

MTWS

Volume V: MTWS Exercise Analysis

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*THE MTWS Documentation
Suite*

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INTRODUCTION

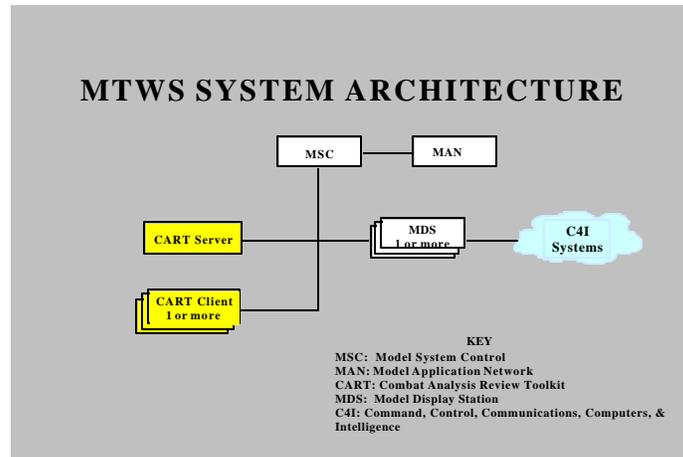
SYSTEM DESCRIPTION

CART (Combat Analysis and Review Toolkit) is a MTWS (MAGTF Tactical Warfare Simulation) after action reporting system. CART allows the user to analyze data from an exercise using both a display (i.e., pictorial) and reports.

CART is intended to be a tool for analysts to analyze, document and present exercise data to interested parties during or after an exercise is completed. This is in response to a US Marine Corps requirement for a system to analyze exercise data for the purposes of producing an effective exercise debrief, capturing required data, and assessing the results of the actions taken during the exercise.

OVERVIEW

CART consists of a server and one or more client stations as noted in the MTWS System Architecture diagram included below. The CART server receives the current exercise data from the MSC (Model System Control) server and stores it in the CART active database. The CART client(s) can access, filter and document this data. The CART client(s) can then present this data visually using the tactical display and textually using the report generator.



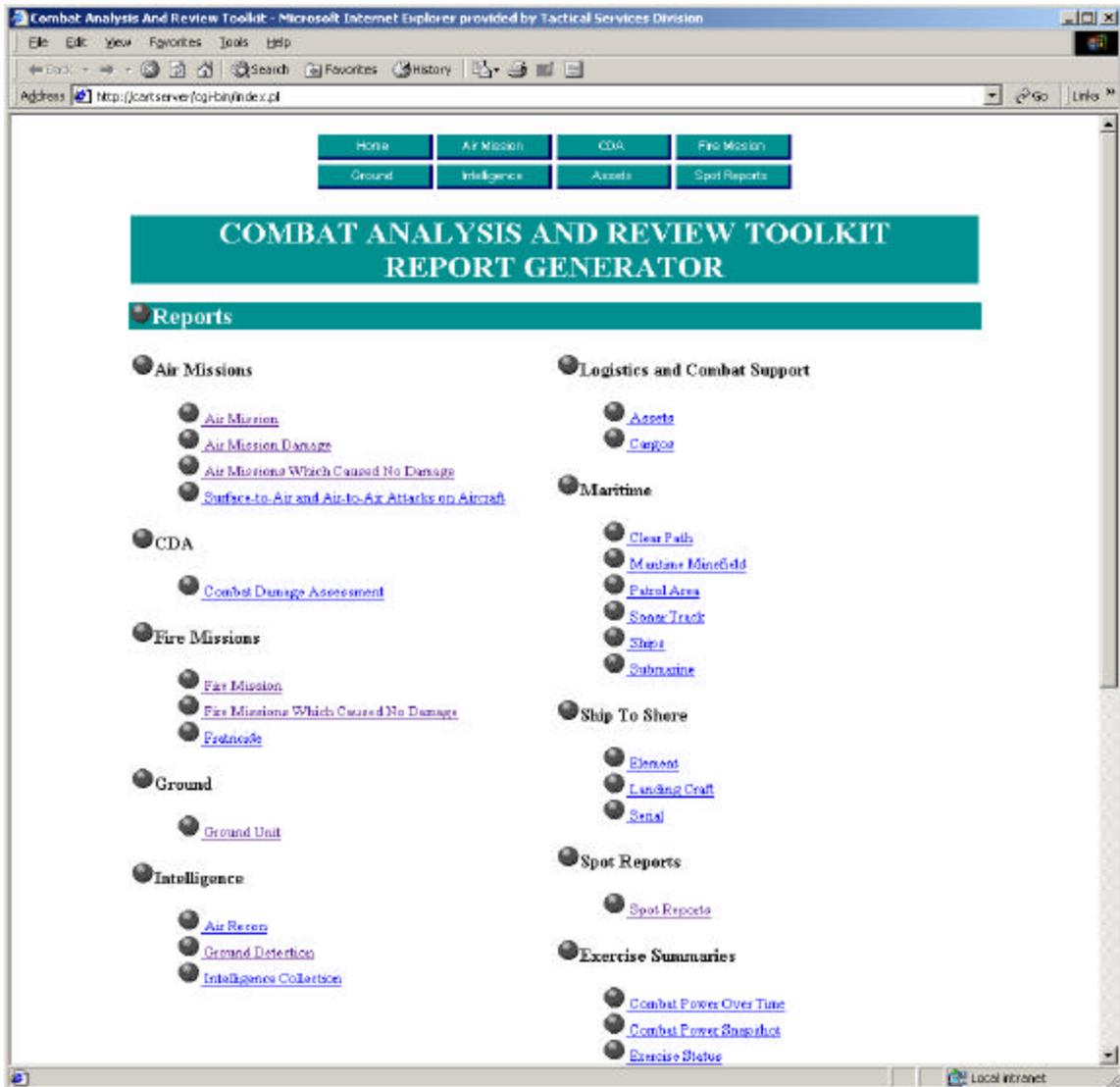
When a new exercise scenario is started on MTWS, the previous exercise that was captured on the CART server is archived in the CART server exercise directory. Exercises that have been saved on the CART server can be replayed independently from the main MTWS system. Basic CART Client operating procedures are available in Chapter 2 of this manual.

The CART server is a typical PC workstation configured with the Linux O/S. The CART Client(s) is also a typical PC workstation configured with Windows 2000, Microsoft Office 2000 and Maui software that enables the PC workstation to operate either as an MDS (Model Display System) or a CART Client.

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The CART Client consists of two primary parts, the Report Generator and the Tactical Display. The CART Report Generator provides information in a textual format. The CART Tactical Display visually depicts exercise data in accordance with the object filter settings that can be manipulated by the user. The content of the reports is coupled with the data shown on the display, generally, only objects that are shown on the display are reported on. Details of the behavior of individual reports are described later in this document

The CART Report Generator provides reports of user selected data for selected periods of time. The user can access the data in the server and format reports on the Client to provide information on various aspects of the exercise. These reports can be used to document and present information required for exercise adjudication and analysis.



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The CART Tactical Display visually displays units and exercise objects and can display these over selected time periods. The CART Tactical Display also allows the user to filter/select units and other exercise objects for presentation.

The display and reporting of the CART data can be shown over any selected time period between the start and end of the exercise. The exercise data can be ran forward and backward in time, using the manual step or auto play buttons located on the CART Client tool bar, to provide a visual and/or textual representation of selected data for that time period of the exercise.

CART CLIENT BASIC OPERATING PROCEDURES

SYSTEM START-UP FOR “ACTIVE” EXERCISE

The System Administrator will load and initialize the MTWS exercise before starting the CART Server and placing the system into run. Detailed MTWS and CART Server start – up instructions are located in Volume 4 of the MTWS Documentation Suite. Once CART is started and MTWS has run for at least (1) minute the System Administrator will click on the Reload (Refresh) button on the Mozilla toolbar, note that the exercise is connected and that the Exercise Name & Start Time are listed in the Exercise Status Report.

