissions, load/reload, and generally control the operation of the exercise.

Event changes made with the Exercise Controller are kept in the TOEL until either a new exercise is loaded, or when the operator exits SISTIM. Although when the exercise is saved changes made become permanent, expect OPFAC generated events that are never saved.

3.2.3.69.2 Fields/Parameters

TOEL Mode - This label states whether the TOEL Controller is currently in ready or running state.

EOEL Mode – This lable states whether the EOEL Controller is currently in Inactive or running state.

Xmit Auto Scrolling - When selected the outgoing messages will scroll while in run mode.

Rcv Auto Scrolling - When selected the incoming messages will scroll while in run mode.

Show Opfac Generated Events - When selected messages generated by SISTIM for opfac logic response will be displayed.

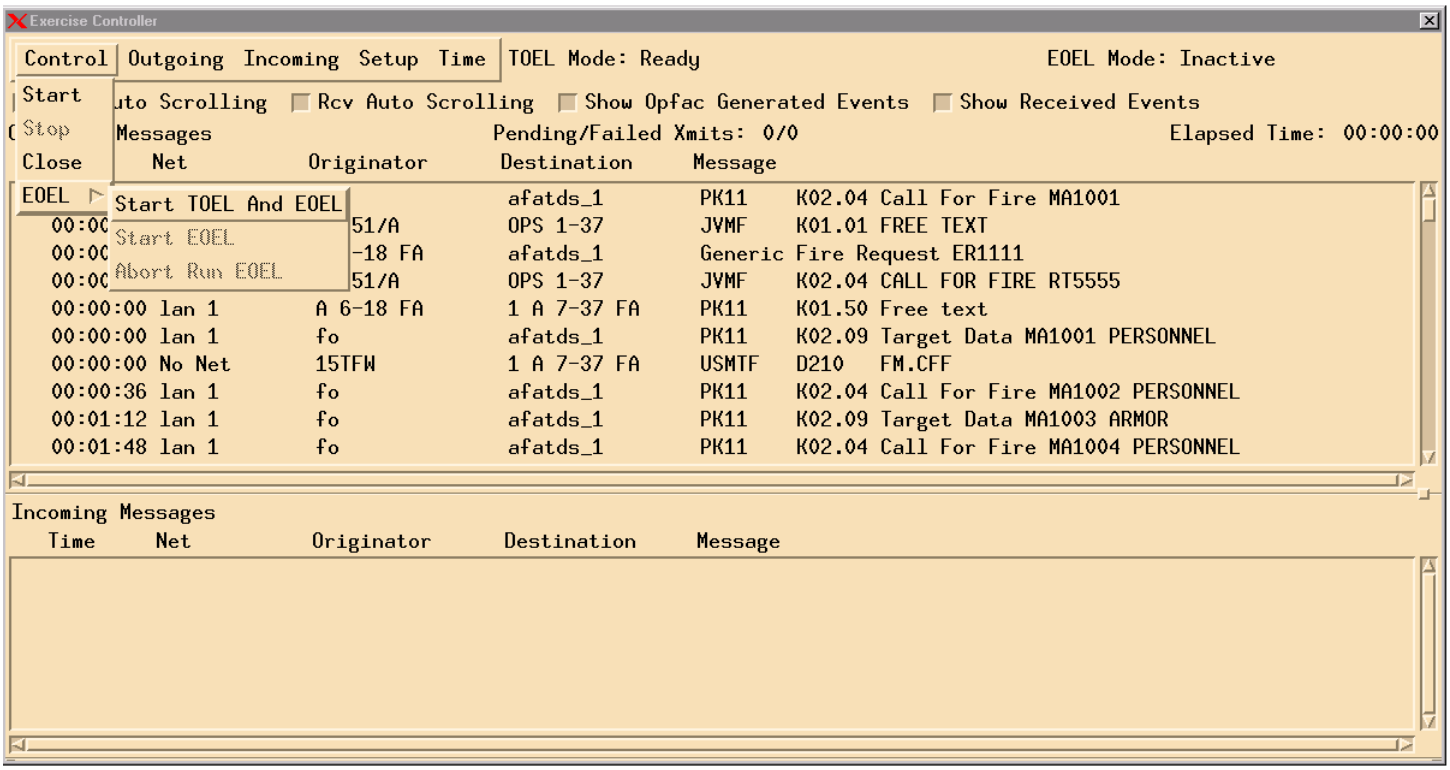
Show Received Events - When selected incoming messages will be shown in the incoming message list.

Pending/Failed Xmits - These numbers indicates the number of messages pending and the number of messages that did not reach their destination. The operator can view a list of these messages (See Transmission List).

Elapsed Time - The time in hours/minutes/seconds that has elapsed in the TOEL (NOTE: This may not reflect the time from the beginning of the TOEL if the time has been edited).

Event Type – Events that originate from EOEL are denoted by *E and events that are prompted my Opfac Logic are denoted by *O on the Exercise Controller window in the Outgoing message section.

CONTROL MENU



Start - This option begins execution of the TOEL. Once a Toel has begun, it can be stopped at any time. This option transitions from Ready to Run mode.

Stop - This option stops execution of the exercise. Once an exercise has been stopped the operator can select "Start" to re-start the exercise from the point at which it was stopped. This option transitions from Run to Ready mode.

Close - This option will close the Exercise Controller window. The exercise must be stopped to close the Exercise Controller window. This option returns SISTIM to configure mode.

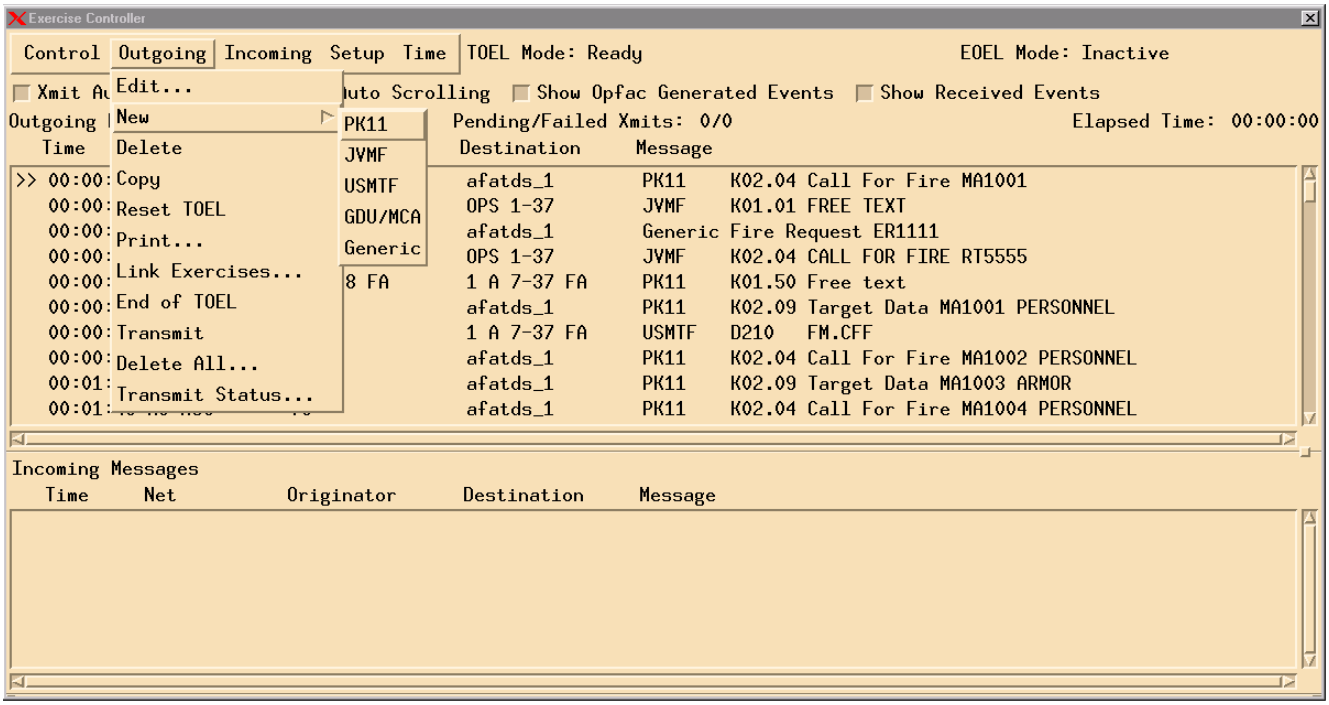
TOEL/EOEL – This option displays a pull-down menu that displays the options the operator has when manipulating the TOEL and EOEL.

Start TOEL And EOEL – This option allows the operator to put both the TOEL and EOEL into running mode.

Start EOEL – This option allows the operator to put only the EOEL into running mode.

Abort Run EOEL – This option allows the operator to put the EOEL into Inactive mode without disrupting the TOEL.

OUTGOING MENU



Edit - This option gives the operator the ability to edit any event in the Outgoing Messages list (Note: an event must be highlighted before this option can be activated). When this option is selected, the message template (See the appropriate section for each message type; PK11 Message Template, JVMF Message Template, USMTF Message Template, GDU/MCA Message Template, or Appendix E Generic Messages) for the event highlighted will be displayed. If the transmit time for the event occurs while the message is being edited, the message will be transmitted as soon as the editing is completed. Double clicking the message invokes the Edit function.

New - This option allows the operator to add new message type into the Outgoing Messages list. A cascade menu appears for the operator to select a PK11, JVMF, or USMTF type, as shown below. Selecting PK11, the PK11 Available Message List window is displayed. Selecting JVMF, the JVMF Available Message List window is displayed. Selecting USMTF, the USMTF Available Message List window is displayed. Selecting GDU/MCA, the GDU/MCA Available Message List window is displayed. Selecting Generic, the Generic Available Message List Window is displayed.

Delete - This option allows the operator to delete any event in the Outgoing Messages list (Note: an event must be highlighted before this option can be activated).

Copy - This option copies a highlighted event and places it in the list immediately following the selected event.

Reset TOEL – This option allows the operator to reset the TOEL back to the beginning at Elapse Time: 00:00:00.

Print – This option allows the operator to print out the highlighted event.

Link Exercises - This option allows the operator to link two or more exercises together. When exercises are linked, the exercises will run one after the other, to simulate multi-phase exercises. (See Link Exercise).

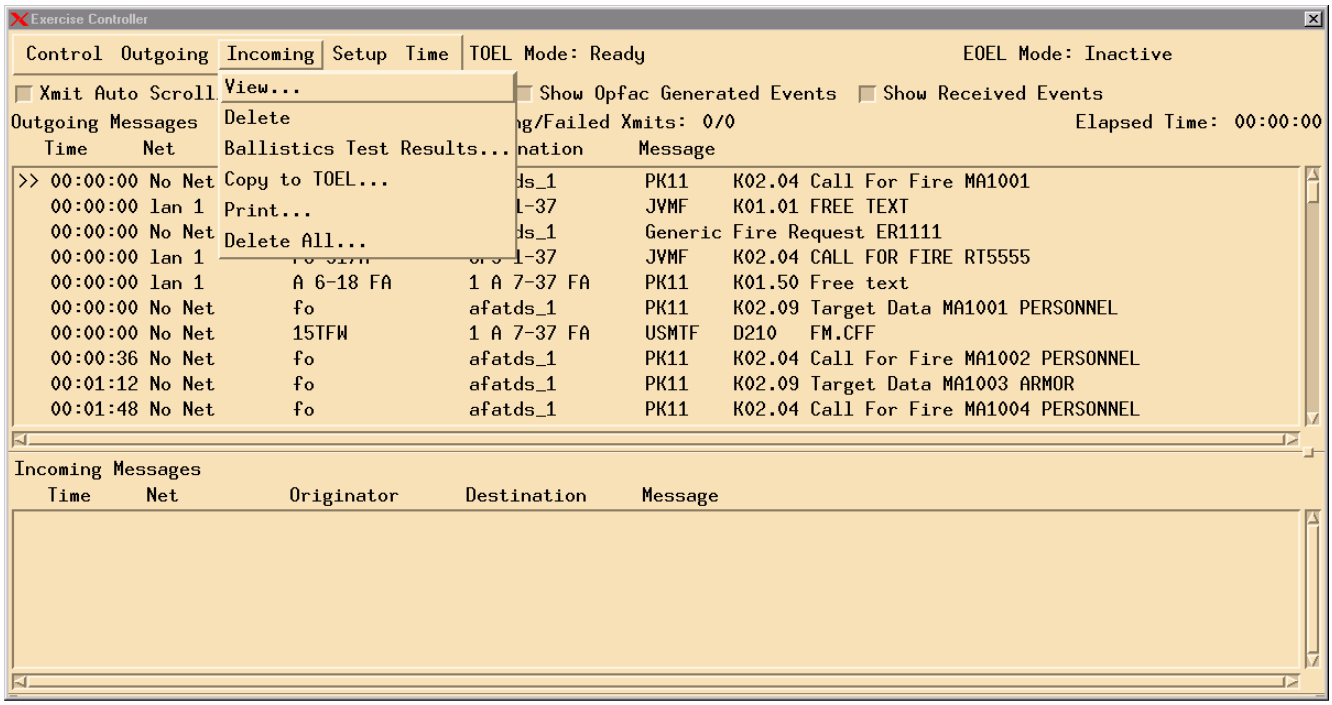
End of TOEL – This option allows the operator to go the end of TOEL.

Transmit - This option transmits a highlighted message from the Outgoing Message List.

Delete All - This option will delete all events in the event list.

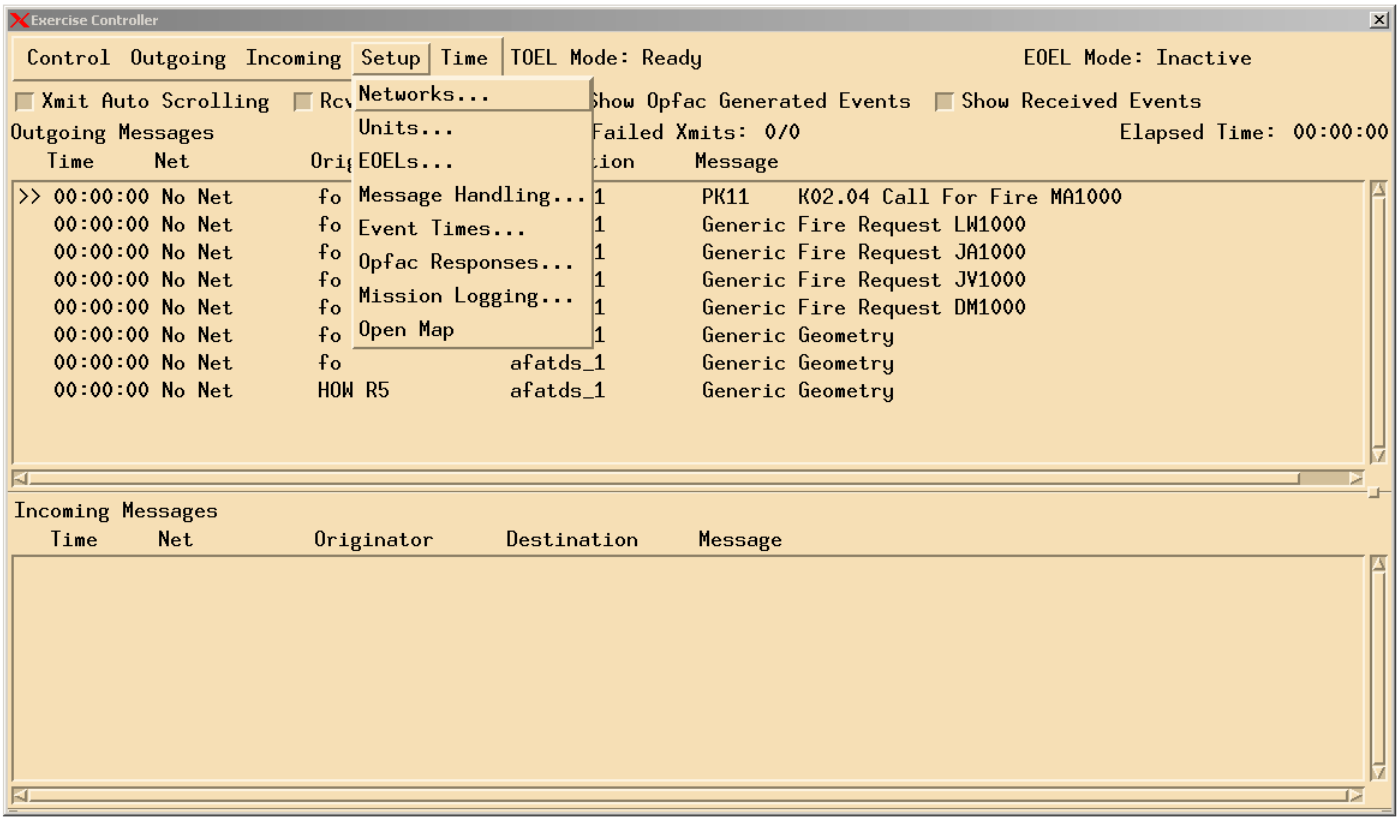
Transmit Status - This option allows the operator to view messages that have failed transmission. When this option is selected, the Transmission List window is displayed (See Transmission List).

INCOMING MENU



View - This option allows the operator to view a highlighted message from the Incoming Message List. These messages are view only. Double clicking an incoming message invokes this function.

Ballistics Test Results - This option will display the results of the current Ballistics test. Only works when the controller is being run in Ballistics test mode only.



delete, or print a highlighted network (See Network Lists for instructions how edit network parameters).

Units - This option allows the operator only to edit an existing unit. This feature does not allow the operator to create, copy, delete, or print a highlighted unit (See Unit List for instructions how edit unit parameters).

EOELs – Selecting this option will display a window, which allows the operator to setup an EOEL list. (See EOEL List).

Message Handling - This option displays the Message Handling Setup window.