The CART Server now has the initial database from the MSC and Client operator(s) will be notified that they can start their CART Client and display the initial database. As the CART Server receives updates at one-minute intervals from the MSC, the CART clients will follow slightly behind the CART Server exercise time.

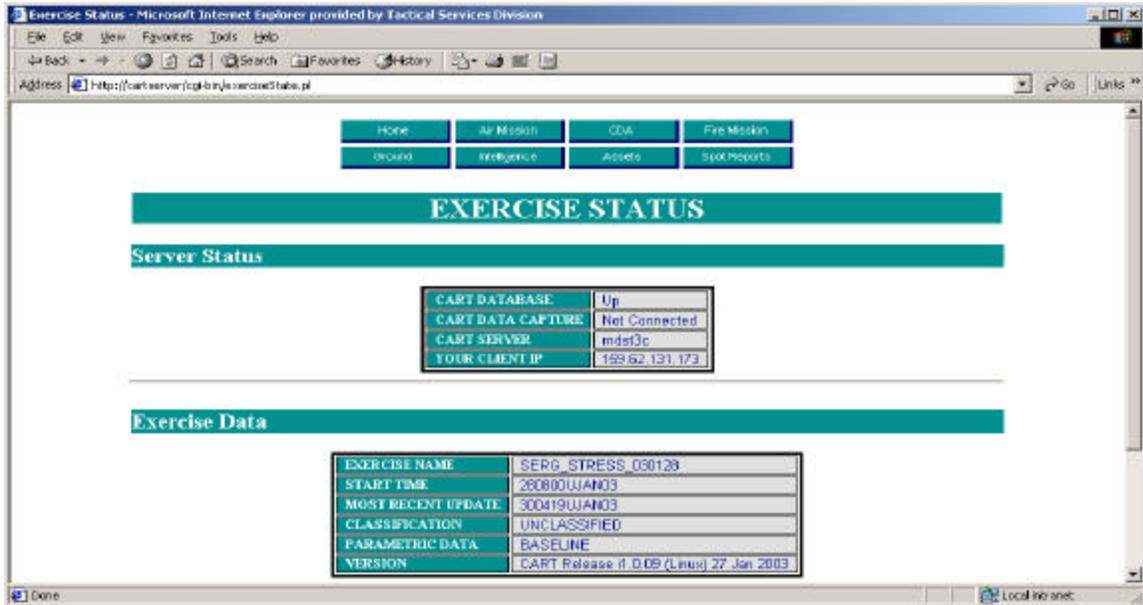
CART CLIENT START-UP

With the workstation logged on and the normal windows display available, an Internet Explorer CART Reports icon and a CART icon should be visible on the desktop. If they are not present, see your system administrator. If they are present, continue as follows:



Click on the Internet Explorer CART Reports icon. Then click on the Exercise Status under Exercise Summaries at the end of the Reports section. Ensure that the CART server is connected and the Exercise Name & Start Time are listed.

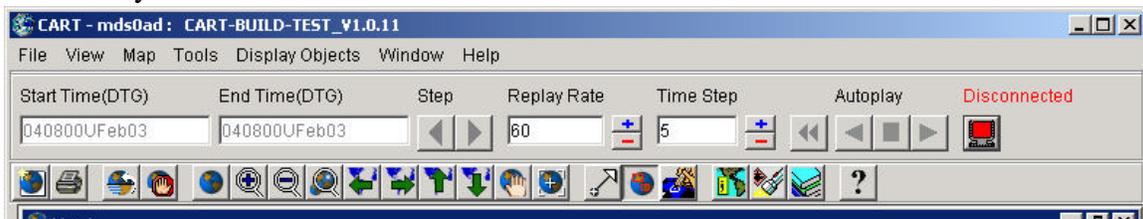
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Iconify the CART Reports window and click on the CART icon.

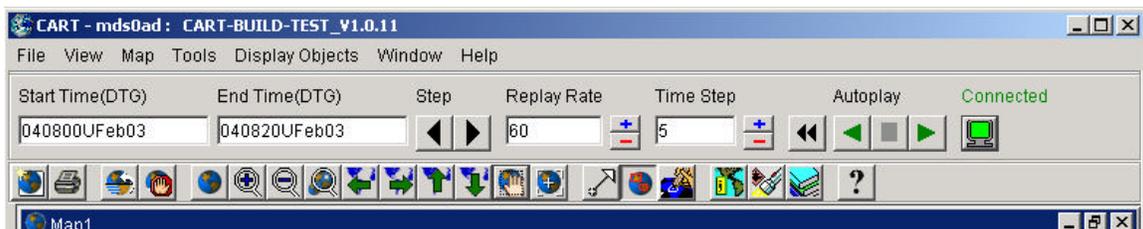
The CART Splash screen window will appear.

A Warning may appear if there is less than a complete minute of data available for the exercise in the CART server. Click YES to continue and the CART display will come up--note that the "Disconnected" button on the CART display is red, verifying no connectivity to the CART server.



Set up CART display profile as desired (font size, maps, object filters, etc)

Click on the red "Disconnected" button to connect; button should turn green and read "Connected".



CART CLIENT START-UP FOR "HISTORIC" EXERCISE

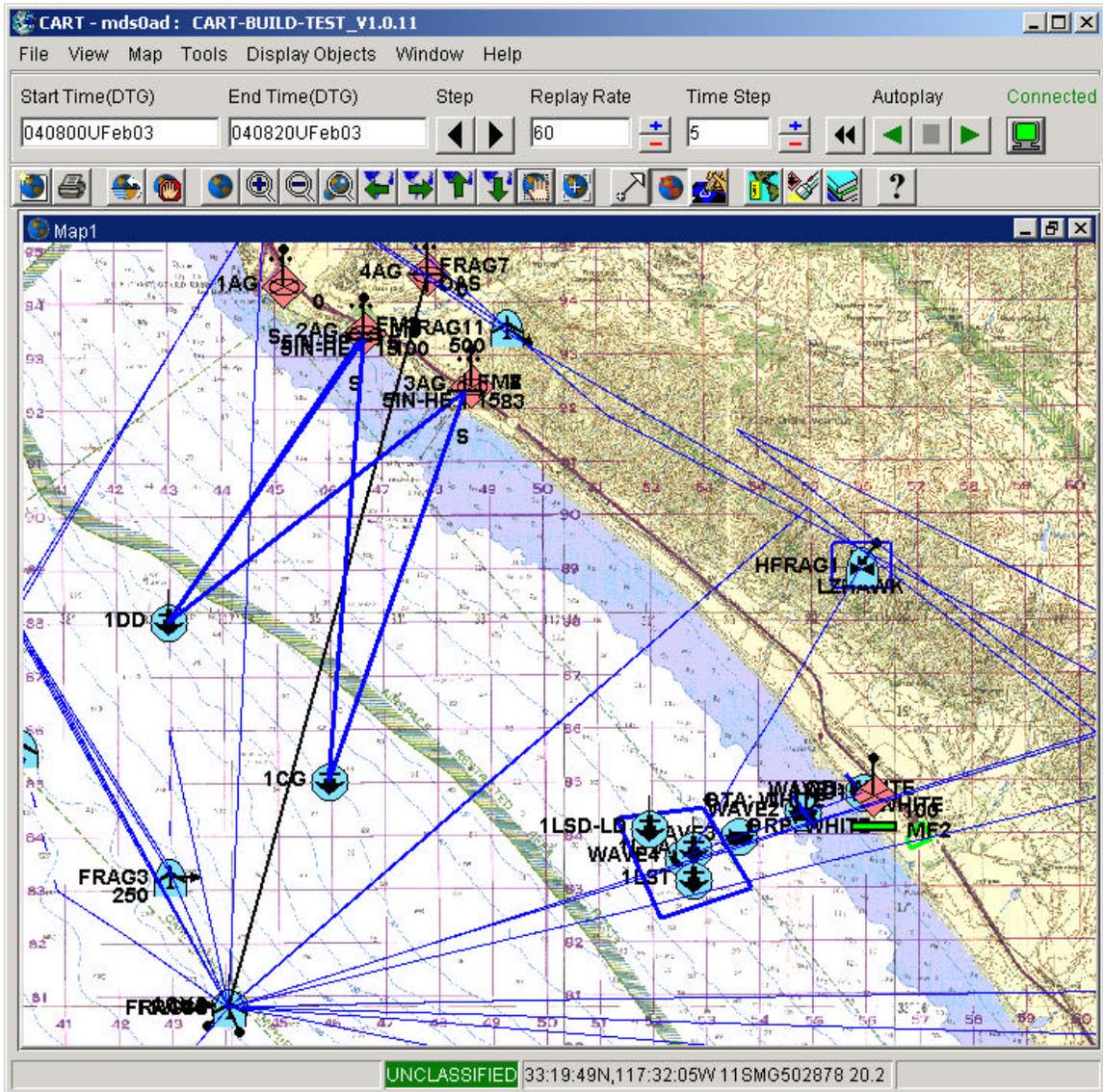
System Administrator will ensure that the CART server is not connected and that CART is not running on the MSC. Then on the CART Server Manage Exercise Window verify

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that the desired Historic exercise is in the “Active “mode. At this point the CART Clients can be started, as depicted in Section 2 above, and when connected the Client will load and display the selected exercise.

CART TACTICAL DISPLAY

The tactical display provides a means for the user to filter and graphically display units and exercise objects. To start the CART Tactical Display, double click on the CART icon on the desktop. Upon start up the tactical display will appear and various menu bar selections are provided. These are the same as those in the MTWS display station with the exception of some of the options in the “Display Objects” menu that have additional features, and the Maui Command Center Menu which is not present. The toolbar provides the user the capability to set time periods and to move forward and back in time.



EXERCISE REPLAY

CART Tool Bar

The CART Tool Bar provides the user with the capability to set time periods for the presentation of data from the CART server. The tool bar also allows the user to move forward or backward in time.



Start Time (DTG). This time is the start time of the time period to be displayed on the CART tactical display and reported on by the CART Report Generator.

End Time (DTG). This is the end time of the time period to be displayed on the CART tactical display and reported on by the CART Report Generator.

Note: Only data between the Start Time and End Time entered here is displayed on the CART map display. The Start Time and End Time must be a valid exercise time.

The display of symbols such as ground units, ships and air missions is based on what the values were at the end time shown in the CART tool bar. The history trail for units, ships, submarines, ship-to-shore objects and air-missions is displayed for the time range between start time and end time.

Objects and events that exist for only a limited time period such as fire missions or ground detections are shown if they existed at any point during the displayed time period.

Step (Forward/Back). This allows the user to “step” forward or backward in time intervals (as entered in “Time Step”).

Replay Rate. This applies only in the “Autoplay” mode and is the time in seconds between Time Steps in the Autoplay mode. Example: As set above: Replay Rate= 60 and Time Step= 5 means that if Autoplay is selected CART will advance five minutes of exercise time every 60 seconds of real time.

Time Step. This is the time interval in minutes at which CART will step forward or backward. This is applicable in either the Manual or Autoplay modes.

Autoplay. If this feature is selected CART will automatically step forward or back in time intervals as set in “Time Step” at the rate set in “Replay Rate”. When CART is

advancing and End Time has reached the point where it is within one minute of the current exercise time, CART will advance at one-minute intervals and remain one minute behind the current exercise time.

Connected. Gives the status of the CART client (i.e., the CART client is connected or not connected to the CART server.

OBJECT FILTERS

Filters are used in CART to remove objects from the display that are not of interest to the current analysis and to control which features of an object are displayed.

The CART reports also use the Object Filters to control which objects are reported on. Thus objects that are filtered off are, in general, not reported on.

Filters act cumulatively. For example if the Environment panel is set to show only LF objects and the Object Groups panel is set to show only Ground objects, the display will show only LF Ground objects. AG Air objects, AG Ground objects and LF Air objects will not be shown.

If an object is removed from display by one filter, no combination of other filters will cause it to be added back on to the display.

To open the Filters panel select “Display Objects → Object Filters” from the Map Display menus or click the filter icon on the menu bar:

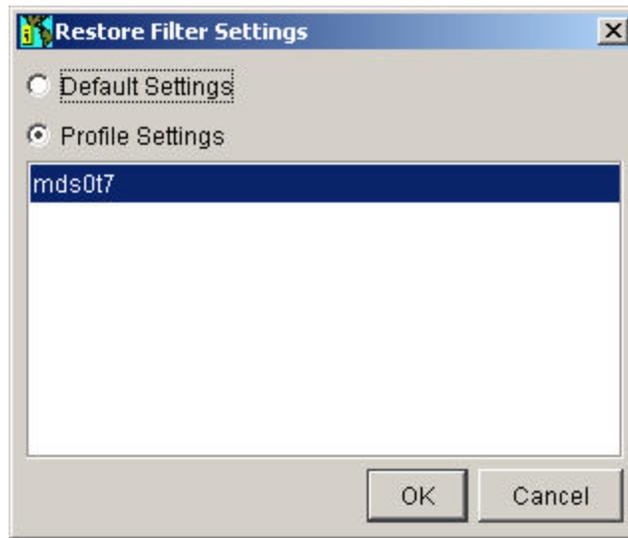


Some filter settings are applied to values that can change over time. In such instances the filters are reapplied every time the displayed time range is changed. For instance, if in the direction filter, the filters are set to display moving units, but not to display non-moving units, when stepping forward, a unit that transitions from stationary to moving, will appear on the display. When it stops moving, it will be removed. Stepping backward in time will reverse the process.

Universal Functions for Filter Panel

Every filter panel includes the four following controls located at the panel bottom.

?? **Restore** allows the user to return to the Default Settings (i.e., all filters are removed, meaning that all simulation objects will be displayed), or any saved filter profiles. The filter settings that were in effect when the workstation was started are stored using the machine name as the identifier. You can also save a current setup by defining a profile name from the Tools->Profile manager menu item and then selecting Tools->Save Profile from the menu.



- ?? **Apply All:** allows the user to apply all changes on all panels. Changes made to the filters do not take effect until they are applied. Note that all panels with settings that have not been applied are shown in the left filter panel in red. All other panels are shown in black.
- ?? **OK:** allows the user to quit the filters window and apply the effects of all filters.
- ?? **Cancel:** allows the user to close the filters window without applying any changes. The settings when filters were last applied will remain in effect. All changes to panels whose title is shown in red in the left window will be lost.

In addition the following two buttons are positioned above the previous four buttons and affect only the current changes.

- ?? **Apply:** Apply the settings on the current window.
- ?? **Cancel:** Cancel the settings on the current window and restore the previously applied settings to the panel display.