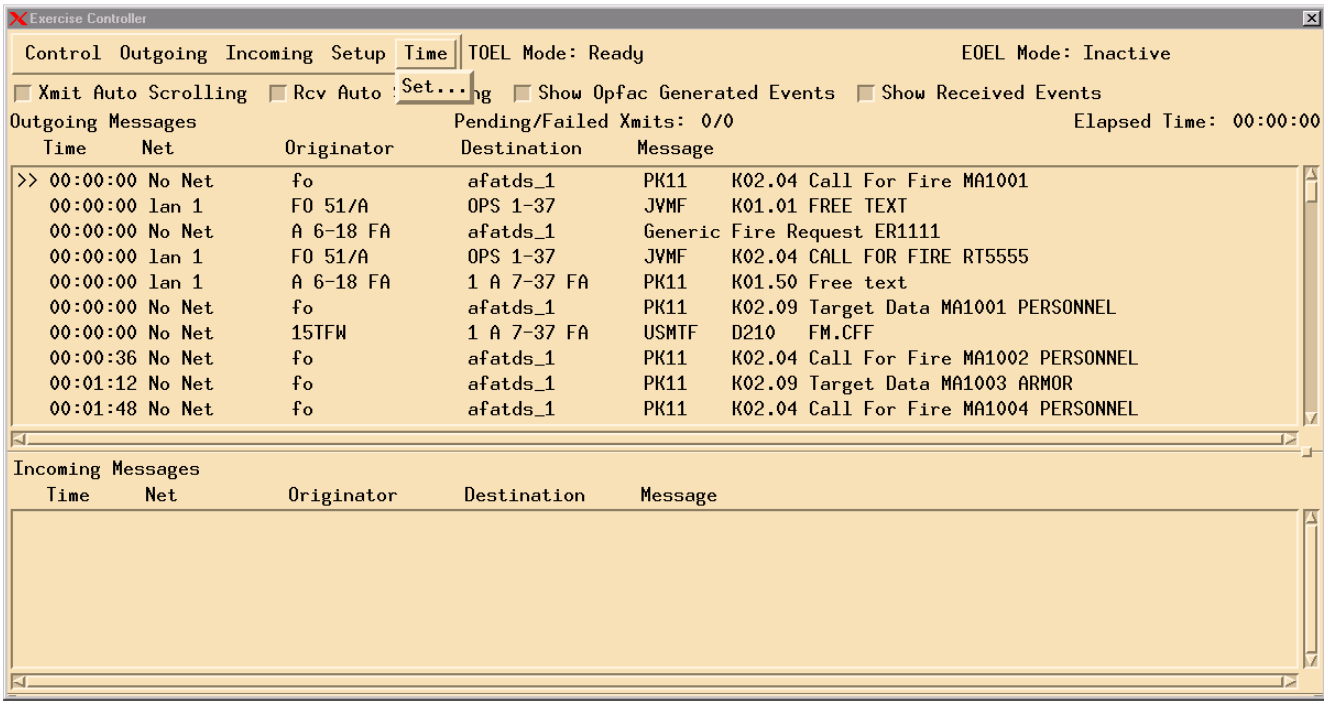
Event Times - This option displays the Event Times window. This option is not available when SISTIM is in run mode.

Opfac Responses - This option allows the operator to edit and view the Opfac Response Times window. (See TIME MENU).

Mission Logging – This option allows the operator to setup and start mission logging. (See Mission Logging).

Open Map – This option allows the operator to open the map. (See Map).

TIME MENU



Set - This option allows the operator to set the exercise time. This allows certain portions of an exercise to be skipped. (See Set Time).

3.2.3.69.3 Window Navigation

SISTIM - Select "Run Exercise" from the "TOEL" menu.

3.2.3.69.4 Accessible Windows

PK11 Available Message List PK11 Message Template JVMF Available Message List

JVMF Message Template

USMTF Available Message List USMTF Message Template GDU/MCA Available Message List

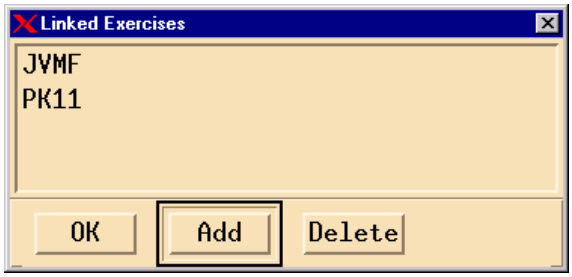
GDU/MCA Message Template Generic Available Message List Generic Messages (Appendix E)

Link Exercises

Transmission List

Set Time

3.2.3.70 LINK EXERCISES



3.2.3.70.1 Description

This window allows the operator to link multiple exercises to support multi-phase operations. Linking exercises allows the operator to begin execution of a second exercise as soon as the first has completed. If the operator creates multiple exercises with the same units in different locations and then links the exercises, movement of the units can be simulated.

3.2.3.70.2 Fields/Parameters

OK - This button closes the Link Exercises window and saves any changes that have been made.

Add - This button adds an exercise that has been highlighted from the Current Exercises list, to the Linked Exercises list (Note: an exercise must be highlighted from the Current Exercises list before this button can be activated).

Delete - This button deletes an exercise from the Linked Exercises list (Note: an exercise must be highlighted from the Linked Exercises list before this button can be activated).

3.2.3.70.3 Window Navigation

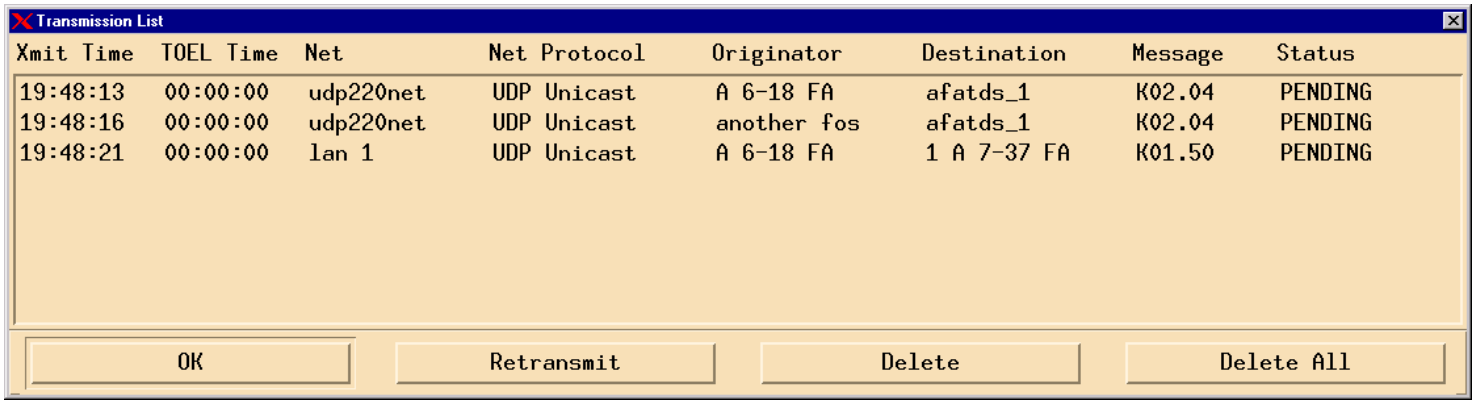
SISTIM - Select "Run Exercise" from the "TOEL" menu

Exercise Controller - Select "Link Exercises" from the "Outgoing" menu

3.2.3.70.4 Accessible Windows

None

3.2.3.71 TRANSMISSION LIST



3.2.3.71.1 Description

This window displays a list of all messages that have failed transmission. It notifies the operator of the cause of failure and offers the opportunity to retransmit the message.

3.2.3.71.2 Fields/Parameters

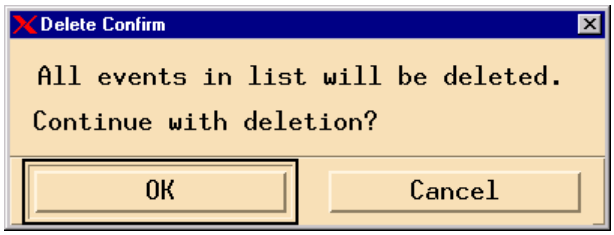
Time/Net/Originator/Destination/Message/Failure - This is a list of messages that failed transmission during the execution of the currently running TOEL. This list will be empty if all the messages have transmitted successfully.

OK - This button closes the Failed Transmission Messages window and saves any changes that have been made.

Retransmit - When this button is activated, SISTIM attempts to retransmit the selected message (Note: a message must be highlighted before this button can be activated). Double clicking a message invokes this function.

Delete - This button deletes a message from the list of failed messages (Note: a message must be highlighted before this button can be activated). After the deletion is complete, the message is removed from the list.

Delete All - This button deletes all messages from the list of failed messages. When activated the operator will receive the following confirmation screen.



3.2.3.71.3 Window Navigation

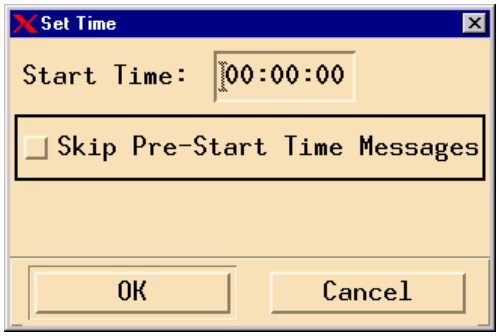
SISTIM - Select "Run Exercise" from the "TOEL" menu

Exercise Controller - Select "Transmit Status" from the "Outgoing" menu.

3.2.3.71.4 Accessible Windows

None

3.2.3.72 SET TIME



3.2.3.72.1 Description

This window allows the operator to set the Elapsed Time clock and decide what to do with bypassed messages. The Set Time Window is used to determine what time should be used when SISTIM enters Run mode.

3.2.3.72.2 Fields/Parameters

Start Time - When a value is entered in this field (hh:mm:ss format), the Elapsed Time clock is reset to reflect the entered time.

Skip Pre-Start Time Messages - If this field is set, the messages that were scheduled for transmission before the time entered in the Start Time field, will be skipped from the event list. If this button is not selected, all messages with transmit times prior to the Start Time will be immediately queued for transmission.

OK - This button will reset the Elapsed Time clock to the new start time and closes the Set Time window.

Close - This button closes the Set Time window without resetting the Elapsed Time clock.

3.2.3.72.3 Window Navigation

SISTIM - Select "Run Exercise" from the "TOEL" menu.

Exercise Controller - Select "Set" from the "Time" menu.

3.2.3.72.4 Accessible Windows

None

3.3 SETUP HELP

This section is designed to assist the operator in understanding how to create and operate a SISTIM TOEL. It is recommended that an operator read this entire section fully and uses the SISTIM Windows section as a guide during operation. The following Threads section is setup by detailing how to create Exercise, Nets, and Units based on the PK11 format.

3.3.1 Create a new exercise

3.3.1.1 Naming the exercise

From the main SISTIM menu bar select "System" menu and then select "Exercise…" on the menu. This will create the Exercise List form. On the Exercise List form, click on "New". This will create the New Exercise Data form. Enter the name for your exercise on this form and then click "OK". Highlight the name of your new exercise in the Exercise List and click "Load" and then "OK". Follow the save prompts and make an appropriate decision.

3.3.1.2 Creating a network

You should normally create your networks first. This allows you to place your units on a network as you create them instead of going back later and editing your units to place them on a network. Lay out your networks on paper in advance so you know which units to place on each net and resolve all your addresses and IPs in advance. The majority of communication problems result when networks are not created like you planned (different addresses for the same unit and unit not assigned to the correct network)

3.3.1.2.1 UDP 220

From the main SISTIM menu bar select "Setup" and then select "Networks…". This will create the Net List form. On the Net List form, click on "New". This will create the Network Protocol Available form. Highlight "UDP/220A" and then click "OK". This will create the UDP/220A Setup form. On the form select the channel corresponding to the SCSI address and TCIM channel for your TCIM. The menu will list a channel as "Simulated" in the final field of the selection list if there is no TICM associated with it. Give the network a name that makes sense (the same name as in AFATDS is always a good choice). Setup your choices for Device, Data Encoding and Data Rate to match what is actually connected and what the live work stations have set. Set the COMSEC Mode and Hop Mode if you are using a SINCGARS radio. Forward Error Correction and Method do not normally have to be set. Finally, set your number of stations and station ranking. This refers to actual work stations, not simulated units, so the SISTIM workstation is only one station. Click on "Go To Defaults" and verify that the settings correspond to the SISTIM workstation. Station Address and Host IP must match how you setup the "SISTIM Relay Unit" in the AFATDS Communications Setup. Host Net Mask is normally 255.255.255.0. Do not change Host Service unless directed to. Click "OK" on both forms and your net is created.

3.3.1.2.2 UDP Lan

From the main SISTIM menu bar select "Setup" and then select "Networks…". This will create the Net List form. On the Net List form, click on "New". This will create the Network Protocol Available form. Highlight "UDP/Lan" and then click "OK". This will create the UDP/Lan Setup form. On the form select the Lan channel. Give the network a name that makes sense (the same name as in AFATDS is always a good choice). Click on "Go To Defaults" and verify that the settings correspond to the SISTIM workstation. Host IP will change depending on how you setup the computer. Host Net Mask is normally 255.255.255.0. Do not change Host Service unless directed to. Click "OK" on both forms and your net is created.

3.3.1.3 Creating a unit

When you are creating units you should normally create the highest level units first. This allows you to set the headquarters for lower echelon units as they are created instead of going back and editing the unit later to establish the command relationship. It is critical that you set the command headquarters for all SISTIM units, that is the unit they will send their messages to. It is also critical that both the unit and its Command HQs are on the same net or they will not communicate. There are three types of units in SISTIM: Sensors, Shooters, and Others. Sensors and Shooters have OPFAC Logic that allows them to act like a live version of their representation. Sensors and Shooters can be live, but seldom are. Other units are either live units or SISTIM units that will simply accept messages or for which specific messages will be created in the Event List or during Exercise execution (SISTIM Interactive Mode). All units are created from the Unit List form. From the main SISTIM menu bar select "Setup" and then select "Units…".

3.3.1.3.1 Headquarters

Click on "New" to create the Unit Protocol Available form. On that form highlight "PK11" or "AFATDS" as appropriate and then click "OK". This will create the Available Unit form. On that form, click on any of the Unit Available Roles then click on "OK". This will create the appropriate Unit form. Give the unit an appropriate name. It does not have to match anything else, it is only used within SISTIM. Enter the Unit Reference Number that matches what is on the Master Unit List in AFATDS. The Device choice will be chosen by your navigation and is not editable. Set your Command HQ by clicking on "Select…", which will create the Select Command HQs form. On the form either highlight the unit you want or click on "Set To None". This selection is only used if you are creating a Meteorological Section. Enter a grid coordinate in the "Location" field, but it is not currently used by SISTIM. Next select the button to mark the unit as "Simulated" (represented within SISTIM only) or "Real" (Live hardware system). Select whether the unit is "Active" or "Inactive". Only active units are capable of sending or receiving messages. Finally, assign the unit to one or more nets by clicking "New…" under the Net/Address Pairs in Use field. This will create the Select Net/Address Pair form. This will list all of the nets that have been created. When you highlight a net it will display all of the addresses that are currently on that network. Enter the "IP Address" for the unit and the "Destination Address" (since you are a relay unit through the "SISTIM Relay Unit" the IP address and Destination Address are not used, but you should have the first three octets match those of the "SISTIM Relay Unit") if it is not a Lan network. Click on "OK" to close the form and link the network information to the unit. Add as many networks as necessary to the unit form and then click on "OK" on the Unit form to save the data.

3.3.1.3.2 Sensors

Click on "New" to create the Unit Protocol Available form. On that form, highlight "PK11" and then click "OK". This will create the Available Unit form. On that form click on the type of sensor you want to create ("Forward Observer", "Fire Support Team", "FIREFINDER [CMR or CBR]", "Air Observer", or "JSTARS") and then click on "OK". This will create the appropriate Unit form. Give the unit an appropriate name. It does not have to match anything else, it is only used within SISTIM. Enter the Unit Reference Number that matches what is on the Master Unit List in AFATDS. The Device choice will be chosen by your navigation and is not editable. Set your Command HQ by clicking on "Select…", which will create the Select Command HQs form. On the form highlight the unit you want to send the target data to. Enter a grid coordinate in the "Location" field. This location must be behind the FLOT. Enter an "Observer Number", this is required and must match what is in AFATDS. Next select the button to mark the unit as "Simulated" (represented within SISTIM only)(Only units available for consideration during target generation) or "Real" (Live hardware system). Select whether the unit is "Active" or "Inactive". Only active units are considered during target generation or are capable of sending or receiving messages. Finally, assign the unit to one or more nets by clicking "New…" under the Net/Address Pairs in Use field. This will create the Select Net/Address Pair form. This will list all of the nets that have been created. When you highlight a net it will display all of the addresses that are currently on that network. Enter the "IP Address" for the unit and the "Destination Address" (since you are a relay unit through the "SISTIM Relay Unit" the IP address and Destination Address are not used, but you should have the first three octets match those of the "SISTIM Relay Unit") if it is not a Lan network. The sensor and as his Command HQs must have a single common network. Click on "OK" to close the form and link the network information to the unit. Add as many networks as necessary to the unit form and then click on "OK" on the Unit form to save the data.