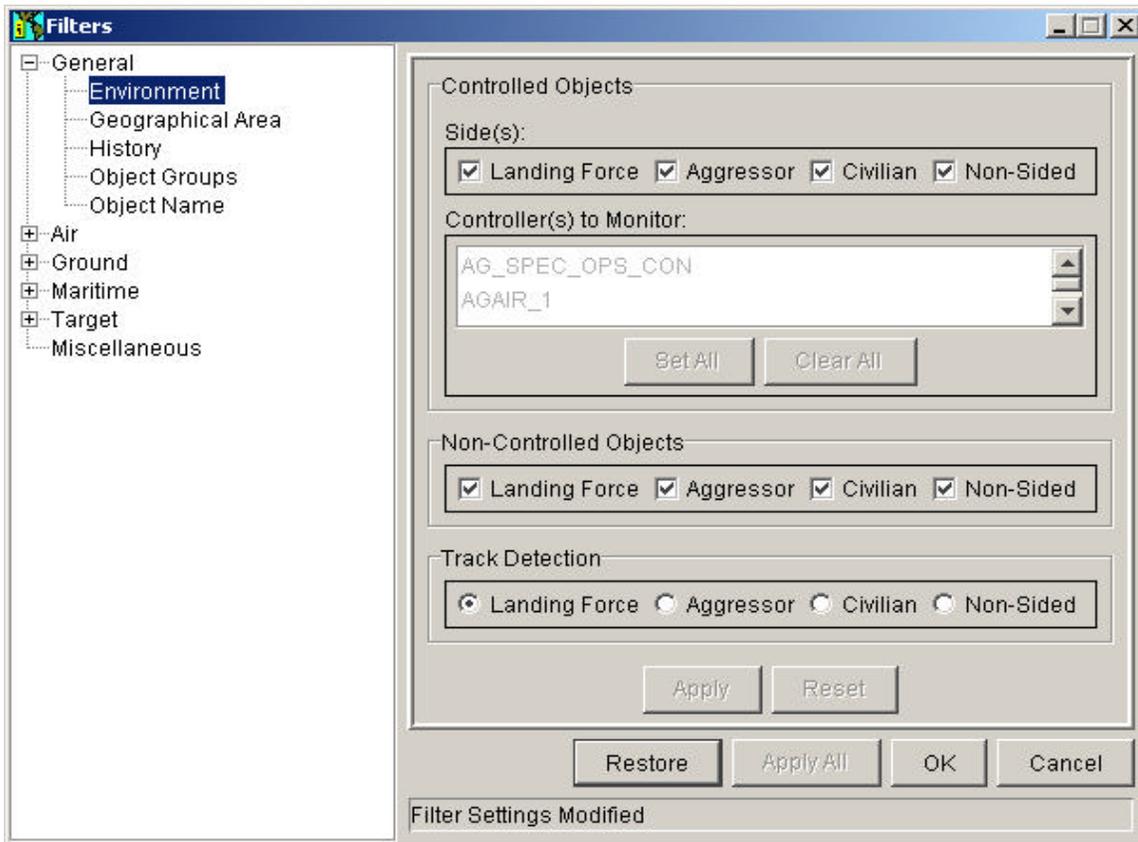
CART includes all the filters that are available in the Maui Workstation. The following sections will present those filters, which are unique to the CART client station.

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GENERAL FILTERS

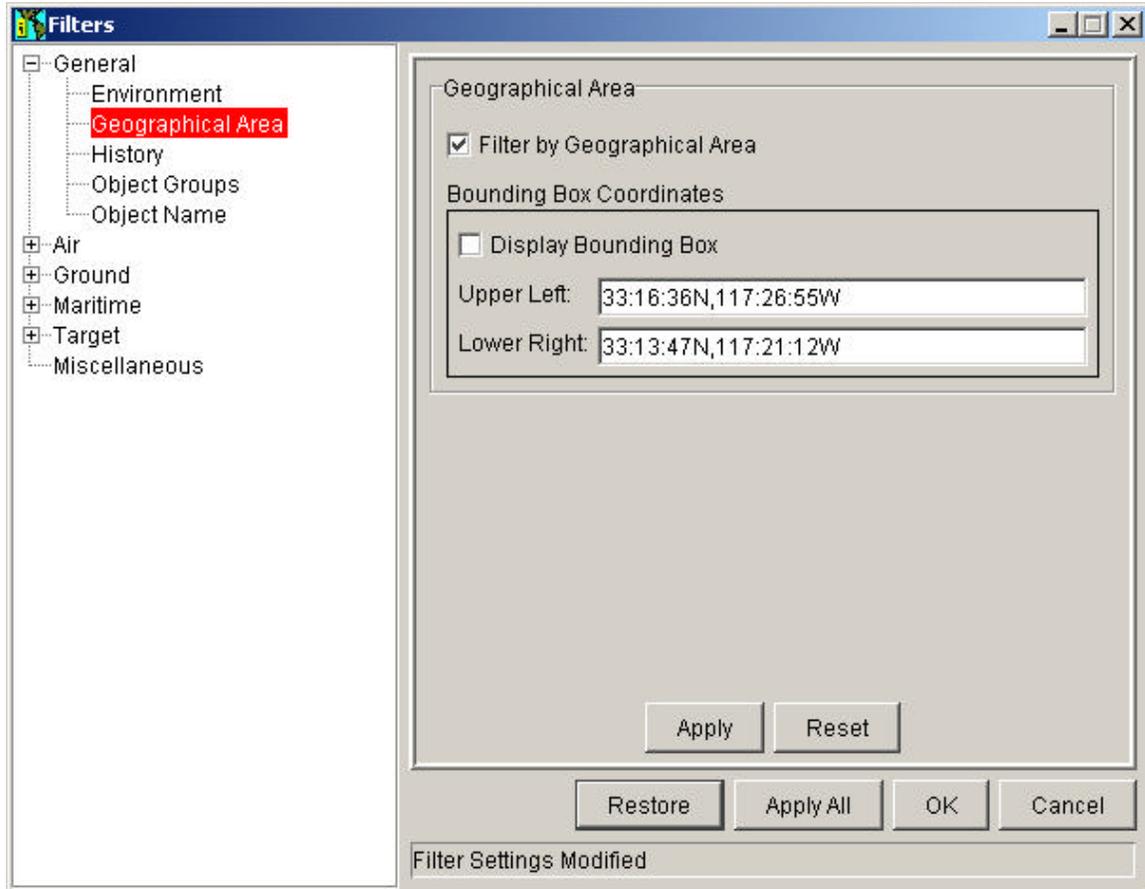


Geographical Area.

Geographical area is used to set up a “box” to display exercise units and objects. Selecting the Upper left and Lower right corners of the desired box do this. Clicking on the desired location on the display or typing the desired LAT/LONG in the field can enter these. The format for a LAT/LONG location is XX:XX:XXL,XXX:XX:XXL where X is a number in the range 0-9 and L is a letter, ‘N’ or ‘S’ for the latitude, and ‘E’ or ‘W’ for the longitude. A box can also be defined using the cursor to define the box and clicking “Apply”.

Units and exercise objects within the geographical box will be displayed while those outside its boundaries will not. Example: A firing unit outside the box firing into the box

will not be displayed but the fire mission will. A firing unit inside the box firing outside the box will be displayed while the fire mission will not be displayed. A firing unit inside the box firing inside the box will be displayed and its fire mission will also be displayed.