3.3.1.3.3 Firing Unit

Click on "New" to create the Unit Protocol Available form. On that form, highlight "PK11" and then click "OK". This will create the Available Unit form. On that form click on the type of firing unit you want to create ("Howitzer Unit", "MLRS Unit", or "Mortar Section" and then click on "OK". This will create the appropriate Unit form. Give the unit an appropriate name. It does not have to match anything else, it is only used within SISTIM. Enter the Unit Reference Number that matches what is on the Master Unit List in AFATDS. The Device choice will be chosen by your navigation and is not editable. Set your Command HQ by clicking on "Select…", which will create the Select Command HQs form. On the form highlight the unit you want to send the Fire Mission Messages to. Enter a grid coordinate in the "Location" field. This location is not currently used by SISTIM. Next select the button to mark the unit as "Simulated" (represented within SISTIM only) or "Real" (Live hardware system). Select whether the unit is "Active" or "Inactive". Only active units are capable of sending or receiving messages. Finally, assign the unit to one or more nets by clicking "New…" under the Net/Address Pairs in Use field. This will create the Select Net/Address Pair form. This will list all of the nets that have been created. When you highlight a net it will display all of the addresses that are currently on that network. Enter the "IP Address" for the unit and the "Destination Address" (since you are a relay unit through the "SISTIM Relay Unit" the IP address and Destination Address are not used, but you should have the first three octets match those of the "SISTIM Relay Unit") if it is not a Lan network. The firing unit and as his Command HQs must have a single common network. Click on "OK" to close the form and link the network information to the unit. Add as many networks as necessary to the unit form and then click on "OK" on the Unit form to save the data.

3.3.1.3.4 Copy a unit

If you are making multiple instances of the same kind of unit (six firing platoons for a battalion) it is often easier to create one of them and then copy it. To copy a unit, highlight the unit name on the Unit List form and click on "Copy". This will create a Unit form with the "Unit Name" and "Unit Reference Number" blank. Enter the correct values for these fields and then edit the communications setup information for the unit. To do this, highlight the Net in the Net/Address Pairs in Use Field and then click on "Edit". This will create the Select Net/Address Pair form. Change the "IP Address" and "Net Address" to the correct values for the unit and then click "OK" on the form to save the changes and close the form. If you are creating another sensor, you should enter a different grid coordinate in the "Location" field. Click "OK" to save the data for the new unit.

3.3.1.4 Creating an EOEL

Creating an EOEL (**E**vent **O**rdered **E**vent **L**ist) in SISTIM allows the operator to run a complete thread or series of threads without the intrusiveness of Opfac Logic. An EOEL is a thread in which both incoming and outgoing messages are defined by the operator. When an EOEL is created the operator uses triggers to help control the thread. Triggers place conditions on the messages so that outgoing messages will only be transmitted if and only if they meet the criteria of the triggers set. No Opfac Logic is used during the processing of an EOEL. The EOEL strictly follows the flow predetermined by the operator. EOELs can only be put into the running mode when the TOEL is in fact running. Once the TOEL is placed in running mode the EOEL can be “turned on” as well (Note: It is very important that you verify that the EOELs you want to be “running” are selected).

3.3.1.5 Creating a Scenario

Creating a scenario in SISTIM allows you to drive a number of units without tying a number of soldiers to send in target information. SISTIM will create a scenario based on your parameters and the generic capabilities of the simulated sensors you have created. After you create the generic scenario you can modify it to better meet the unit training requirements. You get to the Scenario Setup form by clicking on "Setup" on the SISTIM main menu bar and then selecting "Scenario Setup…"

3.3.1.5.1 Battlefield orientation

This allows you to establish the area in which your targets will be located. The "FLOT Center" is the midpoint of the side of the rectangular target area closest to the friendly troops. A sensor must be behind the FLOT line for it to be used during Target Generation. Enter a full UTM grid coordinate, including grid zone into the "FLOT Center" field. Enter a value in the "Width" field that meets your requirements. The "Depth" field serves several purposes. If you have long range sensors, such as JSTARS, you can limit their acquisition by using a depth that is shallower than their capability. The Depth is also use when drawing the Target Map, so a greater depth effectively increases the scale of the Target Map. Enter an appropriate value in the "Depth" field to meet your training requirements. The orientation of the target box is from the perspective of the sensors. Enter an appropriate value in the "Orientation" field.

3.3.1.5.2 Target mix

The "Start Time" field determines when SISTIM will begin sending targets. Normally you leave it at the default of 00:00:00 (Hours:Minutes:Seconds). The "Duration" field allows you to determine the time length for your scenario. The minimum time is one hour and it can be increased to 99 hours in six minute increments. Enter an appropriate value in the "Duration" field. The "Density" field lets you set the intensity of the scenario. The targets will be evenly distributed between all of the sensors. Enter an appropriate number in the "Density" field. By default, SISTIM will send in all of the targets as fire requests. You can modify this and have a percentage of the targets submitted as intelligence reports. To do this click on "Message Setup…". The Message Setup form lets you set the mix of Calls for Fire and Intelligence inputs. Enter the percentage of each type of input into the appropriate "Density (%)" field. The two numbers must total 100. If you want to revert to all Calls for Fire, either uncheck the Target Data box or click on "Cancel". Set the appropriate values to meet your training requirements and then click on "OK" to close the form.

3.3.1.5.3 View/Edit Target List

Each time you want to build a target list you have to click on "Build Target List" This will build a new target list based on the construction parameters you have entered. You can view the Targets as a list, on a map or a combination of both. Normally you should use the combination. To do that you click on "Show Target List…". This will create the Target List form. This shows all of the information for the target. If you click on "Show Map" the graphical map will be created as a child of the Target List. When you do this each target you place your cursor over will highlight the target in the Target List and scroll the list so the target is at the top of the form. To select a target, click on it. The selected target turns red. You can Edit, Copy, or Delete the selected target by clicking the appropriate button. You can change the target's location by either editing it or dragging it. To drag a selected target, click and hold on it with the middle button and then drop it where you want it. The Target List will immediately update to show you the new location. When you are satisfied with your changes, click "OK" on the Target Map form and on the Target List form to save your changes. Now that you have created a Target List that meets your needs you need to replace your existing TOEL (blank or previous creation) with this one. Click on "Replace TOEL" to implement your changes, click on "Cancel" to discard them. Either button click will close the Scenario Setup form.

3.3.1.6 Map/TOEL Relationship

When creating a Generic Fire Request or Geometry on the TOEL, you are given the option to copy them to the Map. The Map takes a new copy of these objects and keeps them on a list of its own. So when editing the same object again from the Map, you will not be altering the same object in the TOEL, and visa versa. If you wish to update the object on the Map from the TOEL, you should edit the object, and select Copy to Map. This will replace the same named, same type, object on the Map with a new copy from the TOEL. If you wish to place a copy of an object from the Map onto the TOEL, then you would edit it from the Map, select Copy to TOEL, and when confirmed, a new Message Event will be placed onto the TOEL. In this case the original and the new copy would both be on the TOEL, so you may want to remove one of them if needed. This allows you to build a TOEL from the Map if you want.

There are two types of objects that are displayed on the Map, but they are not just copies on the Map, but are the direct object. The first one is Units. Units can be positioned on the Map and their location will change in the actual Unit. Units may also be edited directly from the Map. The second object that is not a copy is the Scenario Targets. These appear as red crosses on the map. If you change them you are actually changing the targets built in the Scenario Dialog. If you later put the Scenario targets onto the TOEL, they will retain your changes to location and target type.

3.3.1.7 Creating an Event List

After you have created the scenario targets you can expand the scope of your exercise by adding in additional messages. You do this by accessing the Event List. To get to the Event List, click on the "TOEL" menu on the Main Menu Bar and select "Edit Event List". This will create the Event List form.

3.3.1.7.1 New Message

Mostly you will create new messages. To create a new message click on "New", which will create the Message Protocol Available form. Highlight Package 11 and then on "OK", which will create the Package 11 Available Message List. The actual message creation is almost identical to using the CMP within AFATDS. For SISTIM messages you need create an "Origin"(sender) and "Destinations" (receivers). They both must be on the same network. To set the Origin click on "Select" to create the Select Unit Form. Highlight the simulated unit you want to initiate the message and then click on "OK". To set the destination unit(s) you click on "Add" which creates the Select Unit form again. Highlight the unit and then click on "OK". If you select multiple units and want to review them, click on the Destination Units field and use the up and down arrows to "scroll" through the list. If there are multiple destination units, on the Event List you will see a "…" after the first unit listed. You should also establish the Xmit Time, hours, minutes, and seconds ,that you want the message sent out. The time will default to 00:00:00, which is the beginning of the scenario.

3.3.1.7.2 Copy Message

Copying a "Master Message" is a great way to say time. Create the initial message and save it. Highlight the message and then click on "Copy". This will create a copy of the message at the same time as the original. Highlight the message and then click on "Edit". This will bring up the copy of the message and you can change what is appropriate, the sending unit, the time or something else. This allows you to do things such as create ammunition updates from multiple platoons quickly or multiple updates from an observer.

3.3.2 Copy an exercise

Creating a master exercise and then copying and modifying it to meet the needs of a specific training event. This allows you to create a database that has every unit you need in it one time and then create subsets of it for later use. To copy an exercise click on the System menu and select "Exercise…". This will create the Exercise List. Highlight the exercise you want to copy and then click on "Copy". This will create the New Exercise Data form. Enter the name for the new exercise and then click on "OK". This will create the new exercise and add the name to the exercise list. Highlight the name of the new exercise, click on "Load" and then "OK". This will load the exercise and close the Exercise List form and allow you to work with the exercise.

3.3.2.1 Modify networks

The first change you might want to make is changing your network structure. To edit your networks click on the Setup menu and select "Networks...". This will create the Net List form. From this form you can edit existing networks by highlight the network name and then clicking on "Edit". You edit the network in the same manner you create one. You can also create new networks from here. You create a new network here the same as you do for a new exercise.

3.3.2.2 Modify units

Most of the changes you will make will be to the units. The most common change will be making units "Inactive". To change a unit click on the Setup menu and select "Units". This will create the Unit List form. If you want to edit a unit, highlight the unit's name and then click on "Edit". This will create the Unit Setup form that is appropriate for the unit. Make the desired changes and then click on "OK".

3.3.2.3 New TOEL

Once you have made any changes to the units and communications setup, you can then make any changes to the TOEL target list. Any changes you make will result in the creation of a new set of targets which will not match the previous set. To make changes to the TOEL, Click on the Setup menu and select TOEL. This will create the Scenario Setup form. Here you can change the location of the Target area and its width and orientation. You can change the start time and duration of the exercise and the number of targets generated per hour. If you want to review or change the mix of calls for fire versus artillery target intelligence reports, click on "Message Setup" to access the Message Setup form. If you make any changes and want them to take effect you must click on "Build Target List". After you build the target list you can view or modify the targets the same as you do when you initially create targets. Once you are done, click on Replace TOEL to put the new targets onto your Event List and close the form.

3.3.2.4 Modify Event List

An alternative to updating the TOEL is to change the Event List. This would be very useful if you are creating a series of evaluations and you want to tailor the messages so they go to the correct unit, use the unit's associated target number block, or something else that needs to be specific for the unit. To access the Event List, click on the TOEL menu and select "Edit Events List". To change a message, highlight it and then click on "Edit". This will bring up the Package 11 message form and you can change any of the parameters of the message. Once you have made the changes to the message, click on "OK" to save the changes to the message. Once you have modified all the messages you need to, click on "OK" to close the form, changes are made as each message is closed.

3.3.3 Execute an Exercise

Executing an exercise is the final step. You can operate SISTIM in two different modes. In the stand-alone mode, SISTIM operates automatically and you just check it occasionally to make sure no messages have failed. In the SISTIM Interactive mode, there is an operator assigned to the SISTIM work station. This operator is responsible for providing the operator input for the simulated units. He responds to requests for information and orders from the live elements

3.3.3.1 Establish Communications

First thing you typically want to do is establish communications from SISTIM to the live units to verify connectivity. From AFATDS you can do a Test Message. From SISTIM you can create and send a Free Text message. You do not want the exercise running. Click on the Outgoing menu and select "New" and then "Package 11". This will create the Package 11 Available Message form. Select Free text from the list and then click on "OK". Select an Origin Unit that is common to as many of the live units as possible and select one of the live units as the Destination, add a short message and then click on "OK". This will place the message into the outgoing list. If you need to communicate with multiple units, highlight the message, click on the Outgoing menu and select "Copy". This will create a copy of the message. Highlight the message again, click on the Outgoing menu and select "Edit". This will open the message in the Package 11 message format. You can change the Origin and Destination units. Click on "OK" to close the message and save the changes. To individually verify communications, highlight the message and then click on the Outgoing menu and select "Transmit". This will send out the message. When you transmit the message, it is not removed from the list. This allows you to reuse a message if you want to.

3.3.3.2 Maintain Communications

During the course of the exercise you need to periodically verify that there are no lost messages. Within SISTIM you can monitor if any messages have failed by checking the "Pending/Failed Xmits" counters located above the outgoing message list. The second subfield lists the number of messages that have failed. To review and resend the messages, click on the Outgoing menu and select "Transmit Status…". This will open the Transmission List form. This form shows the status of all messages that have not reached their destination units. When this form is open you can not access any other portions of the Exercise Controller form. If a failed message is in the Transmission List and you want to try and resend it, highlight it and then click on "Retransmit". Before doing this make sure the cause of the communications failure is fixed.

3.3.3.3 SISTIM interactive mode

The SISTIM Interactive mode allows you to maximize your resources. You use SISTIM's opfac logic to generate the standard responses to fire mission messages and an operator responds to situations that are not handled by the opfac logic. An operator can move units around the battle field, send resource updates, change the availability status of a unit, and do anything that a normal live unit would do. To operate in this mode the operator needs to monitor the Incoming Message list and review any incoming messages that are not handled by the opfac logic. When this type of message is received, the operator must review the message by highlighting the message, clicking on the Incoming Message menu and selecting "View". This will bring up the message in a view only mode in the Package 11 message template. If the message requires an action, the operator can create a new message using the Outgoing Message menu. The operator does not have to stop the scenario to do this. On the message template, if no "Xmit Time" is entered the message will be transmitted as soon as you click on "OK". Enter an appropriate "Xmit Time" if you do not want the message to go out immediately.

3.3.3.4 Monitoring the Outgoing Message List

Unlike previous versions of SISTIM, messages that are transmitted are not removed from the outgoing list. The list scrolls so the next message to be transmitted is at the top of the viewable portion of the list. In addition, there is a double "Arrowhead" in the left margin that marks the next message to be transmitted.

3.3.4 SISTIM SETUP AT AFATDS

In order to properly communicate with multiple units represented by SISTIM. A relay unit must be created and setup at AFATDS.

3.3.4.1 Creating the SISTIM Relay unit

Create the SISTIM Relay unit within AFATDS master unit list like you would any other unit. It should be a Package 11 System device. This unit can have any name and URN and does not need to be created at SISTIM. It will only be used as part of the communications setup at AFATDS.

3.3.4.2 Establishing Communications

Add the SISTIM Relay unit to your communications configuration as a primary direct addressee on the network. The "Internet Address" and "Destination Address" entered for the SISTIM Relay Unit in AFATDS must match the entries for the network used for communications at SISTIM. In other words if the UDPLAN network at SISTIM has an IP address of 170.100.100.100 then the IP address for the SISTIM relay unit at AFATDS will be the same. After you have established the SISTIM Relay Unit within the communication structure, setup the simulated units as Primary-Indirect through the SISTIM Relay Unit. The URN for these simulated units within AFATDS and SISTIM must be the same; this is how SISTIM resolves which unit to send the message to.

4. NOTES

4.1 OPERATOR TIPS 4.1.1 COMMUNICATIONS

Simulated Units will not relay messages they receive. Units must be on the same network in order to communicate with each other. SISTIM networks are Clear networks, but will communicate as a Secure network to AFATDS. Clear means SISTIM does not provide any additional encryption. Occasionally, when a network is created or reviewed, all the channels will reset to "Simulated". If this happens, attempt to reset the networks to the correct channel. If resetting the channel does not work, exit SISTIM, power down the system, and then restart it. This resets communications and you will be able to select the correct channels.

4.1.2 SAVING DATA

When building a scenario, it is wise to frequently save the data to the database on disk. This will reduce data losses due to power failures, etc.

4.1.3 PRINTERS

To be able to print reports from SISTIM, the local system must be configured appropriately. The system administrator must configure the printers appropriately and the printer must be connected to the system. Although an operator can always print data to text files and view printed information with a text file editor. Step by step instructions are provided in Appendix F.

4.2 SISTIM INSTALLATION

SISTIM can be installed on supported UNIX based systems. The steps are outlined in Appendix B. The system should be quiescent or single user mode, and the installation will need to be done as the ‘root’ user.