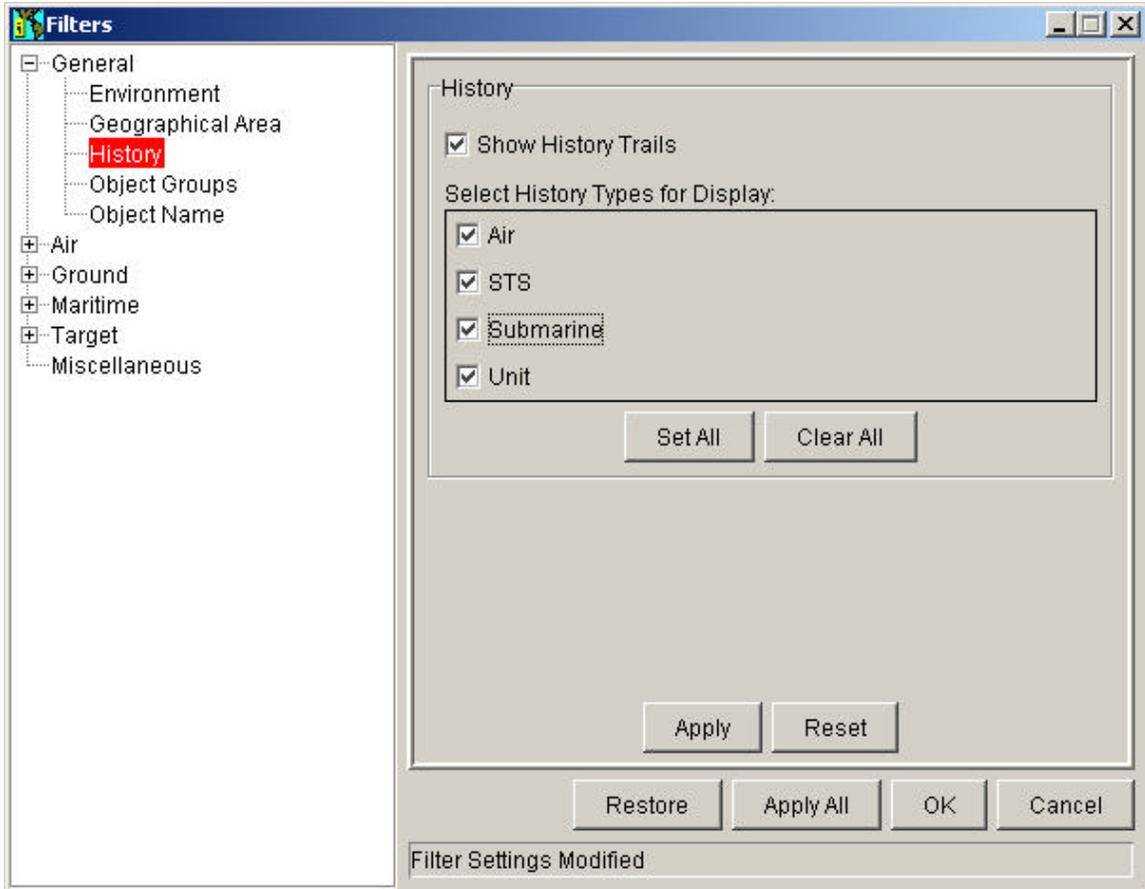
If “Display Bounding Box” is selected the boundaries of the selected geographical area will be displayed when “Apply” is clicked. To remove the display of the area deselect “Display Bounding Box” and click on “Apply”.

To remove the geographical area, deselect “Filter by Geographical Area” and click on “Apply”.

History.

History is used to show the movement trails of air missions, STS elements, submarine and units. If this is selected the movement tracks of the selected air missions, STS elements and units will be shown for the time period entered.

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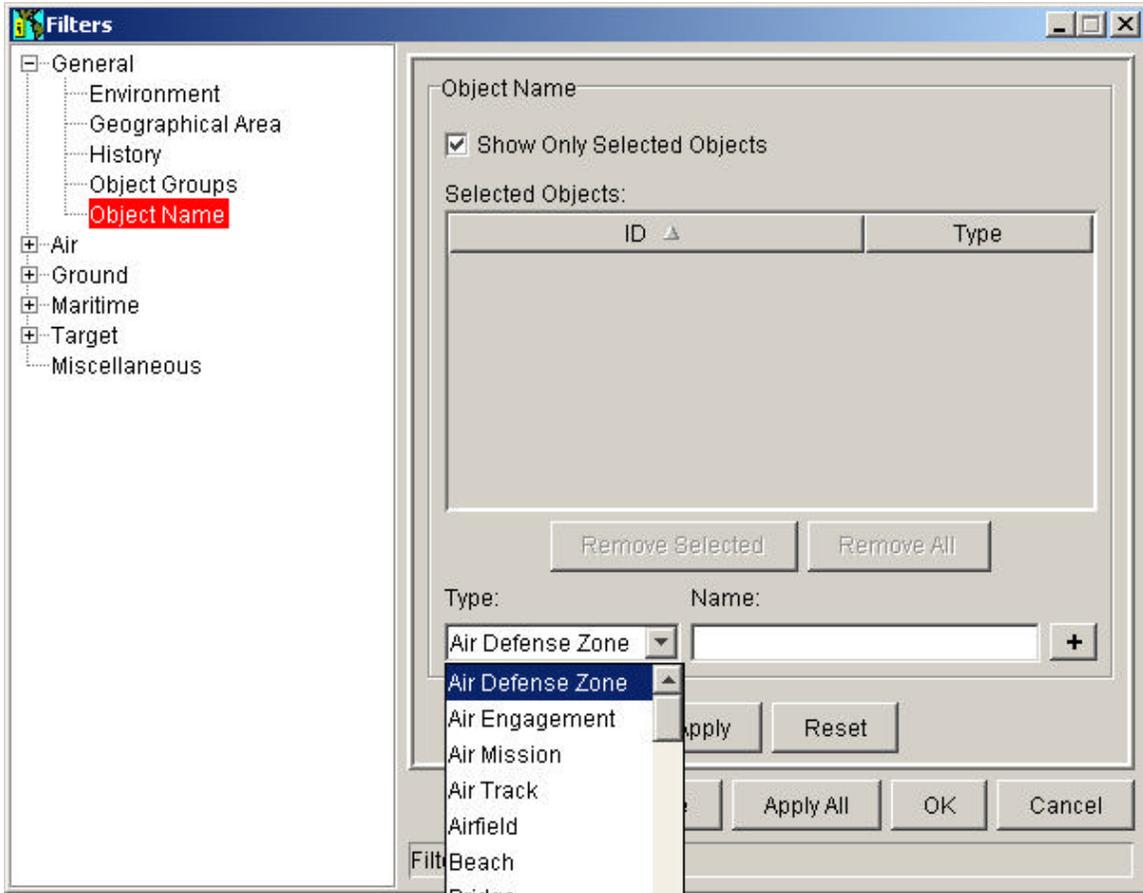


The history trails of the objects are shown as thin trails shown in the color of the objects side (e.g. blue for LF objects, red for AG objects). The line joins together points that the object has traveled through during the displayed time period.

For Unit objects, a dotted trail object identifies a period of travel during which it was transported by another unit, air mission, ship, or STS element. A solid line identifies a period in which an object moved using it's own assets.

Object Name.

The Object Name filter allows objects to be filtered individually.



To filter one or more named objects, check the box titled “Show Only Selected Objects”, then select objects using one of the following methods:

- ?? Select the object type from the selection box titled “Type”, e.g. Unit. Type in the name of an object into the “Name” field. Press the “+” button. This sequence may be repeated as many times as desired.
- ?? Draw a bounding box on the map display surrounding the objects to be selected by left-clicking the mouse in the center and the dragging the mouse to the outside corner of the area to be selected.
- ?? Clicking directly on the object to be selected.