4.3 ACRONYMS

- A -

ACO	Airspace Control Order
AFATDS	Advanced Field Artillery Tactical Data System
AFCS	Automatic Fire Control System
AFU FUS	Ammunition Fire Unit-Fire Unit Status
AFU MFR	Ammunition Fire Unit-Mission Fired Report
AIRSUP REQ	Air Support Request
ASAS	All Source Analysis System
ATHS	Airborne Target Hand-off System
ATI ATR	Artillery Target Intelligence-Artillery target Report
ATI IEWTC	Artillery Target Intelligence-Intelligence and Electronic Warfare Target Coordination Message
ATO	Air Tasking Order

- B -

BCS	Battery Computer System
BDE	Brigade
BN	Battalion
BOM	Bit Oriented Message format

- C -

CBRR	Counter Battery Radar Q-37
CFF	Call For Fire
CFL	Coordinated Fire Line
CHA	Chemical Hazard Area
Cn Btry	Cannon Battery
CNO	Can Not Observe
COLT	Combat Observation/Lasing Teams
COM	Character Oriented Message format
COMINT	Communications Intelligence
CP/FDC	Command Post/Fire Direction Center
CPH	Copperhead
CRI	Coordinated Illumination
CROS	Crossover Geometry

- D -

DAA	Damage Avoidance Area
DC	Danger Close
DCT	Digital Communication Terminal
DMD	Digital Message Device
DNL	Do Not Load
DNO	Did Not Observe
DSA	Dead Space Area

- E -

ELINT	Electronic Intelligence
EOM	End of Mission
EPLRS	Enhanced Position Location and Reporting System

- F -

FASCAM	Family of Scatterable Mines
FCS	Fire Control System
FDDM	Fire Direction Data Manager
FDS	Fire Direction System
FED	Forward Entry Device
FFE	Fire For Effect
FIST	Fire Support Team
FL	Flash Ranging
FL	Front Line
FLOT	Front Line of Troops
FM	Fire Mission
FO	Forward Observer
FOCMD	Forward Observe Command
FOWOL	Forward Observer Without Laser
FSCL	Fire Support Coordination Line
FSCM	Fire Support Coordination Measure
FSE	Fire Support Element
FSO	Fire Support Officer

- G -

GDU	Gun Display Unit
GSM	Ground Station Module
GSRA	Ground Surveillance Radar
GT	Gun Target
G/VLLD	Ground/Vehicular Laser Locator Designator

- H -

HE	High Explosive

- I -

ICM	Improved Conventional Munitions
IR	Airborne Infrared

- J -

JSTARS	Joint Surveillance Target Attack Radar System

- L -

LRRP	Long Range Reconnaissance Patrol
LSFZ	Laid FASCAM Safety Zone

- M -

MBC	Mortar Ballistic Computer
MLRS	Multiple Launch Rocket System
MMS	Mass Mounted Sight
MTO	Message To Observer

- O -

OBCO	Observer Location
OBSR	Observer Not Artillery
OPFAC	Operational Facilities
OPS	Operations

- P -

PI	Photo Interpretation
Plt FDC	Platoon Fire Direction Center
POW	Prisoner of War
PRAND	Prone and Standing troops in target area
PROVER	Prone with overhead Cover troops in target area
PRUG	Prone and Dug-in
PSFZ	Planned FASCAM Safety Zone

- Q -

Q36	Counter Mortar Radar Model Number
Q37	Counter Battery Radar Model Number

- R -

RAAMS	Remote Anti Armor Mine System
RFA	Restrictive Fire Area
RFFE	Repeat Fire For Effect
RFL	Restrictive Fire Line
RKTMSL	Rocket Missile
RPV	Remotely Piloted Vehicle

- S -

SISTIM	Simulator/Stimulator
SORING	Sound Ranging
SLAR	Side Looking Airborne Radar

- T -

TA	Target Acquisition
TACAIR	Tactical Air
TACFIRE	Tactical Fire Direction System
TCIM	Tactical Communication Interface Module
TGTB	Target Base
TOEL	Time Ordered Events List
TOF	Time of Flight
TOT	Time On Target
TTF	Time to Fire

- U -

USMTF	US Message Text Format

- V -

VA	Vertical Angle
VI	Vertical Interval
VT	Variable Time Fuse

- W -

WP	White Phosphorus

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APPENDIX A

UNIT MESSAGES

A. UNIT MESSAGES

1. PACKAGE 11 MESSAGES

Msg Number	Message Name
K01.50	Free Text
K02.01	Check Fire
K02.02	Reg Data
K02.03	Meteorological Data
K02.04	Call For Fire
K02.05	Shell, Bomb, Mortar Report
K02.06	Observer Notification
K02.07	Survey Control Point
K02.08	Schedule of Fires
K02.09	Target Data
K02.10	Mission/Cancellation
K02.11	Ammunition Inventory
K02.12	On-Call Fire Command
K02.13	Mission Clearance
K02.14	Message to Observer
K02.15	Coordination Measures
K02.16	End of Mission and Surveillance
K02.17	Mission Summary
K02.18	Fire Unit Capabilities
K02.19	Artillery Intelligence Query/Standing Request for Target Information
K02.20	Survey Control Point Information Request
K02.21	Clearance to Fire
K02.22	Subsequent Adjust
K02.23	Execute Fire Plan
K02.24	Mission Notification
k02.25	EOM Notification
K02.27	Tactical Air Request
K02.31	Mission Request Rejection
K02.32	Tactical Air Request (TAR) Acceptance
K02.33	Aircrew Briefing
K02.34	Aircraft On-Station
K02.35	Aircraft Depart IP
K02.36	Air Mission Update

K02.40	Launcher Orders
K02.41	Geographic Ref
K02.42	Commander's Fire Unit Guidance
K02.43	Fire Mission Guide
K02.44	Commander's Target Acquisition Guidance
K02.45	Howitzer Command
K02.46	Reply/Remarks
K02.47	Rocket/Missile Operational Status Update
K02.48	Assignment Data
K02.49	Munitions Effects
K02.50	Observer Status
K02.51	Unit Situation Report
K02.52	Request for Report
K02.53	Target Data Entry
K02.54	Deployment Command
K02.55	Mutual Data Xchange
K02.56	Fire Unit Tac Sched
K02.58	Abrn Fire Mission
K05.09	CDR
K05.10	EDR
K05.11	Strike Warning
K05.15	Field Orders
K07.01	MEDEVAC

2. JVMF MESSAGES

Msg Number	Message Name
K01.01	Free Text
K01.03	Information Request Message
K01.04	Geographic Reference Data
K02.01	Check Fire
K02.02	Registration Data
K02.03	Meteorological Data
K02.04	Call For Fire
K02.05	Shell, Bomb, Mortar Report
K02.06	Observer Notification
K02.07	Survey Control Point
K02.08	Schedule Of Fires
K02.09	Target Data
K02.10	Fire Plan Mission/Fire Plan Cancellation
K02.11	Ammunition Inventory
K02.12	On-Call Fire Command
K02.13	Mission Clearance
K02.14	Message To Observer
K02.15	Fire Support Coordination Measures
K02.16	End Of Mission and Surveillance
K02.18	Fire Unit Status
K02.19	Target Query/Standing Request for Information
K02.20	Survey Control Point Information Request
K02.22	Subsequent Adjust
K02.23	Fire Plan Orders
K02.24	In Progress Mission Notification
K02.27	Close Air Request
K02.28	CAS Mission Battle Damage Assessment Report
K02.31	Mission Request Rejection
K02.32	Close Air Request (TAR) Acceptance
K02.33	CAS Aircrew Briefing
K02.34	Aircraft On-Station
K02.35	Aircraft Depart Initial Point
K02.36	Aircraft Mission Update
K02.37	Observer Readiness Report
K02.38	Airborne Fire Mission
K02.39	Fire Support Mission Planning
K02.40	Howitzer Message
K02.41	Fire Unit Deployment Command
K02.42	Fire Plan Assignment Data

K02.43	Rocket/Missile Munitions Effects Data
K02.44	Target Element Data Entry
K02.45	Rocket Missile Launch Order
K02.46	Rocket/Missile Operational Status Update
K02.47	Launcher Configuration Update
K02.48	Commander's Fire Unit Guidance
K02.49	Commander's Fire Mission Guidance
K02.50	Commander's Target Acquisition Guidance
K02.51	Fire Support Reply/Remarks
K02.54	Howitzer Communication Initialization Data
K03.03	Forecast Met Data
K05.01	Position Report
K05.14	Situation Report
K05.15	Field Orders

3. VMF R5 MESSAGES

Msg Number	Message Name
K01.01	Free Text
K01.03	Information Request Message
K01.04	Geographic Reference Data
K02.01	Check Fire
K02.02	Registration Data
K02.03	Meteorological Data
K02.04	Call For Fire
K02.05	Shell, Bomb, Mortar Report
K02.06	Observer Notification
K02.07	Survey Control Point
K02.08	Schedule Of Fires
K02.09	Target Data
K02.10	Fire Plan Mission/Fire Plan Cancellation
K02.11	Ammunition Inventory
K02.12	On-Call Fire Command
K02.13	Mission Clearance
K02.14	Message To Observer
K02.15	Fire Support Coordination Measures
K02.16	End Of Mission and Surveillance
K02.18	Fire Unit Status
K02.19	Target Query/Standing Request for Information
K02.20	Survey Control Point Information Request
K02.22	Subsequent Adjust
K02.23	Fire Plan Orders
K02.24	In Progress Mission Notification

K02.25	End of Mission Notification
K02.27	Close Air Request
K02.28	CAS Mission Battle Damage Assessment Report
K02.31	Mission Request Rejection
K02.32	Close Air Request (TAR) Acceptance
K02.33	CAS Aircrew Briefing
K02.34	Aircraft On-Station
K02.35	Aircraft Depart Initial Point
K02.36	Aircraft Mission Update
K02.37	Observer Readiness Report
K02.38	Airborne Fire Mission
K02.39	Fire Support Mission Planning
K02.40	Howitzer Message
K02.41	Fire Unit Deployment Command
K02.42	Fire Plan Assignment Data
K02.43	Rocket/Missile Munitions Effects Data
K02.44	Target Element Data Entry
K02.45	Rocket Missile Launch Order
K02.46	Rocket/Missile Operational Status Update
K02.47	Launcher Configuration Update
K02.48	Commander's Fire Unit Guidance
K02.49	Commander's Fire Mission Guidance
K02.50	Commander's Target Acquisition Guidance
K02.51	Fire Support Reply/Remarks
K02.54	Howitzer Communication Initialization Data
K03.03	Forecast Met Data
K05.01	Position Report
K05.14	Situation Report
K05.15	Field Orders

4. JVMF-C MESSAGES

Msg Number	**Message Name**
K01.01	Free Text
K01.03	Information Request Message
K01.04	Geographic Reference Data
K02.01	Check Fire
K02.02	Registration Data
K02.03	Meteorological Data
K02.04	Call For Fire
K02.05	Shell, Bomb, Mortar Report
K02.06	Observer Notification
K02.07	Survey Control Point

K02.08	Schedule Of Fires
K02.09	Target Data
K02.10	Fire Plan Mission/Fire Plan Cancellation
K02.11	Ammunition Inventory
K02.12	Command to Fire
K02.13	Mission Clearance
K02.14	Message To Observer
K02.15	Fire Support Coordination Measures
K02.16	End Of Mission and Surveillance
K02.18	Fire Unit Status
K02.19	Target Query/Standing Request for Information
K02.20	Survey Control Point Information Request
K02.22	Subsequent Adjust
K02.23	Fire Plan Orders
K02.24	In Progress Mission Notification
K02.27	Close Air Request
K02.28	CAS Mission Battle Damage Assessment Report
K02.31	Mission Request Rejection
K02.32	Close Air Request (TAR) Acceptance
K02.33	CAS Aircrew Briefing
K02.34	Aircraft On-Station
K02.35	Aircraft Depart Initial Point
K02.36	Aircraft Mission Update
K02.37	Observer Readiness Report
K02.38	Airborne Fire Mission
K02.39	Fire Support Mission Planning
K02.40	Howitzer Message
K02.41	Fire Unit Deployment Command
K02.42	Fire Plan Assignment Data
K02.43	Rocket/Missile Munitions Effects Data
K02.44	Target Element Data Entry
K02.45	Rocket Missile Launch Order
K02.46	Rocket/Missile Operational Status Update
K02.47	Launcher Configuration Update
K02.48	Commander’s Fire Unit Guidance
K02.49	Commander’s Fire Mission Guidance
K02.50	Commander’s Target Acquisition Guidance
K02.51	Fire Support Reply/Remarks
K02.54	Howitzer Communication Initialization Data
K02.99	Artillery Rearm Order
K03.03	Forecast Met Data
K05.01	Position Report
K05.14	Situation Report

K05.15	Field Orders

5. USMTF MESSAGES

Msg Number	Message Name
A423	ORDER
A659	ATO
A661	REQSTATASK
B220	AFU.FUS
C120	MIJIFEEDER
C121	TACELINT
C130	MISREP
C241	AFU MFR
C281	ATI ATR
C400	SITREP
C443	NBC3
C447	NBC4
C488	NBC1
C501	NBC5
C506	NBC6
C507	NBC CDR
D210	FM CFF
D281	ATI.TCRIT
D670	AIRSUPREQ
E400	PLANORDCHG
E500	AIREWARN
F002	GENADMIN
F014	RI
F015	RRI
F541	AKNLDG
F756	ACO
G131	INTSUM
G489	NBC2
S201	SPRT.GEOM
S202	FP ATL
S305	TIDAT
S308	ATI IEWTC
S309	ENSIT
S507	RESOURCES
S508	SUPCONSTRAINT
S509	CTIL

6. GDU/MCA MESSAGES

Msg Number	Message Name

GDU.01	Common Data
GDU.02	Common Special Instructions
GDU.03	Individual Gun Data
GDU.04	Control Data
GDU.05	Request for Data
GDU.06	Response
MCA.01	Ammunition On-Hand
MCA.02	MCA Command
MCA.03	M94 MVS Command Recording
MCA.04	MVV Retrieval Data
MCA.05	MCA Status
MCA.06	MCA Report
MCA.07	Howitzer/Tube Identification

7. GENERIC MESSAGES

Msg Number	**Message Name**
1	Fire Request
2	ATI
3	EOM
4	Geometry
5	FO Command
6	Unit Status
7	MET

APPENDIX B

SISTIM INSTALLATION

B. SISTIM INSTALLATION

SISTIM is available for installation with CDROM.

B.1 SISTIM SINGLE CD LOAD/CONFIGURE INSTRUCTIONS

B.1.1

The single CDROM load for SISTIM is compatible for both the CCU2 (AXi), and the UCU platform. A hard drive of 4GB or larger is required.

B.2 To load the SISTIM follow the procedures listed below:

B.2.1 Place the CDROM in the CDROM drive.

B.2.2 On the keyboard hold down the (**Stop)** key and then press the (**a)** key, this will give you and OK prompt on the screen.

B.2.3 Type “boot cdrom” and press return.

B.2.4 If you are prompted for a password, use **AFATDS**.

B.2.5 The CDROM will boot.

B.2.6 After the system boots you will be prompted for a **HOSTNAME**, the name selected should be unique within the LAN address subnet to be used. Listed below are some examples:

sistim
sistim01
sistim02
sistim03

B.2.7 The next prompt you will receive will be for a **LAN IP** address.

IP Information:

B.2.7.1 IP Address - The IP address is the most critical element to a host (your box/machine/platform/computer). This address must be unique for each host in a network. If a user is going to communicate on the global Internet, they must have a unique address for the entire Internet. A systems administrator (**USMC** = G-6/S-6, **Army** = Signal Officer) issues an address with this fact in mind.

B.2.7.1.1 An IP address is four decimal numbers between 1 and 254 separated by periods. For example, 192.156.2.169. The

user should know the setting of their IP address in the configuration in case they ever have to call in a network problem

B.2.7.1.2 Users should never change their IP address without consulting the network administrator as this can easily create problems.

B.2.7.2 Subnet Mask - There is another part of the addressing component of an IP host that is not carried as part of the IP header, but is very critical to the operation of the TCP/IP networking on each host. This component is called the Subnet mask.

B.2.7.2.1 The Subnet mask is used by the IP routing setup of the user's host to determine if the target they are trying to reach is on their physical LAN within their network, but not on the same physical LAN, or in a totally different network. **How to reach the target, using a route that matches the target IP and subnet.**

B.2.7.2.2 Users should never change the Subnet mask without discussing this need with their network administrator.

B.2.8 Once the LAN IP is entered the system will configure. This takes between (30-45 minutes), depending on your platform.

B.2.9 You will be prompted for a system login: enter **sistim**

B.2.10 Next you will be prompted for a password: use **sistim**.

B.2.11 Wait for X windows to load.

B.3 You can now start the SISTIM program.

Once SISTM is powered up the following toolbar will appear at the bottom of your screen. SISTIM can then be started by either double clicking on the ***SISTIM*** icon below:

Or by clicking on the up arrow directly above the ***SISTIM*** icon and selecting it from the following pull down menu:

B.4 Once SISTIM is running you should check that all devices are present, and configured correctly. ***To perform these checks you must have at least one Network, and one Unit built in SISTIM*** or **use the default database.**

B.4.1 On the SISTIM toolbar select SETUP .

B.4.2 Next select NETWORKS.

B.4.3 Select NEW or EDIT. ***This will allow you to add new nets to either the LAN or TCIM's***.

B.4.4 As you build a net, ensure that you select the "Set to Default" button prior to editing any net parameters.

B.4.5 Once you have built/edit a Net for each device, you must now build a Unit.

B.4.6 Save the exercise now. **(This step, although not required is strongly recommended)**

B.4.7 On the SISTIM toolbar select SETUP.

B.4.8 Next select UNITS.

B.4.9 Select NEW. ***This will allow you to build new Units.***

B.4.10 Once you have completed the above units and net creations, select TOEL, and RUN EXERCISE.

B.4.11 Now select SETUP, and NETWORKS. This will display a listing of Networks that have been built and there status. The three possible statuses are:

DISABLED

ENABLED

ENABLED/SIMULATED **(This net would not have real external LAN or TCIM)**

The status that should be displayed is ENABLED, this can sometimes take a few seconds to change from Disabled to Enabled.

If the networks display ENABLE you are now ready to save your configuration, and start your exercise. ***However, if any Networks fail to Enable you must exit the TOEL and reconfigure those Nets***, **or exit SISTIM and run SISTIM AUTOGEN _DEVICE CONFIGURATION again.**

APPENDIX C

SCENARIO QUICK HELP

C. SCENARIO QUICK HELP

C.1 FLOT Center

Battle Field 'Front Line Own Troops'
Consist of the following four UTM coordinate fields from left (top) to right (bottom):

Field Name	Min	Max	Startup
Long Easting	0	9	6
Short Easting	0	99999	50000
Long Northing	0	999	006
Short Northing	0	99999	50000

C.2 Grid Zone

Zone in which the battle field is to be located.
Used in the conversion of UTM coordinates to Lat/Long coordinates.

Min	Max	Startup	Exception
- 60	60	30	0

C.3 Battle Field Setup

Used in conjunction with the FLOT Center to setup the battlefield width, depth, and direction in which friendly forces are oriented.

Field Name	Min	Max	Startup
Width (Km)	2	99	10
Depth (Km)	2	99	20
Orientation (mils)	0	6399	3200

C.4 Start Time

Used to set the start time (HH:MM:SS) of the Time Ordered Events List (TOEL) for the current target list. The start time can be set at any time (before or after the target list is

generated - refer to **C.7 Build Target List**). This is particularly useful when adding the current target list, with a new start time, to the existing TOEL (refer to **C.10 Add To TOEL**).