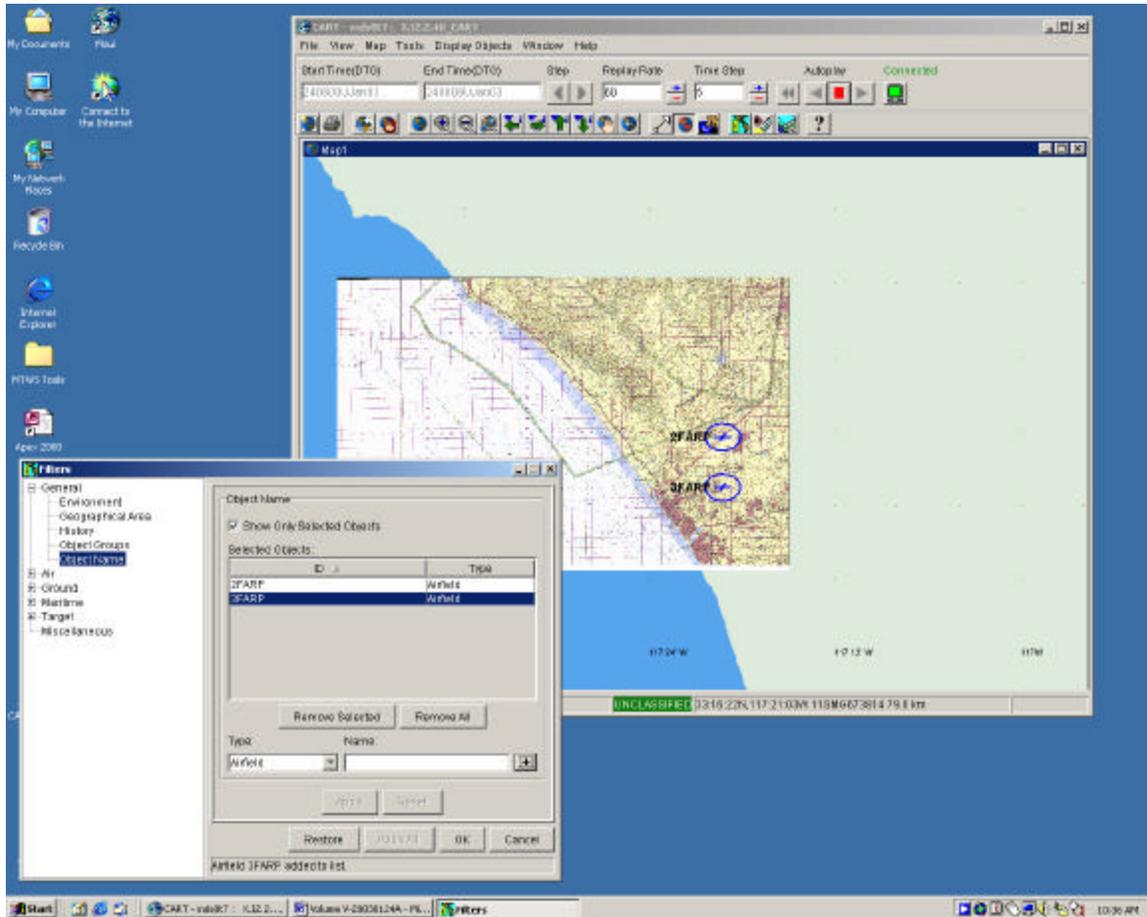
Click “Apply” to update the map display with the changes.

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To remove some of the units from the list click on one or more objects (either by dragging the mouse across a range of items, or by holding down the “CTRL” key on the keyboard and clicking on the objects to be removed) then click the “Remove Selected” button.

Click on the “Remove All” button to remove all units in the list.

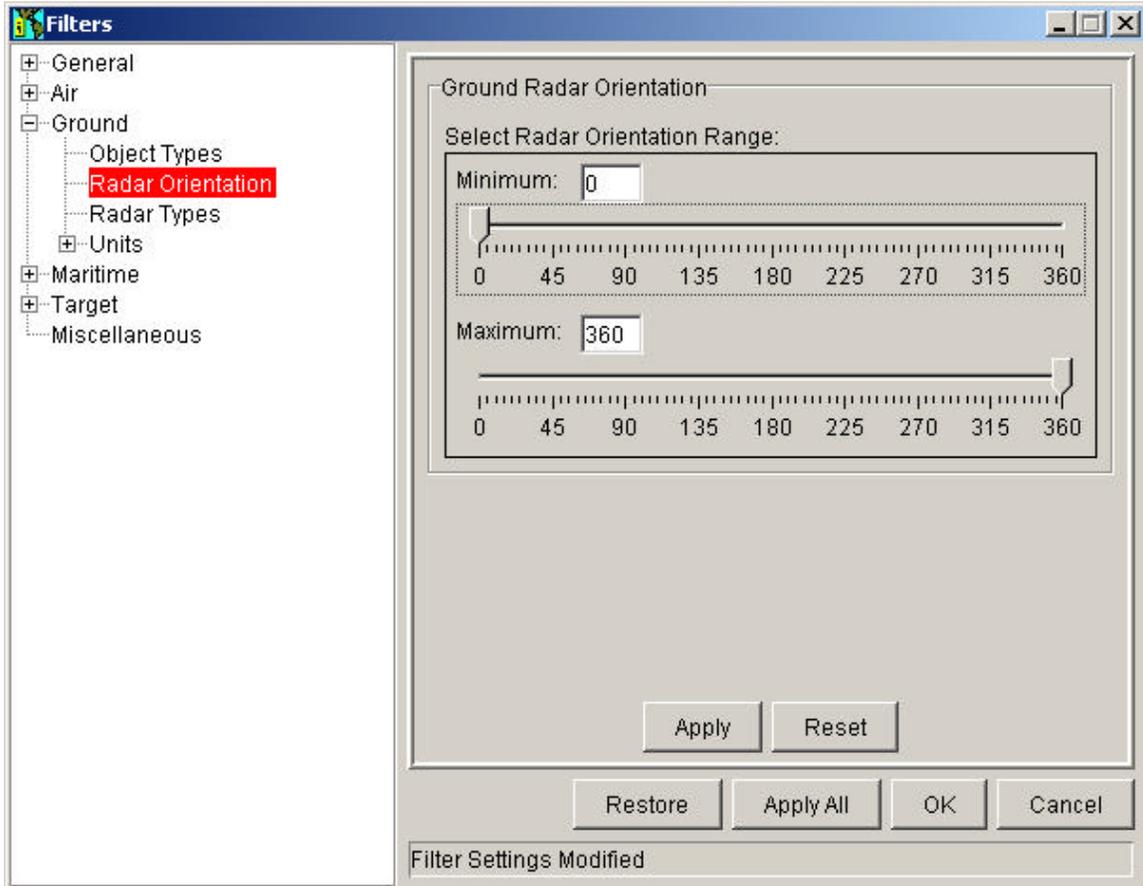
In the example below only airfields 2FARP and 3FARP have been selected (i.e., nothing else is shown).



GROUND

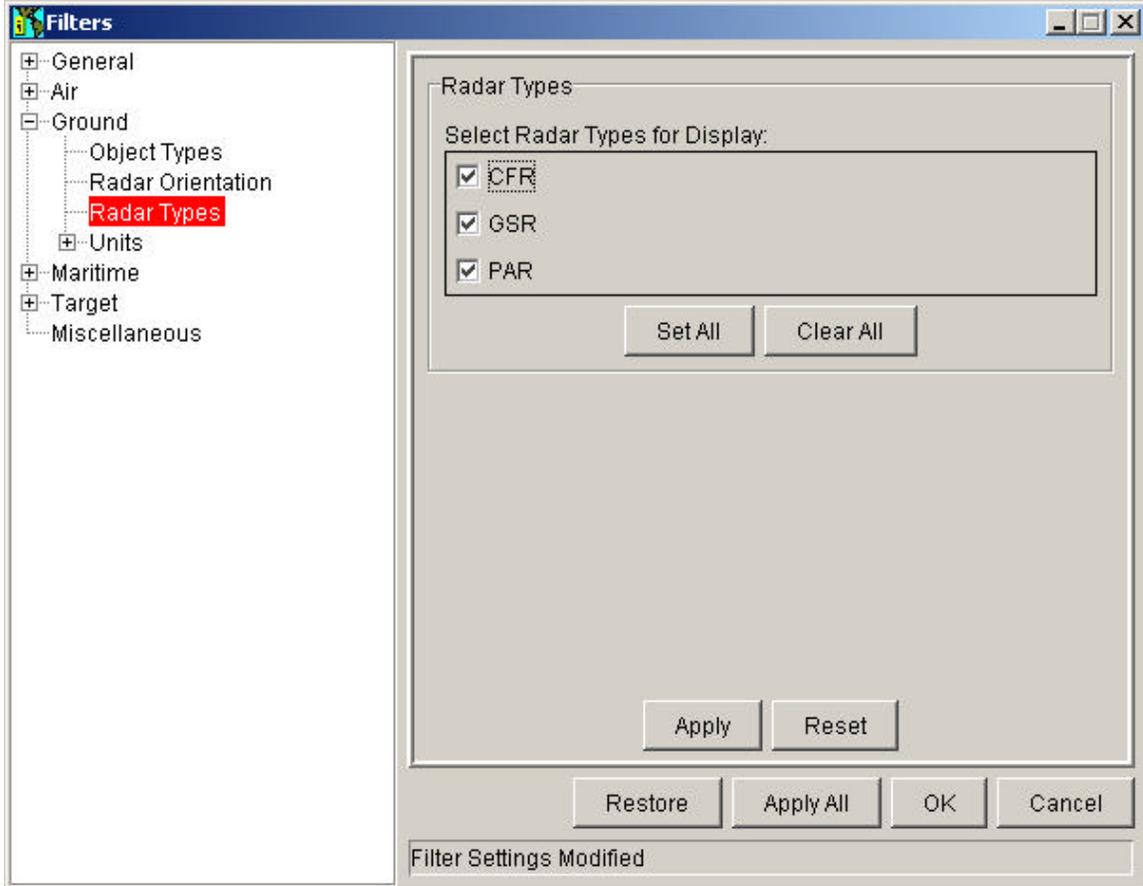
Radar Orientation.