Field Name	Min	Max	Startup
HH (hours)	00	99	00
MM (minutes)	00	59	00
SS (seconds)	00	59	00

C.5 Duration And Density

These fields serve two purposes. The first is to determine the number of targets to be generated. The second is to allow the user to adjust the transmit time between targets before or after the target list is generated (refer to **C.7 Build Target List**).

Field Name	Min	Max	Startup
Duration (Hrs)	0.1	99.0	1.0
Density (Tgts/Hr)	0	600	100

Determining The Number Of Targets
If the Duration is less than or equal to 1 hour, the number of targets generated is equal to the Density. Otherwise, the number of targets generated is equal to the Duration x Density.

Adjusting The Transmit Time Between Targets
Before sending the current target list to the TOEL, the Duration or Density can be adjusted to increase or decrease the transmit time between targets.

Increasing the Density while keeping the Duration constant decreases the transmit time between targets. Likewise, decreasing the Duration to a value less that 1.0 while keeping the Density constant has the same result.

Decreasing the Density while keeping the Duration constant increases the transmit time between targets. Likewise, if the Duration is less than 1.0, increasing the Duration to a higher value (less than 1.0) has the same result.

Note that increasing or decreasing the Duration to values greater than 1.0 while holding the Density constant has no effect on the transmit time between targets. For desired results, increase or decrease the Density.

C.6 Message Setup...

Pressing this button launches the Message Setup dialog. This dialog allows the user to select/deselect Call For Fire and Target Data messages for both PK11 and JVMF protocols. Each message selection contains a Density field that enables the user to select the percentage of each message allocated during target generation. If one

message is deselected and the other message selected, the Density for the deselected message is automatically set to 0. Likewise, the Density for the selected message is automatically set to 100.

Field Name	Min	Max	Startup
Call For Fire Density	1	99	50
Target Data Density	1	99	50

C.7 Build Target List

Pressing this button automatically generates a new target list. If no errors are encountered (refer to **C.12 Alert And Status Messages**) the Target List dialog is launched showing the list of generated targets. Targets are generated using the Scenario (FLOT Center, Battle Field Setup, Duration and Density) and Message Setup parameters entered by the user, along with the setup of each unit in the Unit List. Only valid units (see below) are used in automatic target generation.

Valid Units – a unit is considered valid when all of the following conditions exist:
Unit Role is Simulated.
Status is Active
Command HQ is an entry other than “None”
The Unit has an observer number
The Unit protocol is either PK11 or JVMF
Only the following Unit Types and Devices are used in target generation:

Unit Type	Device
Forward Observer	FOS
Fire Support Team	FOS
FIREFINDER Counter-Artillery Section	FF
FIREFINDER Counter-Mortar Section	FF
Air Observer	ATHS
JSTARS	JSTARS

C.8 Show Target List...

Pressing this button launches the Target List dialog. Information for each target includes location (Easting & Northing UTM coordinates), Unit Type/Device, Description (target type, subtype), and Message. The user can add new targets to the target list.

Furthermore existing targets can be copied, edited, or deleted. The Target Map dialog can be launched from this list.

C.9 Show Map...

Pressing this button launches the Target Map dialog. The Target Map dialog provides a graphical representation of all targets on the battlefield. The user can add new targets to the target map. Furthermore existing targets can be dragged to a new location, copied, edited, or deleted.

Generated targets are placed on the map in a tactically sound and doctrinally correct manner in accordance with the Unit Type/Device that each target is assigned to. Targets are randomly placed on the map based on a 'Distance From FLOT' criteria as follows:

Unit Type	**Device**	**Distance From FLOT (Km)**
Forward Observer	FOS	0.0 - 4.5
Fire Support Team	FOS	0.0 - 7.5
FIREFINDER Counter-Artillery Section	FF	10.0 - 50.0
FIREFINDER Counter-Mortar Section	FF	4.0 - 24.0
Air Observer	ATHS	0.0 - 99.0
JSTARS	JSTARS	- 99.0

C.10 Add To TOEL

Pressing this button adds the current target list to the existing TOEL events. If no errors are encountered (refer to **C.12 Alert And Status Messages**) the Scenario Setup dialog automatically closes.

Before pressing this button, the user should close the Scenario Setup dialog (press the Cancel button) then edit each valid unit's Target Number Block in the Unit List. The purpose of this is to prevent the generation of duplicate target numbers when the current target list is added to the TOEL.

C.11 Replace TOEL

Pressing this button replaces the events on the existing TOEL with the current target list. If no errors are encountered (refer to **C.12 Alert And Status Messages**) the Scenario Setup dialog automatically closes.

C.12 Alert And Status Messages

Alert messages are located at the top of the dialog and are used to indicate input and target generation errors. TOEL Status messages are located above the Add To/Replace TOEL buttons and are used to indicate errors encountered when attempting to place the current target list on the TOEL.

Alert Messages	Reason
Invalid FLOT/Grid Zone Input(s)!!	Input errors in the FLOT Center and/or Grid Zone fields.
Invalid Battlefield Setup Inputs(s)!!	Inputs errors in the Battlefield Setup area (Width, Depth, Orientation).
Invalid Time/Density Input(s)!!	Inputs in the Start Time, Duration, and/or Density fields.
No Valid Units Found!!	If no valid units are present in the unit list, this message will appear when this dialog is started. All buttons except for Message Setup and Cancel are deselectable.
Target Validation – No Unit Device	None of the units in the Unit List have the correct Unit Tactical Role and/or Unit Device for the scenario.
No Targets - Out Of Unit Range	None of the targets generated fall within range of the available valid units.
Invalid Message Setup!!	Call For Fire and Target Data Density fields do not total 100%
Must Select One PK11 Message!!	Neither PK11 Call For Fire or Target Data selected.
Must Select One JVMF Message!!	Neither JVMF Call For Fire or Target Data selected.

TOEL Status Messages	Reason
Target List Empty!!	No targets in the current target list.
TOEL Time Exceeds 99:59:59 With This Setup!!	The Start Time setting is set to high for the number of targets being placed the TOEL.
Set Target Density To 1 Or Higher!!	Must have a Target Density of a least 1 target per hour before sending the current target list to the TOEL.

APPENDIX D

USMTF CONDITIONS

D. USMTF CONDITIONS

4.5.8 Structural Notation.

The purpose of this paragraph is to specify a computer processable notation by which the structure of each message can be strictly defined by consistent application of the rules governing the form and content of Message Text Formats (MTF) as constructed of segments, sets, and fields. For example, the notation provides a mathematical expression for specifying that two sets in a message are mutually exclusive (may not both be used in the same message). By interpreting the notation, automated systems designers and managers will have a consistent interpretation of the message design thereby ensuring that each MTF is structurally correct prior to its transmission. In addition, automated systems can validate the structure of received messages and thereby avoid possible contamination of their application data bases. A natural language equivalent can be derived from the notation to provide readability to the user of the documentation.

4.5.8.1 Expressions.

A mathematical expression is made up of a statement and an optional condition. The statement specifies the action or requirement, while the condition specifies the conditions under which the action is to occur. Each expression is associated with one MTF. As many expressions as are needed may be associated with a given MTF.

a. Statements. A statement defines completely the action that is to occur. It is made up of a left operand, a director, and an optional right operand.

(1) Left Operand. The left operand is the recipient of the action. There are four kinds of left operands.

(a) Set. < (n) > - A set operand is designated by enclosing the sequential set number in parenthesis. The set number is the sequence number of the set as it occurs in the MTF. For example, "(5)" indicates the fifth set in the message format.

(b) Segment. < (nS) > - A segment operand is designated by enclosing in parenthesis the number of the initial set of the segment followed by "S". For example, "(6S)" indicates the segment whose initial set is 6.

(c) Field Group. < (n)FG > - a repeating group of fields is designated by following the set designation with "FG". For example, "(28)FG" indicates the repeating group of fields in set 28. When the field group operand is used there is no space between the set and the field group, e.g., (28)FG.

(d) Field. < (n)Fm > - A field is designated by the containing set designator followed by "F" and the sequential field number. For example, "(7)F2" indicates the second field of

set 7. If the field happens to be one of a repeating group of fields it may be necessary to specify which occurrence of the repeating group of fields is being referenced. This is done by designating the field group as described in (c) above instead of simply specifying the set. For example, "(28)FG,LF6" indicates field 6 in the last occurrence of the repeating group of fields in set 28. The ",L" is a subscript. It is described in Paragraph 4.5.8.1c. When the field operand is used there is no space between the set and field, e.g., (7)F2.

(2) Directors. The directors indicate the kind of action that is to occur. There are two classes of directors. One class does not utilize a right operand and the other class requires a right operand. When directors are used they are documented by placing a blank space before and after the director.

(a) No Right Operand. These directors are used with a left operand only.

P - use of the left operand is prohibited within this occurrence of the containing set or segment. If the left operand is a set or segment on level 0 (not contained within a segment), its use is prohibited within the message.

M - Use of the left operand is mandatory within this occurrence of the containing set or segment.

MP - Use of the left operand is mandatory within this occurrence of the containing set or segment if the associated condition evaluates true, otherwise its use is prohibited. Note that this director requires that a condition be included in the expression.

(b) Right Operand Required. These directors Require that a right operand be used in the statement.

A - The left operand is assigned the value of the right operand. The left operand must be field and the right operand must be a single literal value. The principal use of this director is to enable automated systems to prepopulate fields in sets, such as the first field in sets MSGID and GENTEXT. The field should also be treated as if the "=" director had been used.

= - The left operand must be equal or contain the right operand. The exact meaning is largely dependent upon the operands themselves. For example, if the right operand is a FFIRN/FUDN designator, that FFIRN/FUDN must be selected as the alternative content for the field indicated by the left operand.

!= - The left operand must not equal or contain the right operand. The exclamation point (!) is a symbol representing negation. It is not used with any other director.

> - The left operand must be greater than the right operand.

< - The left operand must be less than the right operand.

@= - The left operand must occur the number of times indicated by the right operand.

@> - The left operand must occur greater than the number of times indicated by the right operand.

@< - The left operand must occur less than the number of times indicated by the right operand.

?< - The left operand must be less in length than indicated by the right operand. The principal use of this director is to restrict the size of a field to something less than the FFIRN/FUDN would normally allow.

(3) Right Operand. The right operand completes the statement. It usually represents a value being imposed upon or compared to the left operand.

(a) Set. < [n] > A set operand is designated by enclosing the sequential set number in square brackets. Unless modified by a subscript (see Paragraph 4.5.8.1c), it is interpreted to mean the number of occurrences of the set within its containing segment, if any.

(b) Segment. < [nS] > A segment operand is designated by enclosing in square brackets the number of the initial set of the segment followed by "S". Like the set, this usually means the number of occurrences of the segment within its containing segment.

(c) Field Group. < [n]FG > A group of fields operand is designated by following the set designator with "FG". Like the set and segment, this usually means the number of occurrences of the repeatable group of fields within its containing set.

(d) Field. < [n]Fm > A field is designated by the containing set designator followed by "F" and the sequential field number. If the set is the same as the set specified in the left operand, the set designator may be omitted from the right operand.

For example, "(6)F3 > F2" means that the value in field 3 of set 6 must be greater than the value in field 2 of the same set.

If the field happens to be one of a repeating group of fields it may be necessary to specify which occurrence of the repeating group of fields is being referenced. This is done by designating the field group as described in (c) above instead of simply specifying the set. For example, "[28]FG,LF6" indicates field 6 in the last occurrence of the repeating group of fields in set 28. The ",L" is a subscript. It is described in Paragraph 4.5.8.1c.

(e) Literal. < "literal" > A literal value is designated by enclosing it in quotes. This is used only when the left operand is a field. It represents a potential or actual field literal value. For example, '(6)F2!= "CAN"' means that the value of field 2 in set 6 may not be "CAN". An asterisk (*) may be used (outside of the quotes) in conjunction with a literal as a wild card. For example, '"g"*' indicates any literal value beginning with "g".

(f) Coded Value. < "code" > The value for a FFIRN/FUDN (field) that has a specified list of codes is indicated exactly the same as a literal.

(g) Numerics. < n > Numeric information is expressed simply by the appropriate numeric notation. This may express an actual numeric value, a number of occurrences, or an actual occurrence number as determined by the rest of the statement.

(h) Alternative Contents. < FFnnnnn-nnn > A FFIRN/FUDN number is indicated by "FF" followed by the FFIRN followed by "-" followed by the FUDN. Leading zeros for both numbers may be omitted. This is used to specify a specific FFIRN/FUDN for use in an alternative contents field.

(i) Remaining. < R > This single character operand means the number of spaces remaining on the line. It is normally used in conjunction with the director, " ?< ".

(j) Remaining, Modified. < R+n > This is the same as (h) above but arithmetically modified by a numeric increment or decrement.

b. Conditions. A condition specifies the circumstances under which the associated statement is to take effect. For example, when a set must always be used when another set is used, one might say "set 6 is mandatory if set 5 is used." In this example, "if set 5 is used" is the condition associated with the statement, "set 6 is mandatory." A condition is said to be evaluated, returning either true, false, or null. If it returns true, the statement is in effect and should be enforced. If it returns a false or null, the statement is not enforced. The null return differs from the false in that it indicates that the domain of the simple condition does not exist. This is significant only with the MP director. A return of false activates the "prohibited" feature of the director. A return of null should cause the entire statement simply to be ignored. For example:

(3) MP ([4]F2 = F3)

This states that set 3 is mandatory if field 2 of set 4 equals field 3 of set 4. Consider the case where the message contains a set 4 in which fields 2 and 3 are not equal. In that case a false would be returned and the use of set 3 would be prohibited. Now consider the case where set 4 is not used in the message. Fields 2 and 3 of set 4 cannot be compared because set 4 does not exist. In this instance a null would be returned because the domain in which the condition operates does not exist.

The entire statement is ignored. That is, set 3 is neither mandatory nor prohibited. Domains are discussed in more detail in Paragraph 4.5.8.2.

In the notation the entire condition is enclosed in parenthesis and immediately follows its associated statement. Note that statements can exist without conditions, but a condition must always be associated with a single statement.

There are two kinds of conditions: simple and compound.

(1) Simple Conditions. A simple condition is, in form, very much like a statement. It is made up of a left operand, an operator, and an optional right operand. It must be enclosed in parenthesis.

(a) Left Operands. The left operand is the recipient of whatever action is indicated by the operator. There are four kinds of left operands.

Set < [n] > A set operand is the same as a statement set operand except that it is enclosed in square brackets instead of parenthesis. This operand may also be modified by a subscript. (See Paragraph 4.5.8.1c)

Segment < [nS] > A segment operand is the same as a statement segment operand except that it is enclosed in square brackets instead of parenthesis. This operand may also be modified by a subscript. (See Paragraph 4.5.8.1c.)

Field Group < [n]FG > A field group operand is the same as a statement field group operand except that the set number is enclosed in square brackets instead of parenthesis. This operand may also be modified by a subscript. (See Paragraph 4.5.8.1c)

Field. < [n]Fm > A field operand is the same as a statement field operand except that the set number is enclosed in square brackets instead of parenthesis.

In the event that the set is the same as the set used in the left operand of the associated statement, the set designator may be omitted. Like the statement operand, it may be necessary to specify the repeating group occurrence of the field.

(b) Operators. The operators are equivalent to the directors in statements. They indicate the kind of action that is being assessed.

! - The negation operator. It is never used alone but only in conjunction with "=" and "@".

= - Does the left operand equal or contain the right operand? The exact meaning is largely dependent upon the operands themselves. For example, if the right operand is a FFIRN/FUDN designator, the assessment is if that FFIRN/FUDN has been selected as the alternative content for the field indicated by the left operand.

!= - Does the left operand not equal or contain the right operand?

@= - Does the left operand occur the number of times indicated by the right operand?

@> - Does the left operand occur a greater number of times than indicated by the right operand?

@< - Does the left operand occur a lesser number of times than indicated by the right operand?

> - Is the left operand greater than the right operand?

< - Is the left operand less than the right operand?

@ - Does the left operand occur? No right operand is used.

!@ - Does the left operand not occur? No right operand is used.

(c) Right Operands. The right operands are the same as the right operands of statements. Note that when a field is used the set designator may be omitted if it is the same set as the left operand of the statement. For example, (3)F2 = "-" (F1 = F3). This statement means that field 2 of set 3 must be a hyphen (-) if field 1 of that set is equal to field 3 of that set.

(2) Compound Conditions. A compound condition is one that is made up of two or more simple conditions. The simple conditions are evaluated and combined so that only one evaluation, true; false; or null, is returned from the compound condition. Each simple condition is evaluated in the order in which it occurs unless that order is altered by enclosing parenthesis.

(a) Logical Operators. The simple conditions making up a compound condition are connected by logical operators. There are only two such logical operators.

& - This is the logical and. A compound condition made up of two simple conditions connected by "&" is evaluated true only if both simple conditions evaluate true.

For example, ((F2 = "CAN") & (F3 = 7)) will evaluate true only if field 2 contains "CAN" and field 3 contains "7".

/ - This is the inclusive or. A compound condition made up of two simple conditions connected by "/" is evaluated true if at least one of them is true. Care must be taken in using the logical operator when the operators of the simple conditions are a "not" form, for the results can be surprising.

For example, ((F2 != "CAN") / (F2 != "ADD")) will always evaluate true. This is because at least one of the simple conditions must be true, regardless of what the value of F2 actually is.

Only in the event that all simple conditions are null will a null be returned for a compound condition.

(b) Multiple Operands. A shorthand notation is available when the simple conditions of a compound condition all use the same operator. This is the concept of multiple operands (on the same side of the operator) connected by logical operators. The

logical operator to be used is the same as that which would be used to connect the simple conditions. For example, ((F2 != "CAN") & (F2 != "ADD")) can be abbreviated as follows: (F2 != "CAN" & "ADD"). This can also be confusing. At first it appears that the multiple operand form in the example should always return true because the same field cannot be both "CAN" and "ADD" at the same time. The expanded form however, makes it clear that if the field has either of the indicated values, one of the simple conditions will be false, thus evaluating the entire compound condition to false.

c. Subscripts. Any segment may be repeated in a message, as may those sets and field groups that have been designated as repeatable. When such a segment, set, or field group is used as an operand (in either a statement or condition), it is sometimes necessary to specify which occurrence of the segment, set, or field group is being referenced.

Since a field in a repeating group of fields may also be omitted, it may also be necessary to specify a particular occurrence of a field. This is done by means of subscripts.

The subscript follows the segment, set, field group designator, or field and is separated from it by a comma (,). When subscripts are not used, the rules of domain are used. These are discussed in detail in Paragraph 4.5.8.2. Generally speaking, this means that corresponding occurrences are paired for comparison or assignment. For example, (F2 = F3) is a simple condition comparing field 2 with field 3 within the same set. By default this comparison is made only between the fields of each occurrence of a possibly repeatable set. In addition, if the fields are designated part of a repeatable group of fields, then the comparison is made for each repetition of the group of fields. This is always the case with columnar sets, because in those sets the fields are always repeatable as a group.

< n > - The nth occurrence. For example, "[6]F2,1" indicates the first occurrence of the second field of set 6. Note that the reference is to the field, not the set. "[6],1F2" indicates field 2 of the first occurrence of set 6. Care should be taken to note here the difference between the occurrence of the field and the field group. In the example shown, if the repeatable group of fields occurs 5 times, but field 2 contains a value (not a hyphen) in only the third and fourth occurrences of the group of fields, then the reference is to field 2 in the third occurrence of the field group. If it is desired to reference field 2 in the first occurrence of the repeatable group of fields, it should be done in this way: "[6]FG,1F2". It is only rarely necessary to draw this distinction.

0 - The zeroth occurrence. By convention, this is interpreted to mean "no occurrence". For example "(F2,0 = "CAN")" is the condition in which no occurrence of field 2 has the value "CAN".

L - The last occurrence. For example, '(13)F2 = "-" (F1 = F3,L)'. In this example field 3 is a repeatable field while fields 1 and 2 are not. The statement is that field 2 must be a hyphen if the value of field 1 is the same as the value of the last occurrence of field 3. Note that this subscript would never be used to modify the statement left operand.

P - Previous occurrence. For example, "(16) P ([12S],P [16] !@)". This states that set 16 is prohibited if it did not occur in the previous occurrence of the segment beginning with set 12.

N - Any occurrence. For example, "(29)F1 = [23]F1,N". This means that field 1 of set 29 must equal the value of some occurrence of field 1 of set 23.

T - This occurrence. This is used only to modify a repeatable set, segment, or field group operand. It means the number of this occurrence. For example, "(10)F1 = [10S],T" means that field 1 of set 10 must contain a value equal to this occurrence number of the segment beginning with set 10. That is, in the third occurrence of the segment beginning with set 10, the value of field 1 in set 10 must be "3". The instance in which alternative initial sets of the segment are involved is a special case. If the segment is designated using the lowest numbered initial set, all occurrences of the segment are to be considered. But if an alternate initial set of a higher number is designated, only those segments starting with the designated set should be used. For instance, in the example above, consider the case where the segment has alternate initial sets 9 and 10. If there are four segment occurrences started by set 10, the example would be as given, even through the example occurrence or the segment is number 7. But if the statement were altered to be "(10)F1 = [9S],T" the value required in field 1 of set 10 in the third occurrence of the segment initiated by set 10 would be 7 since this is actually the seventh occurrence of the segment.

A, B, C - Corresponding occurrence. These subscripts are used to indicate corresponding occurrences of different operands when such correspondence is nontrivial. For example,
"(8) M ([7] @)" means that set 8 is mandatory if set 7 occurs. It is considered trivial and therefore unnecessary to specify by subscript that if these sets are in a segment the domain of the action is within each occurrence of the segment. This concept of domain is discussed in more detail in Paragraph 4.5.8.2. But consider the following expression:

(15)F2 M ((F1 = [14]FG,AF1) & ([14]FG,AF2 !@))

In this case, the condition under which field 2 of set 15 is mandatory involves two fields in a repeatable group of fields in a different set. By using the subscript, "A", on both fields, it is explicitly made clear that the simple conditions must use the same (corresponding) occurrence of the repeating group of fields. The condition might be stated in this way: "...if field 1 of set 15 equals some occurrence of field 1 of set 14 and field 2 in the same occurrence of the repeating group of fields of set 14 is not used."

APPENDIX E

GENERIC MESSAGE TEMPLATES

E. GENERIC MESSAGE TEMPLATES

E.1 Description

E.1.1 Purpose

The Generic Message was designed with ease of use in mind. Several of the most common PK11 and JVMF messages were chosen and combined into the Generic Message type. The interface is less complicated than the traditional PK11 and JVMF message formats. The operator need only enter a few basic fields and when chosen for transmission a valid message will be generated and sent. The interface does not allow for every single type of any specific message to be created, nor is it intended to test specific field requirements of AFATDS. It has been designed to allow an operator to easily simulate the most basic capabilities of SISTIM messages.

E.1.2 Instructions

The Generic interface is similar to any other SISTIM message template. It is important to note that in order to have the desired type of message transmitted the originating units type is the determining factor. In other words if the unit to send the message is a PK11 type unit then a PK11 message will be generated from that generic message.

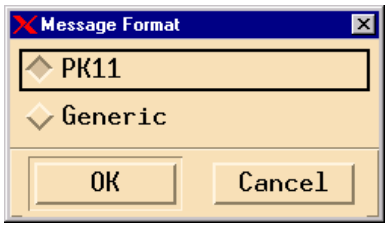
E.2 Generic Windows

E.2.1 FIELD TYPES

In the following section for each generic message each field has been briefly described. This will hopefully further ease the simplicity of the Generic Messages by describing each field individually. Most of the editable fields within the Generic Messages have help interfaces accessed by using the “SHIFT+BUTTON3” method similar to the PK11 Message template.

E.2.2 Copying generic messages

Generic Messages can also be copied to the Originating Units message specification using a very simple interface. From the Event List the operator should choose copy and the following window will be displayed.

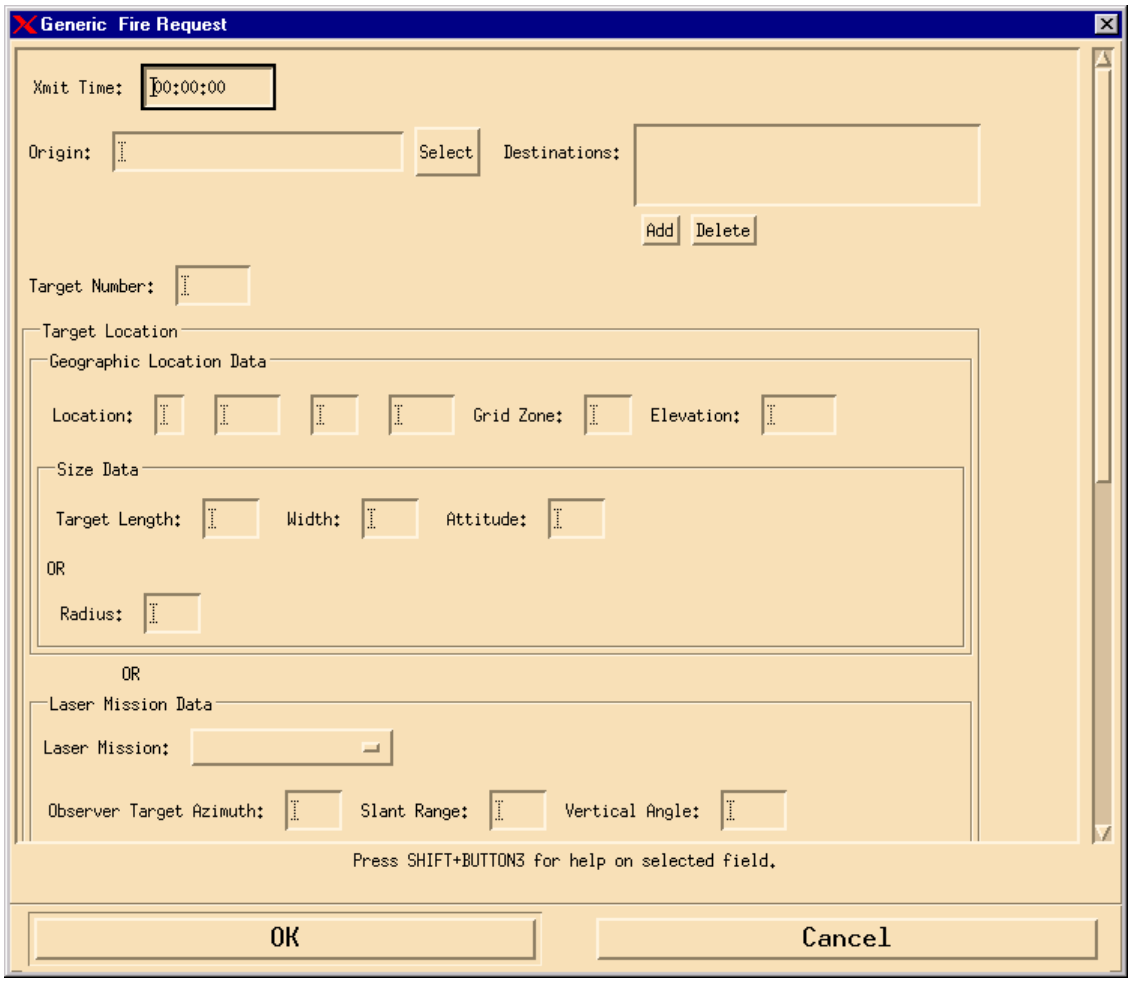


The operator can then choose whether to copy to another Generic Message or to PK11 or JVMF depending on what the Originating Unit of that message is. After selecting the message type and selecting "OK" a new message will be placed on the TOEL.

E.2.3 WINDOWS

The Generic Windows are shown in the following section in the same format as the SISTIM Windows of the main document.

E.2.3.1 FIRE REQUEST TEMPLATE



E.2.3.1.1 Description

The Generic Fire Request is made up of the PK11 K02.04 Call for Fire and the JVMF K02.04 Call for Fire. This message has been designed to allow the operator to send a simple Call for Fire message to AFATDS with some of the most common fields. The sections for Target Type and Shell/Fuze Data have been made simpler by using the common AFATDS types. Also the message has been broken up into logical sections to hopefully alleviate any confusion on what data is required in order to have the information necessary to transmit a valid message.

E.2.3.1.2 Fields/Parameters

Xmit Time - This field shows the time (hh:mm:ss format) at which the message will be transmitted to the destination unit.

Origin - This field allows the operator to select the transmitting unit for the message. By selecting the "Select" button the Select Units window is displayed that prompts the operator to select from a list of available units.

Destinations - This field allows the operator to select the unit/units that will receive the message. By selecting the "Add" button the Select Units window is displayed that prompts the operator to select from a list of available units. Selecting the "Delete" button will remove a highlighted unit from the destination list.

Target Number - This is a target number assigned to this fire request.

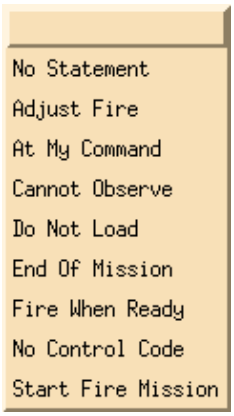
Geographic Location Data - This section is comprised of Point Location fields, and an elevation. If the operator clicks the right mouse button in the Location field area it will switch between UTM and LAT/LONG similar to section 3.2.3.58.

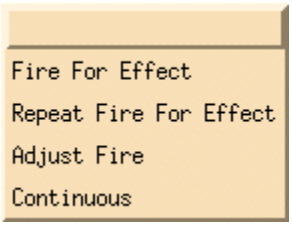
Laser Mission Data - This section allows the operator to enter the fields that correspond to transmitting a Fire Request via Laser Range Finder. The operator should enter Laser Mission, Observer Target Azimuth, Slant Range, and Vertical Angle to have a valid Laser Mission Fire Request.

Size Data - This section allows the operator to specify the size of a target either Rectangular, or circular. If the operator chooses to leave this section blank a point target will be transmitted to AFATDS.

Target Data – This section consists of information relevant to the type of target and its disposition. The Target Type, Degree of Protection, Target Strength, and Target Location Error are part of this section.

Fire and Control Data – This section consists of the Method of Control and the Method of Fire. They are selected by choosing from the following pull-down menus.





Munitions Data – This section is used to enter data pertaining to the Shell and Fuze desired for the Fire Mission. Both projectile and fuze can be chosen using the more general AFATDS type munitions.

Special Mission Data – The Special Mission area is used to allow the operator to use the Generic Fire Request to send some of the more complex Call for Fire messages. Not every type of Call for Fire can be sent using Generic Fire Request, and some operator knowledge may be required when using the Special Mission Data section. However this area is primarily used to send either Copperhead Missions, or Final Protective Fire Missions.

E.2.3.1.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "New" button.

Message Protocol Available - Activate the "OK" button with "Generic" selected.

Generic Message Available List - Activate the "OK" button with the desired message selected.

-Or-

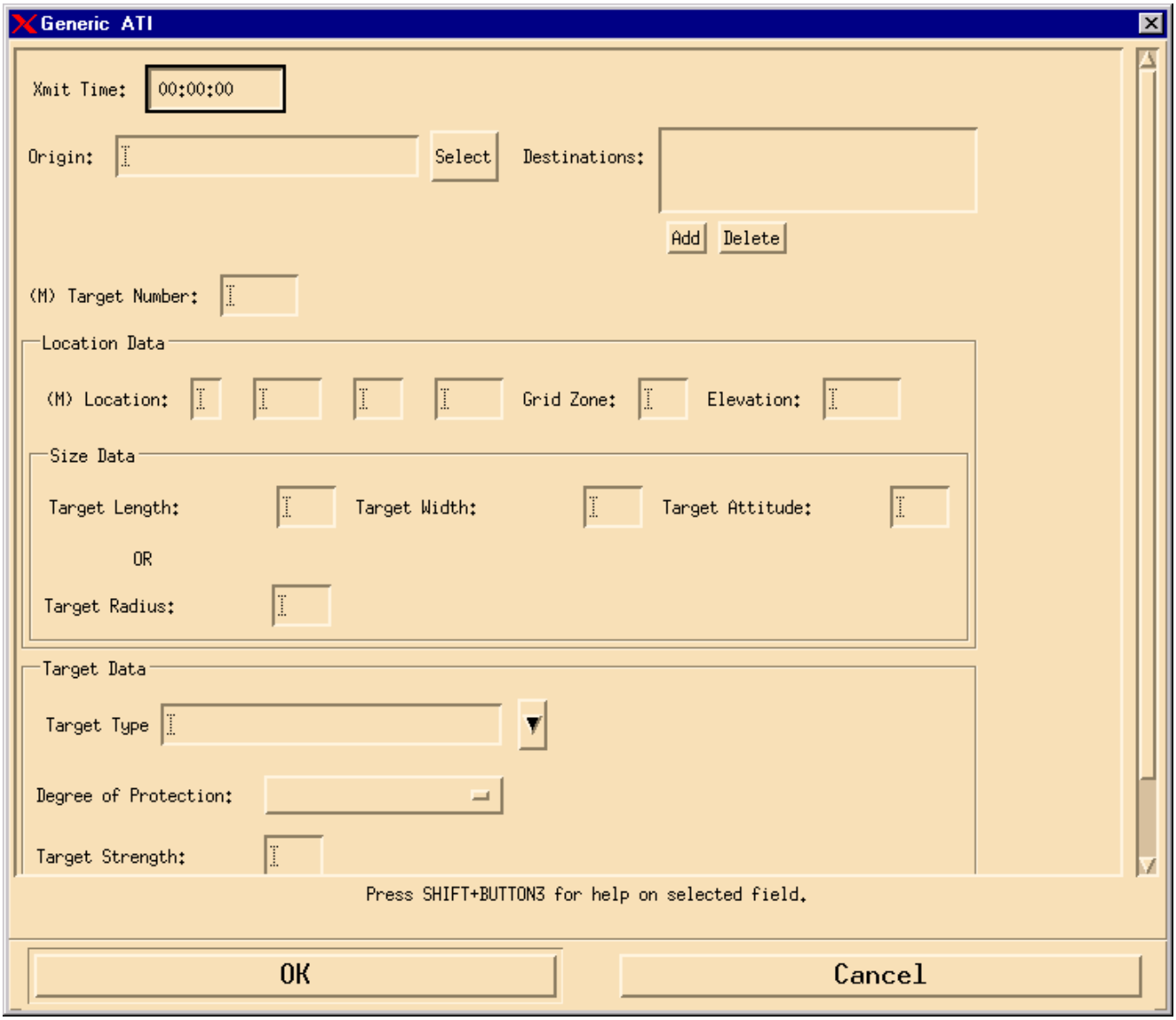
SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "Edit" button with a "Generic" message selected.

E.2.3.1.4 Accessible Windows

None

E.2.3.2 ATI TEMPLATE



E.2.3.2.1 Description

The Generic ATI or Artillery Target Intelligence is made up of the PK11 K02.09 Target Data and the JVMF K02.09 Target Data. This message was designed to allow simple creation and transmission of targets. Similar to the generic Fire Request the ATI uses AFATDS Target Types.

E.2.3.2.2 Fields/Parameters

Xmit Time - This field shows the time (hh:mm:ss format) at which the message will be transmitted to the destination unit.

Origin - This field allows the operator to select the transmitting unit for the message. By selecting the "Select" button the Select Units window is displayed that prompts the operator to select from a list of available units.

Destinations - This field allows the operator to select the unit/units that will receive the message. By selecting the "Add" button the Select Units window is displayed that prompts the operator to select from a list of available units. Selecting the "Delete" button will remove a highlighted unit from the destination list.