This panel provides the facility filter ground radars by their current azimuth. Only radars with an azimuth between the minimum and maximum values (inclusive) shown on the filter panel will be displayed.



Radar Types.

This filter allows the user to select the type(s) of radar for display and reporting. Uncheck the boxes to remove the display of CFR (Counter Fire Radars), GSR (Ground Surveillance Radars), and PAR (Pulse Activated Radars).

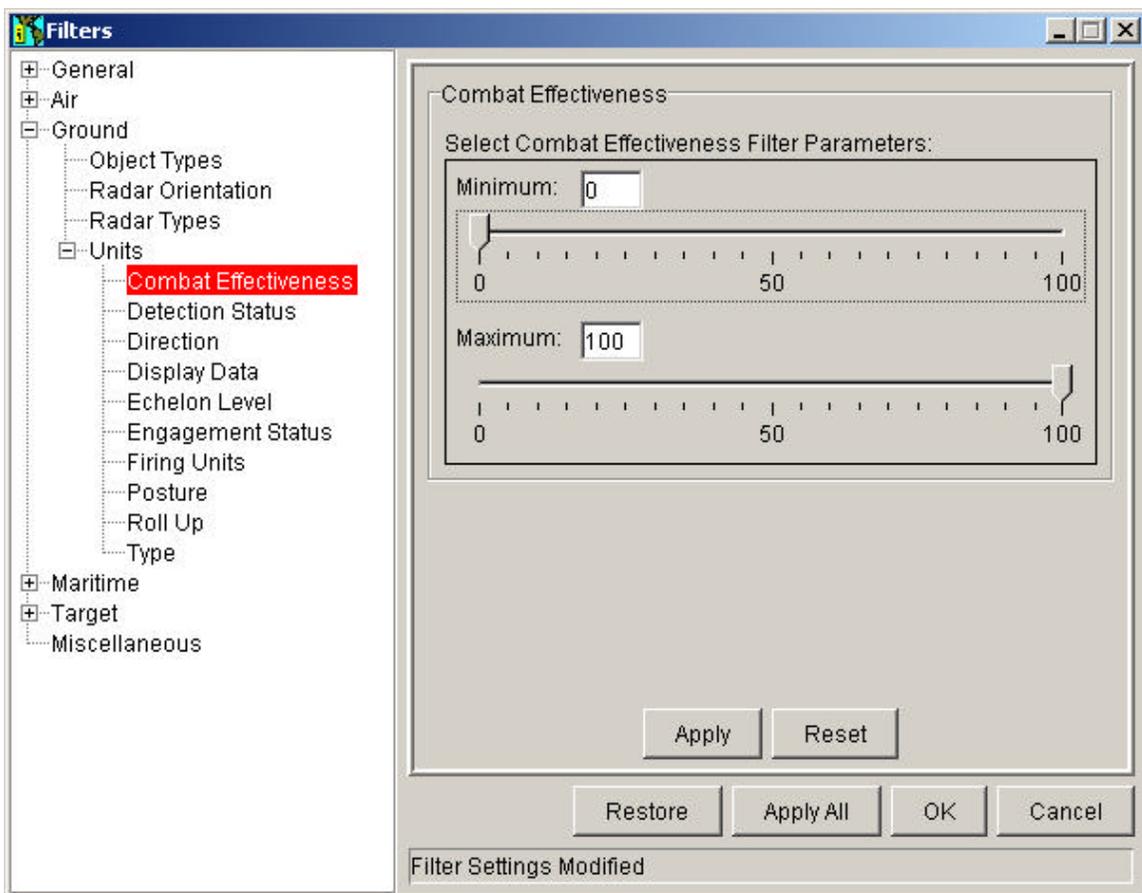


UNITS

Combat Effectiveness.

This filter permits filtering of ground units within a range of combat powers. Units with a combat effectiveness value from the minimum to the maximum values will be displayed or reported on. The shown numbers are inclusive. Using the sliding bars or typing the values directly into the text boxes controls the minimum and maximum values of combat effectiveness used for filtering ground units.

When the maximum combat effectiveness is set to 100, Units with a combat effectiveness of 100 or greater will be displayed.

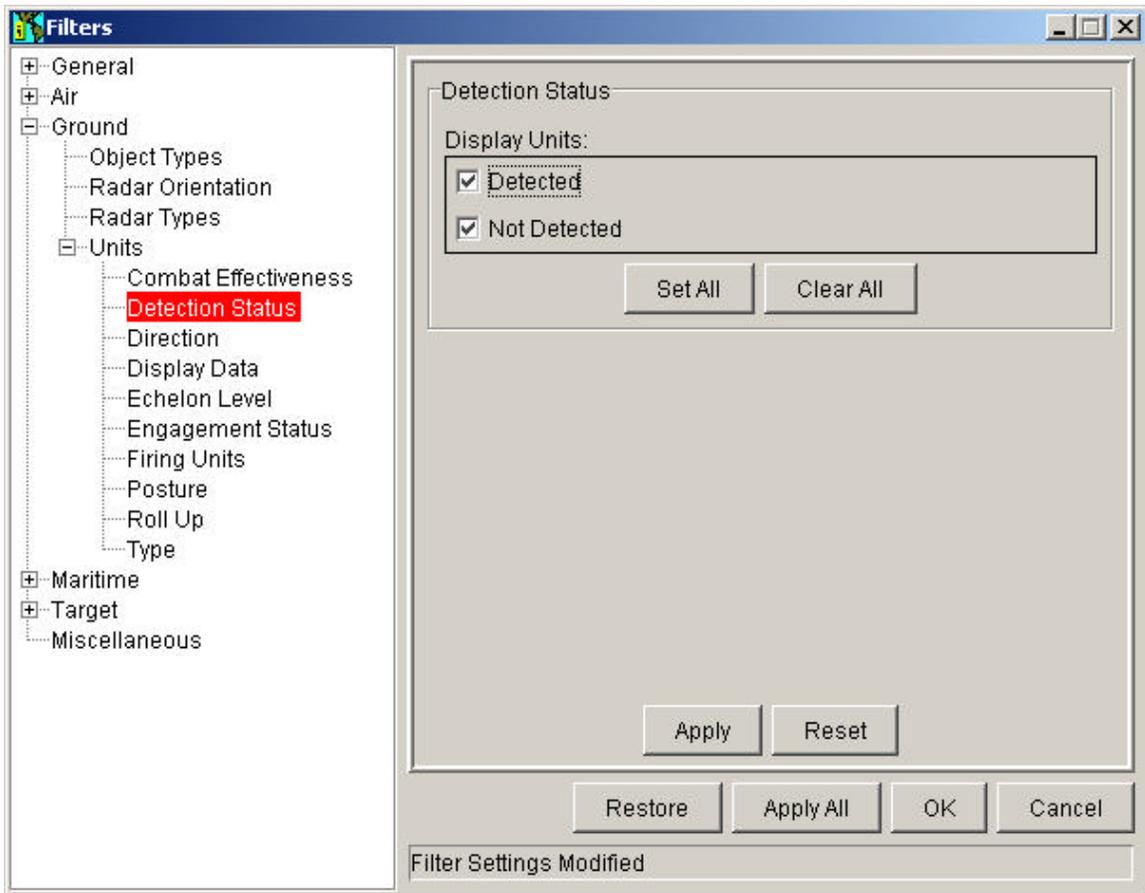


Detection Status.