Target Number - This is the target number for the message.

Location - This section is comprised of Point Location fields, and an elevation. If the operator clicks the right mouse button in the Location field area it will switch between UTM and LAT/LONG.

Size data - This section allows the operator to specify the size of a target either Rectangular, or circular. If the operator chooses to leave this section blank a point target will be transmitted to AFATDS.

Target Data - This section consists of information relevant to the type of target and its disposition. The Target Type, Degree of Protection, Target Strength, and Target Location Error are part of this section.

E.2.3.2.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "New" button.

0Message Protocol Available - Activate the "OK" button with "Generic" selected.

Generic Message Available List - Activate the "OK" button with ATI selected.

-Or-

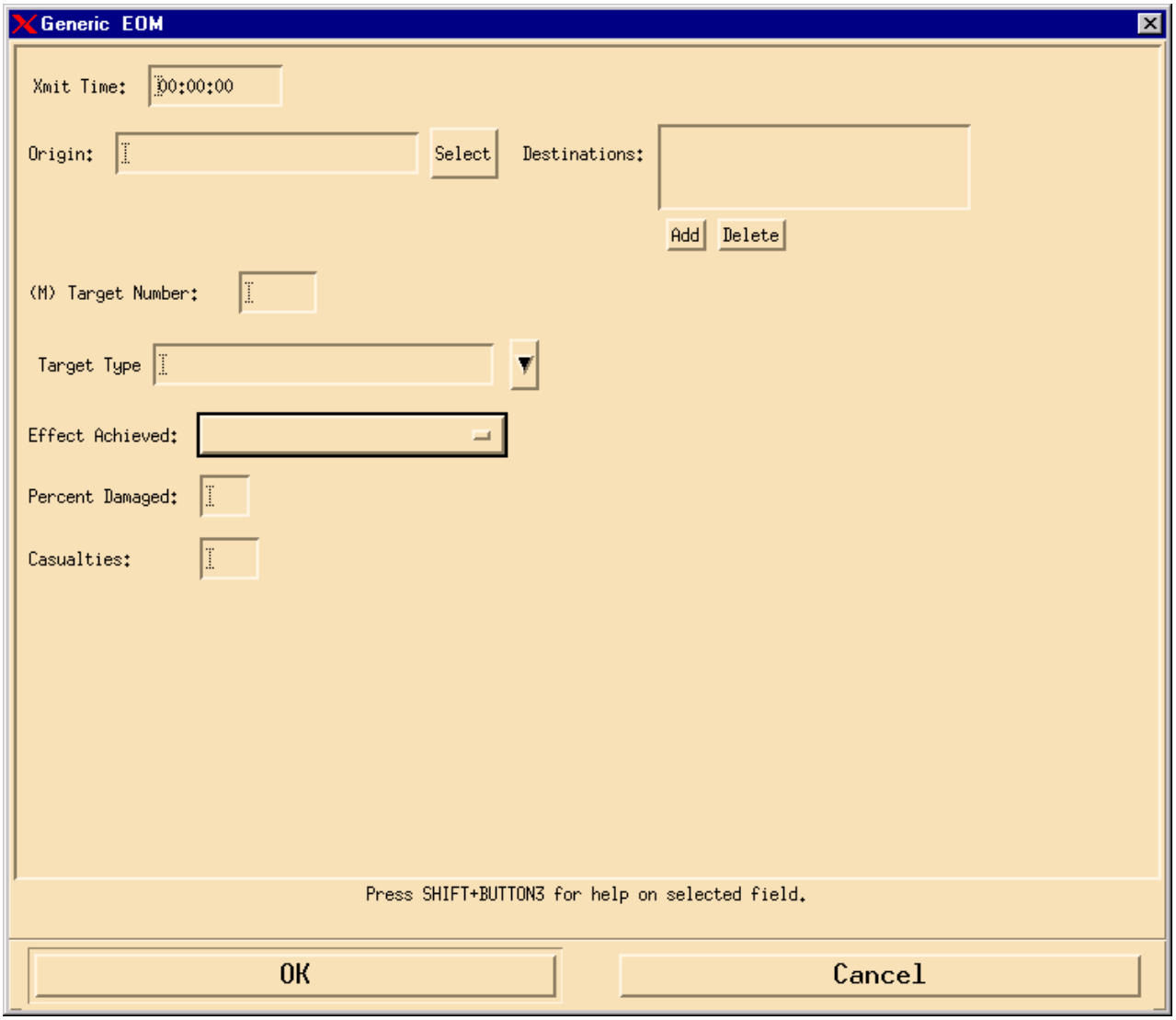
SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "Edit" button with a "Generic-ATI" message selected.

E.2.3.2.4 Accessible Windows

None

E.2.3.3 EOM TEMPLATE



E.2.3.3.1 Description

The Generic EOM is made up of the PK11 K02.16 End of Mission and the JVMF K02.16 End of Mission. This message is intended to simplify the sending of a “End Mission” case of the End of Mission message. In most cases if the operator enter the target number of the mission he wishes to end this is enough information. The other fields have been included to allow for a little more flexibility but are not required.

E.2.3.3.2 Fields/Parameters

Xmit Time - This field shows the time (hh:mm:ss format) at which the message will be transmitted to the destination unit.

Origin - This field allows the operator to select the transmitting unit for the message. By selecting the "Select" button the Select Units window is displayed that prompts the operator to select from a list of available units.

Destinations - This field allows the operator to select the unit/units that will receive the message. By selecting the "Add" button the Select Units window is displayed that prompts the operator to select from a list of available units. Selecting the "Delete" button will remove a highlighted unit from the destination list.

Target Number - This field is the target number of the mission that the operator would like to end.

Target Type – This is the type of target for the completed mission.

Effect Achieved - This field consists of enumerations describing the type of effects the mission achieved.

Percent Damaged - This field is used to specify contain the Percentage of the target damaged by the mission.

Casualties - This field can be used to specify casualties achieved by the mission.

E.2.3.3.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "New" button.

Message Protocol Available - Activate the "OK" button with "Generic" selected.

Generic Message Available List - Activate the "OK" button with the EOM selected.

-Or-

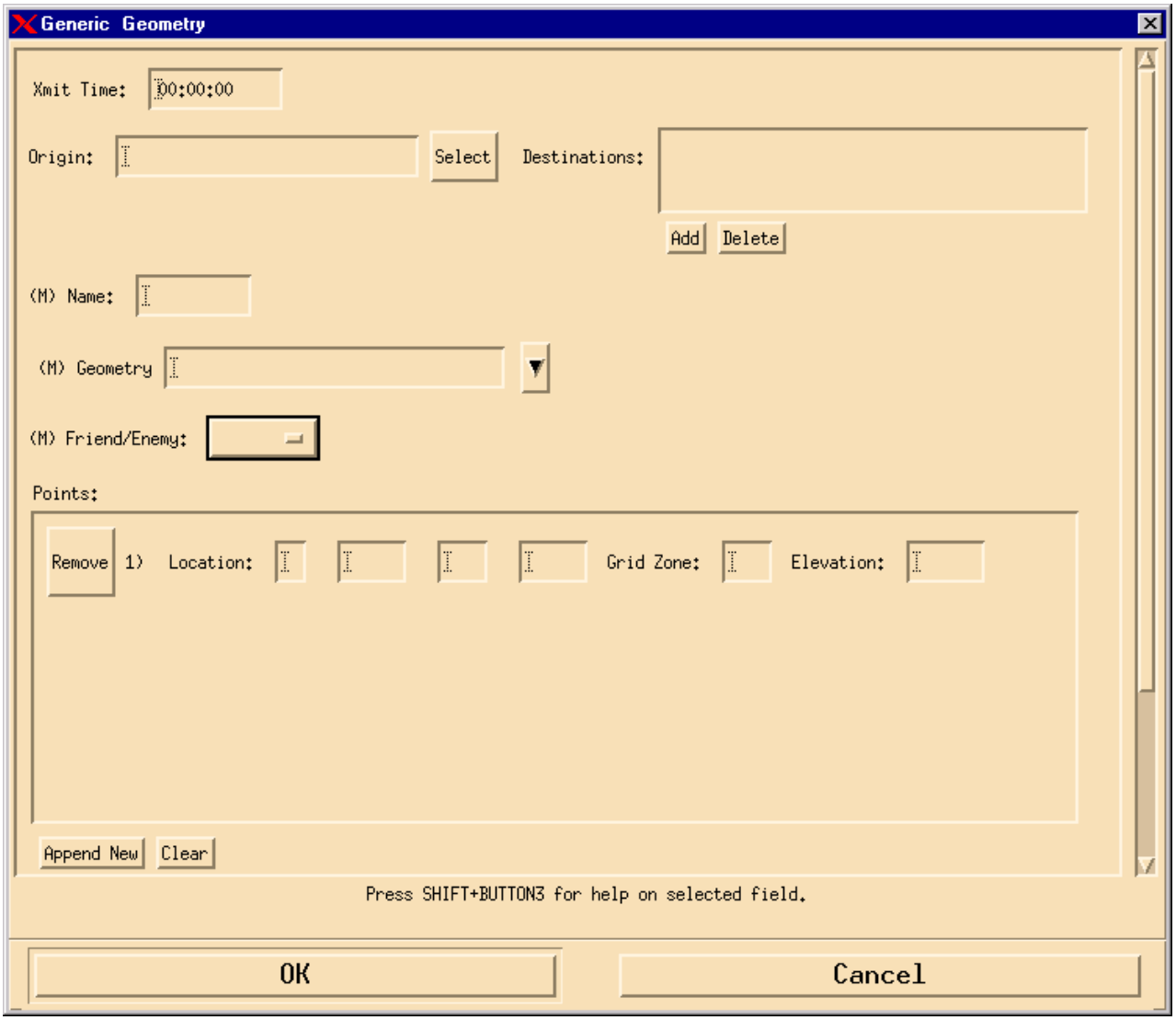
SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "Edit" button with a "Generic-EOM" message selected.

E.2.3.3.4 Accessible Windows

None

E.2.3.4 Geometry TEMPLATE



E.2.3.4.1 Description

The Generic Geometry is made up of the PK11 K02.15 Coordination Measures and the JVMF K02.15 Fire Support Coordination Measures. This message was designed to allow the operator to easily enter and transmit some of the most common Fire Support Geometries used by AFATDS. Not all of the PK11 and JVMF geometry types can be transmitted via this message.

E.2.3.4.2 Fields/Parameters

Xmit Time - This field shows the time (hh:mm:ss format) at which the message will be transmitted to the destination unit.

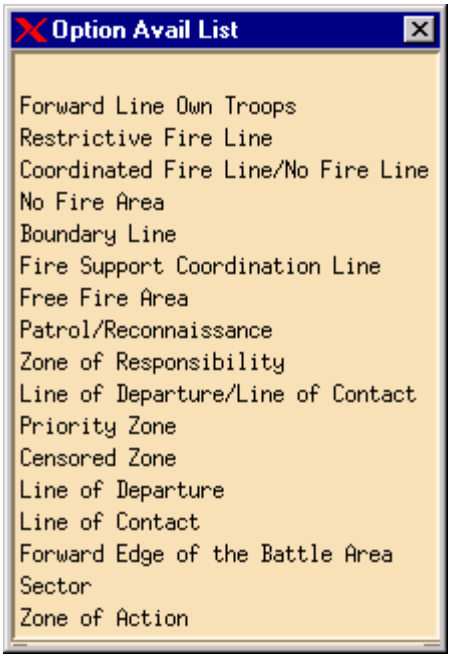
Origin - This field allows the operator to select the transmitting unit for the message. By selecting the "Select" button the Select Units window below is displayed that prompts the operator to select from a list of available units.

Destinations - This field allows the operator to select the unit/units that will receive the message. By selecting the "Add" button the Select Units window below is displayed that prompts the operator to select from a list of available units. Selecting the "Delete" button will remove a highlighted unit from the destination list.

Name - The name of the geometry.

Friend/Enemy – This is a Selection for whether the geometry is friendly or enemy.

Geometry - When selected this field will display the following window, which allows the operator to choose the type of geometry to create.



Points - This section is used to enter point data for the geometry. By selecting “Append New” multiple points (Up to 16) can be entered. Clicking “Remove” will remove that point. When desiring to send a Circular geometry only 1 point is needed.

URN – This field is used to choose the URN of the Establishing Unit for this geometry. By “Right-Clicking” in this field a window will be displayed which will allow the operator to select from the available URN’s in the current SISTIM exercise.

Effective Day – This field is used to specify the time that this geometry should become effective. AFATDS will automatically fill this in as the time received if left empty.

E.2.3.4.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "New" button.

Message Protocol Available - Activate the "OK" button with "Generic" selected.

Generic Message Available List - Activate the "OK" button with Geometry selected.

-Or-

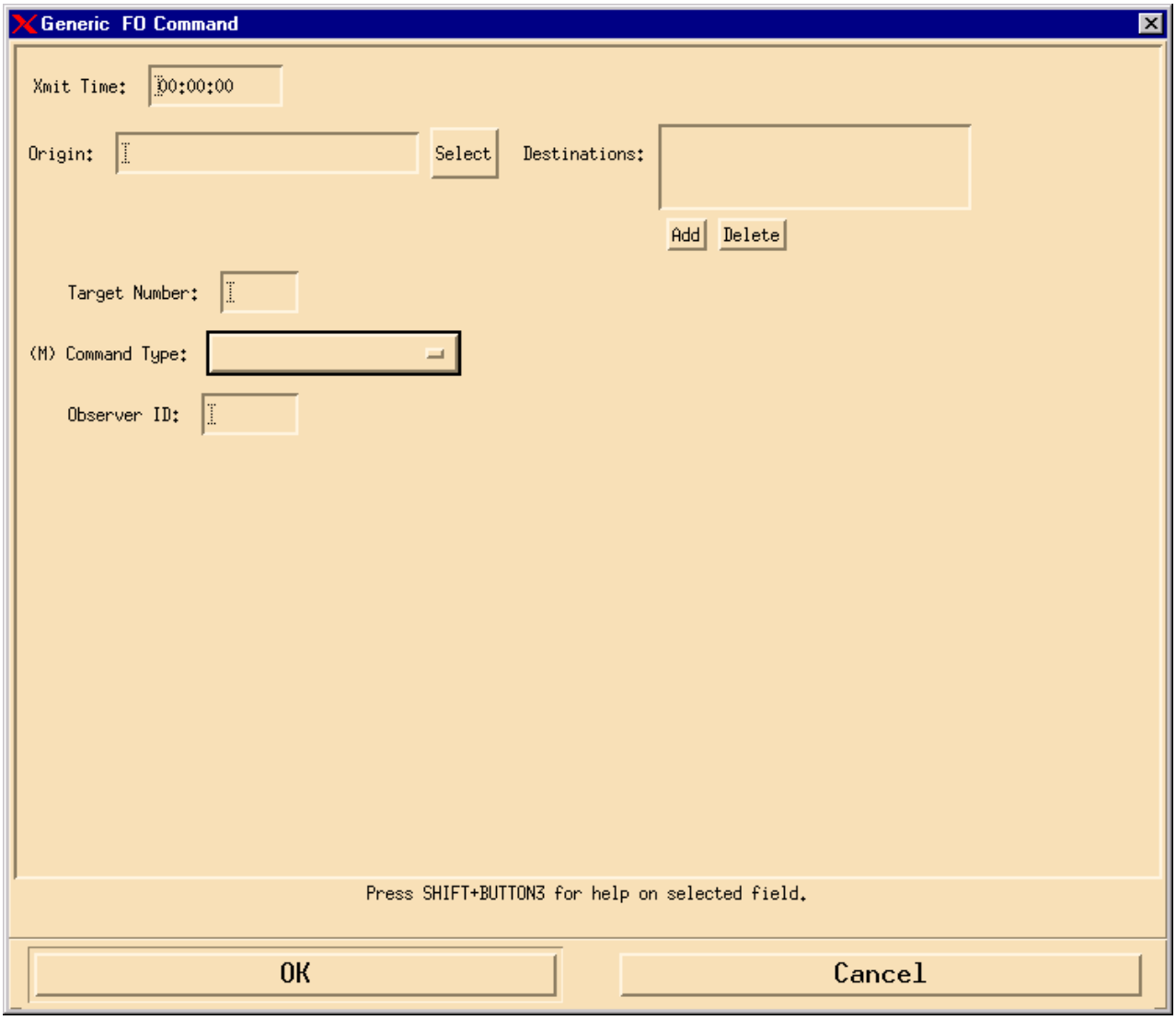
SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "Edit" button with a "Generic-Geometry" message selected.

E.2.3.4.4 Accessible Windows

None

E.2.3.5 FO Command TEMPLATE



E.2.3.5.1 Description

The Generic FO Command is made up of the PK11 K02.01 Check Fire, the PK11 K02.06 Observer Notify, the PK11 K02.12 On-Call Fire Request, the JVMF K02.01 Check Fire, the JVMF K02.06 Observer Mission Update and the JVMF K02.12 On-Call Fire Command. This message was designed to easily transmit some of the most common Forward Observer commands without having to search for the specific message, which contains that type of command. The Observer Commands that the message allows are SHOT, SPLASH, ROUNDS COMPLETE, READY, CHECK FIRE, CHECK FIRE ALL, CANCEL CHECK FIRE, CANCEL CHECK FIRE ALL, and FIRE.

E.2.3.5.2 Fields/Parameters

Xmit Time - This field shows the time (hh:mm:ss format) at which the message will be transmitted to the destination unit.

Origin - This field allows the operator to select the transmitting unit for the message. By selecting the "Select" button the Select Units window is displayed that prompts the operator to select from a list of available units.

Destinations - This field allows the operator to select the unit/units that will receive the message. By selecting the "Add" button the Select Units window is displayed that prompts the operator to select from a list of available units. Selecting the "Delete" button will remove a highlighted unit from the destination list.

Target Number - This is the target number for the specified command.

Command Type – This is the type of command message desired.

Observer ID – This field represents the observer id of the observer for the mission that the commands are for. If the unit is a Package 11 unit then Observer number is used, and if the unit is JVMF then the URN of the observer is used.

E.2.3.5.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "New" button.

Message Protocol Available - Activate the "OK" button with "Generic" selected.

Generic Message Available List - Activate the "OK" button with FO Command selected.

-Or-

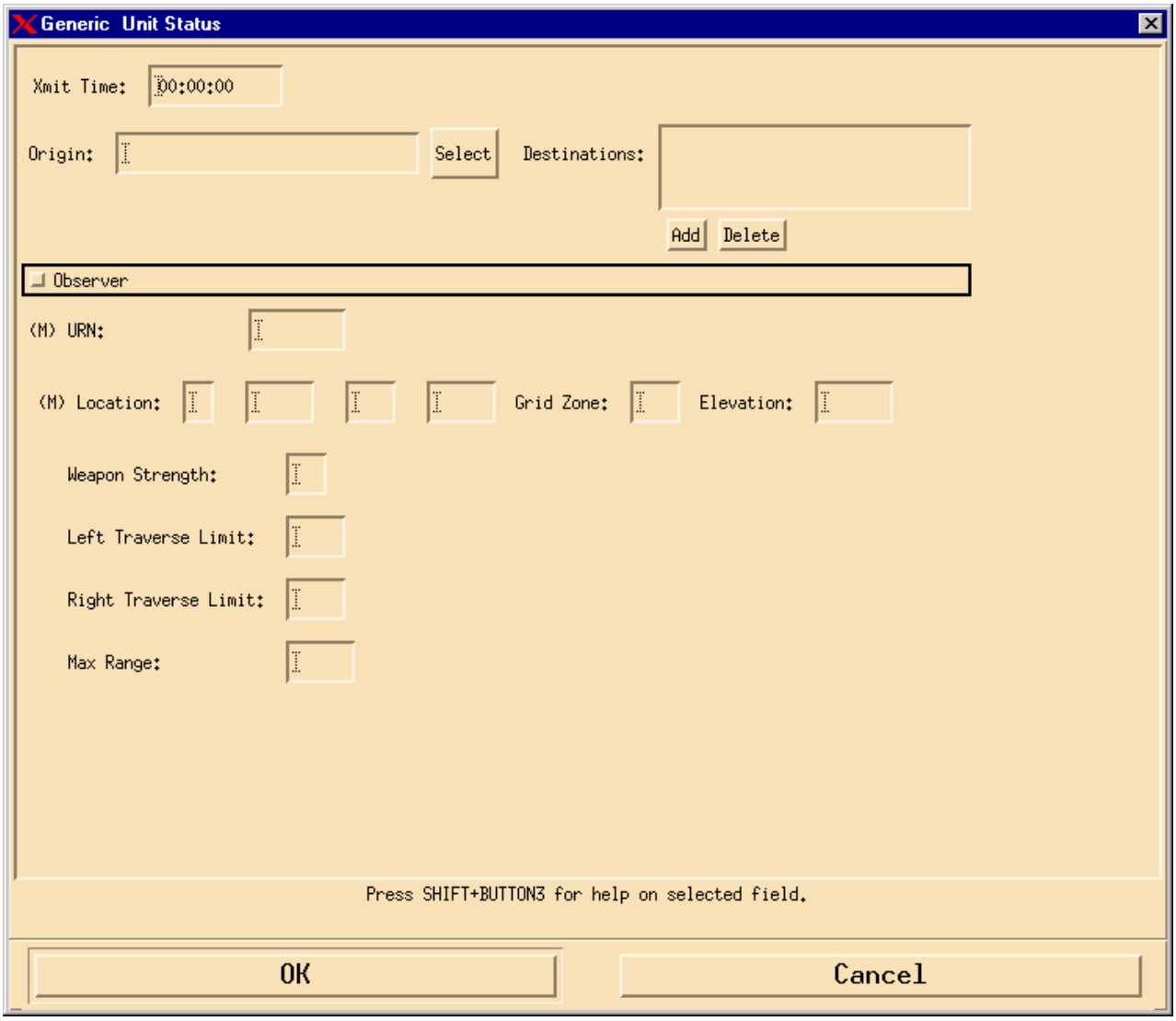
SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "Edit" button with a "Generic-FO Command" message selected.

E.2.3.5.4 Accessible Windows

None

E.2.3.6 Unit Status TEMPLATE



E.2.3.6.1 Description

The Generic Unit Status is made up of the PK11 K02.51 Unit Situation Report, the PK11 K02.18 Fire Unit Capabilities, the JVMF K02.18 Fire Unit Status, and the K02.37 Observer Readiness Report. This message is intended in most cases to allow the operator to move a unit on the map via the Unit Status messages. There are other fields that allow for weapon range manipulation, but these should be used for Fire Units only.

E.2.3.6.2 Fields/Parameters

Xmit Time - This field shows the time (hh:mm:ss format) at which the message will be transmitted to the destination unit.

Origin - This field allows the operator to select the transmitting unit for the message. By selecting the "Select" button the Select Units window is displayed that prompts the operator to select from a list of available units.

Destinations - This field allows the operator to select the unit/units that will receive the message. By selecting the "Add" button the Select Units window is displayed that prompts the operator to select from a list of available units. Selecting the "Delete" button will remove a highlighted unit from the destination list.

Observer - Select this checkbox and the Unit Status interface will transmit the message corresponding to Observer Type units. Once this is selected the operator should not select anything other than URN and Location.

URN - This field should contain the URN of the unit to be altered at AFATDS.

Location - This is the new location for the unit. If the operator clicks the right mouse button in the Location field area it will switch between UTM and LAT/LONG. **Weapon Strength** - This field should contain the new number of weapons for the Unit.

Left Traverse Limit - This field should contain the left traverse limit for the unit's weapon.

Right Traverse Limit - This field should contain the right traverse limit for the unit's weapon.

Max Range – This field contains the new range of the unit's weapons

E.2.3.6.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "New" button.

Message Protocol Available - Activate the "OK" button with "Generic" selected.

Generic Message Available List - Activate the "OK" button with Unit Status selected.

-Or-

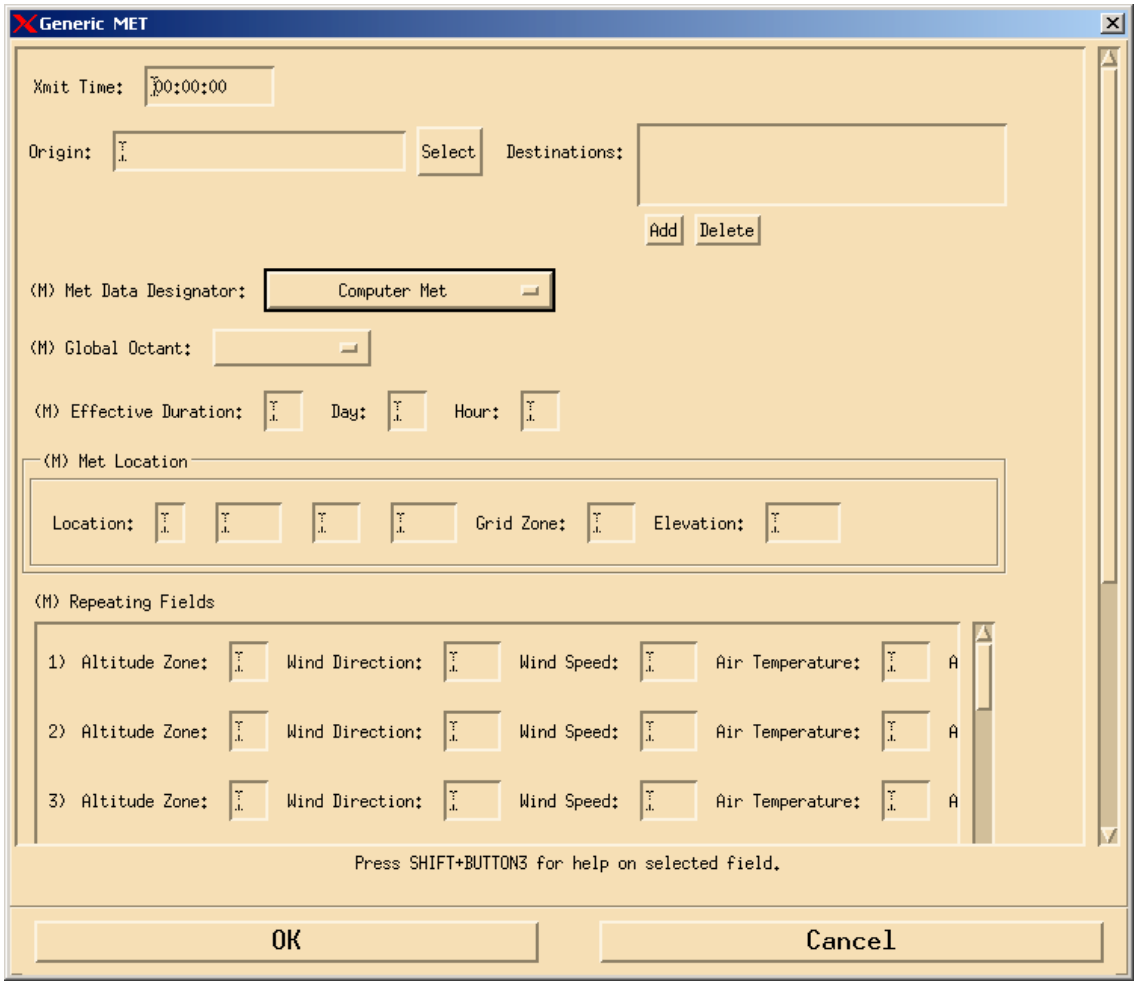
SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "Edit" button with a "Generic-Unit Status" message selected.

E.2.3.6.4 Accessible Windows

None

E.2.3.7 MET TEMPLATE



E.2.3.7.1 Description

The Generic MET is made up of the PK11 K02.03 Met Data, JVMF K02.03 Fire Support Meterological Data, JVMF K03.03 Forecast Meterological Data, JVMF K05.08 Basic Wind Report, and the JVMF K03.05 Observed Weather Information and Effects messages. This message is intended to allow the operator to send meteorological data.

E.2.3.7.2 Fields/Parameters

Xmit Time - This field shows the time (hh:mm:ss format) at which the message will be transmitted to the destination unit.

Origin - This field allows the operator to select the transmitting unit for the message. By selecting the "Select" button the Select Units window is displayed that prompts the operator to select from a list of available units.

Destinations - This field allows the operator to select the unit/units that will receive the message. By selecting the "Add" button the Select Units window is

displayed.It then prompts the operator to select from a list of available units. Selecting the "Delete" button will remove a highlighted unit from the destination list.

Met Data Designator – This pulldown allows the operator to select what type of MET they would like to create. The options are: Computer Met, Forecast Met, Fallout Met, Target Acquisition Met, Target Area Low Level Met, Firing Point Low Level Met, and Surface Observation Met.

Global Octant – This pulldown allows the operator to specify a global octant or positioning of the MET on the map.

Effective Duration – This field allows the operator to specify a duration of time for the validity of the MET.

Effective Day – This field allows the operator to specify the calender day that the MET is valid .

Effective Hour – This field allows the operator to specify the hour that the MET is valid .

Location - This is the new location for the unit. If the operator clicks the right mouse button in the Location field area it will switch between UTM and LAT/LONG.

Repeating Fields – This window contains the various repeating fields valid for the selected MET type.

Set to Defaults – This buttong allows the operator to set the repeating fields to predetermined defaults.

E.2.3.7.3 Window Navigation

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "New" button.

Message Protocol Available - Activate the "OK" button with "Generic" selected.

Generic Message Available List - Activate the "OK" button with MET selected.

-Or-

SISTIM - Select "Edit Events List" from the "TOEL" menu.

Event List - Activate the "Edit" button with a "Generic-MET" message selected.

E.2.3.7.4 Accessible Windows

None

APPENDIX F

PRINTER SETUP

F. PRINTER SETUP

F.1 First open an Xterm from the Programs Menu.

In the Xterm type the following commands:

DISPLAY	COMMAND	ACTION
	xhost +	**(enter)**
	su -	**(enter)**
Password:	**root**	**(enter)**
	export DISPLAY=:0	**(enter)**
	admintool	**(enter)**

*This opens the Admintool Window***.**

F.1.2 At the Admintool Window follow the procedure listed below:

Select *Browse***,** *Printers.*
Then select *Edit, Add, Local Printer***.**
Next you will enter the appropriate data for the type of machine you are on (UCU, CCU).

UCU		CCU2 (AXI)	
Printer Name:	***Lp***	Printer Name:	***lp***
Description**:**	***Lp***	Description:	***lp***
Printer Port:	***/dev/bpp0***	Printer Port:	***/dev/ecpp0***
Printer Type:	***HP Printer***	Printer Type:	***HP Printer***
File Contents:	***ASCII***	File Contents:	***ASCII***
Fault Notification:	***Mail Superuser***	Fault Notification:	***Mail Superuser***

No other modifications are needed, so press OK**.**
At the Menu Select: *File, Exit***.**

F.1.3 SISTIM Menu Bar

Select: *System, Print, Setup…*
Defaults: Plaintext
Next , change the print command to be:

pr | *lp –d***printername**

Press OK**:**

Plaintext printers will not print graphics (screencaptures).

F.2 INSTALL a NETWORK PRINTER

F.3 Adding a NETWORK Printer

Prior to starting SISTIM you must select the ***SISTIM*** icon below on the toolbar when the pull-down appears then select ***Add Lan Printer***.

Once that has been completed enter the LAN Printer IP address and printer name.
Select KEYBOARD Enter.
The response should be:

Printer NAME is IDLE.

F.4 Print from LAN

F.4.1 SETUP

At SISTIM Menu Bar Select System, Print, Setup.
Printer setup to print postscript graphics (screen captures) and plain text lines.

Defaults: Postscript
Next , change the print command to be:

*a2ps –1 –Mletter –l120 –P***printername**

APPENDIX G

OTHER DISK UTILITIES

G. OTHER DISK UTILITIES

G.1 Media Devices

Many computers on which SISTIM is installed have one of the following media drives:

- Flashcard Memory (using a SCSI <–> PCMCIA card drive)
- Magnetic Optical Disk
- Iomega Jaz

G.2 Drive Commands

When SISTIM is installed, there is also a set of commands installed by which the "other drive" can be used to store data files. The commands are as follows:

mod Mounts the media file system to the */od* directory.
After a successful mounting of the other disk, you may use the */od* directory to alter files stored on the media's file system. If the media file system fails to mount, then you may need to use the **fod** command to format the media and prepare it for mounting.

uod Unmounts the media file system from */od***.**
If it was previously mounted, the file system will be closed, making the media ready for removal from the drive (see the **eod** command). After this command, the */od* directory will no longer contain the file system from the media. Unmounting cannot succeed until every running process is not using the */od* file system. This means if the shell is currently inside the */od* directory structure, unmounting will not succeed, so **cd** to */* or **~**. Then try unmounting. If any command is started from within the */od* directory structure, such as running a GUI application, then that application will likely have to be closed in order to successfully unmount the media file system.

eod Eject.
The file system from the media will be unmounted (see **uod**) for you first.
The media will be ejected if the device supports automatic ejection. Otherwise it will tell you ejection is not supported, in which case you can manually remove the media from the drive.

fod Format the media.
This prepares media for use by formatting and creating a file system. After this command you can mount the media using the **mod** command.

pod Fix permissions on the media file systems root directory.
If you mount some media, and then cannot write to the */od* directory, you may run this command to open up the permissions on the media file system at */od* to allow any user to write new files and create new directories. Files and directories already contained in */od* may still require root permission to remove, in which case you may consider running the format command (see **fod**) to wipe the disk clean.

iod Info about other disk and media.
Dump any known information about the other disk drive and any media inserted into it. This is may help reveal status of the drive and its media.

Normally users will only need the **mod**, **uod**, and perhaps the **fod** commands. The **eod** command is a convenience and can be used instead of the **uod** command if ejection is desired. The **pod** command may be useful for already formatted media and the **iod** command is useful for status.

G2.1 Drive Command Uses

Below is an example shell session:

~$ **mod**	Mount the other disk media.
~$ **cd /od**	Change directory to the other disk media file system.
/od$ **mkdir data**	Make a directory called data in the root directory.
/od$ **cd data**	Change directory to the newly created data directory.
/od/data$ **cp ~/*.txt ./**	Copy all text files from *$HOME* to the new data directory.
/od/data$ **cd**	Change directory back to *$HOME*, to unlock the media file system.
~$ **eod**	Unmount and eject the media

Output is not shown.

G.3 Floppy disk commands

******Floppy commands only applicable to floppy's that have not been formatted by SISTIM previously.*

The floppy disk is normally used in a "raw" mode by SISTIM to do exercise database backup and restoration. Some users may wish to use a floppy to transfer data files to a DOS file system compatible computer, such as a PC running Windows.

Below are some useful commands for doing such a thing.

When the floppy is mounted, its contents will be in the */floppy/floppy0* directory.

G3.1 Normal User Commands

Format a floppy for DOS – Prepares a floppy for data and verifies floppy usability.

fdformat –dfvU

After inserting a floppy – This makes the Operating System recognize the disk and mount any recognized file system.

volcheck –v

List the mounted floppy disk contents – An example command to use once a floppy is mounted.

ls –la ***/floppy/floppy0***

Eject Floppy – Eject floppy from device drive.

eject floppy

G3.2 Advanced User Commands

Quick format – Only use this if you know the floppy is formatted already.

fdformat -dfxU

Wipe a floppy clean - Zero out all data. This can help Quick format (see **fdformat**) to work

dd if=/dev/zero of=/vol/dev/rdiskette0/unlabeled

As with any removable media file system, a floppy cannot be ejected unless the mounted file system is not busy. Which means that any shell prompt or program running in the mounted floppy directory structure will prevent the floppy from being ejected.