This filter permits filtering of units based on whether or not they have been detected. (i.e., if “Detected” is selected only units that have been detected will be displayed; if “Not Detected” is selected only units which have not been detected will be displayed; if both are selected all units will be displayed; if neither is selected no ground units will be shown).

A unit is considered detected if it was detected any time between the Start Time and End Time shown on the CART tool bar at the top of the map display window.

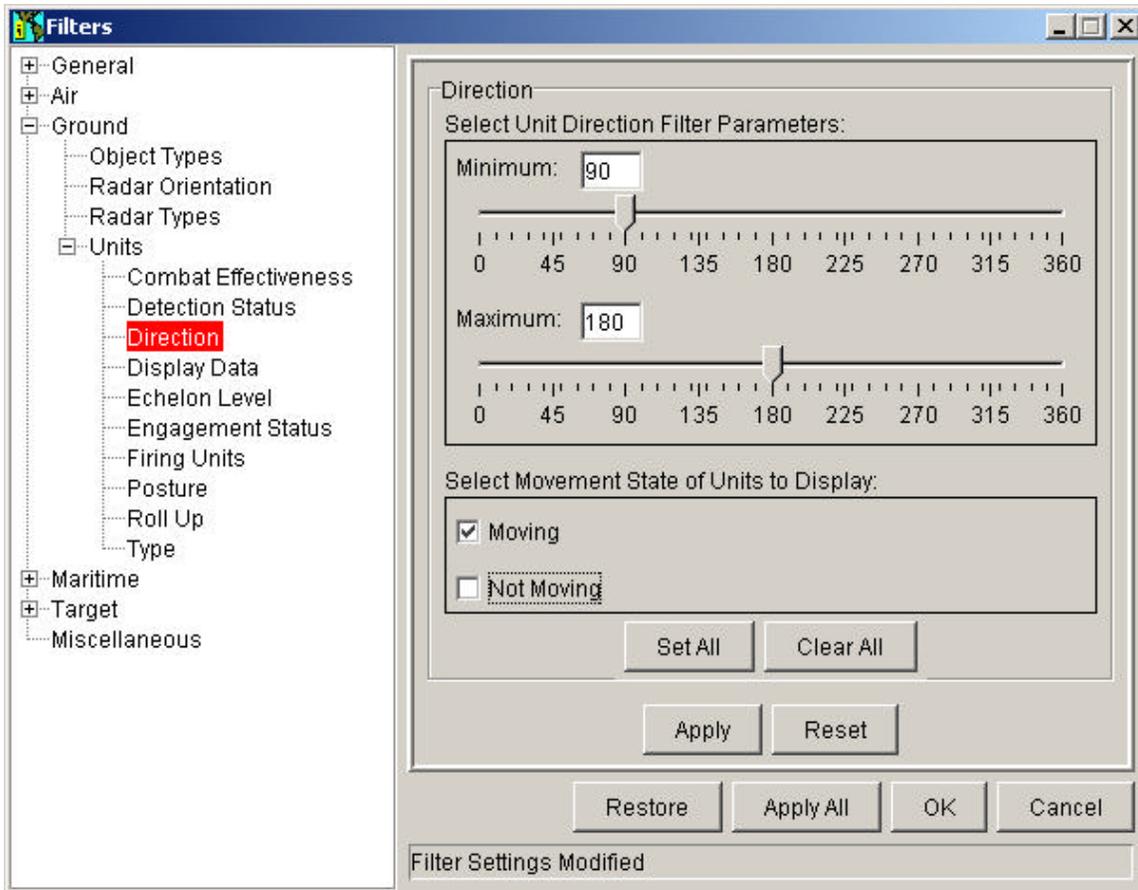
This filter affects only ground units and units of all sides are filtered, regardless of settings in the Environment filter panel, or whether the ground detections themselves are being shown.



Direction.

With this filter, the user can filter units by their direction of movement or facing and whether the units are moving or not. In the example below only units moving with a direction of movement between 90 and 180 degrees would be displayed.

For the purposes of this filter, a unit is considered to be moving only if it is moving at the end time displayed on the CART tool bar and the direction used for filtering is the direction the unit is facing or heading at the end time.

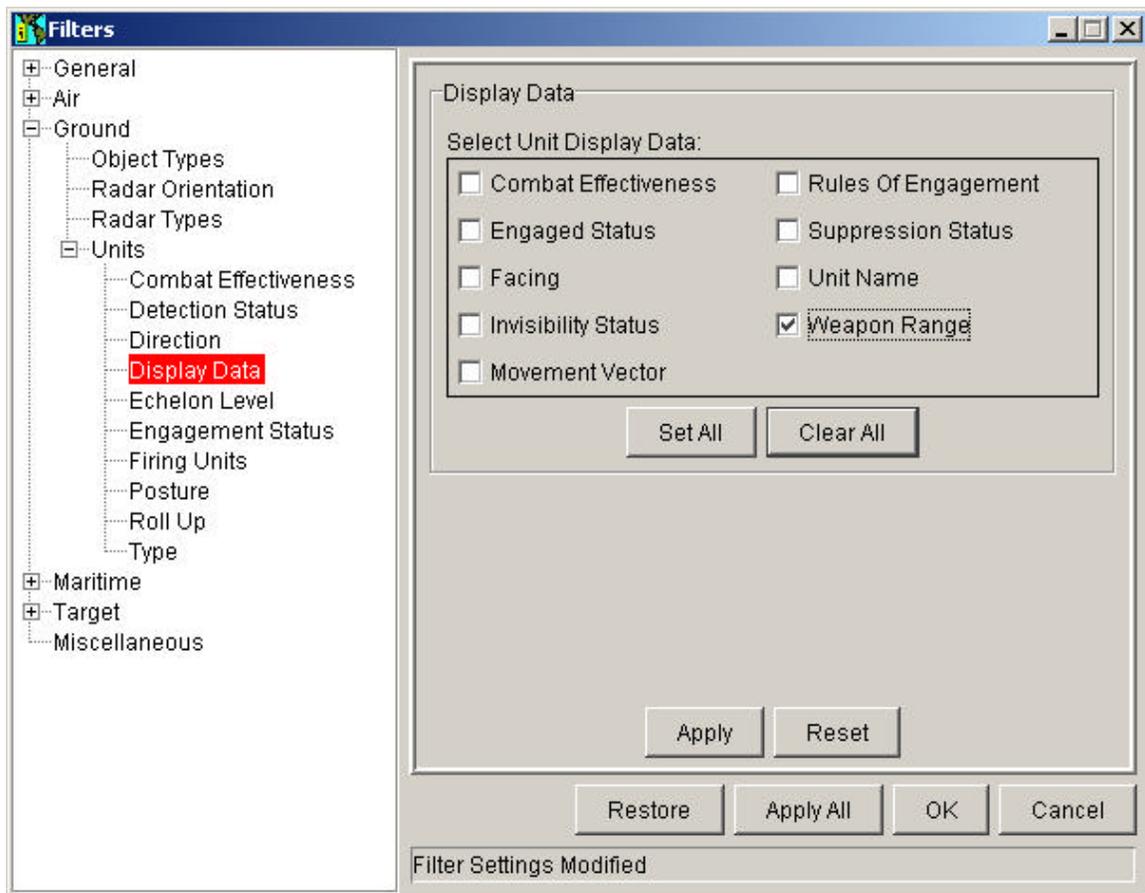


Display Data.

This filter is almost the same as that used in Maui. The unique feature for CART is “Weapon Range” which if selected causes the display of a range ring for the primary weapon for each of the following units:

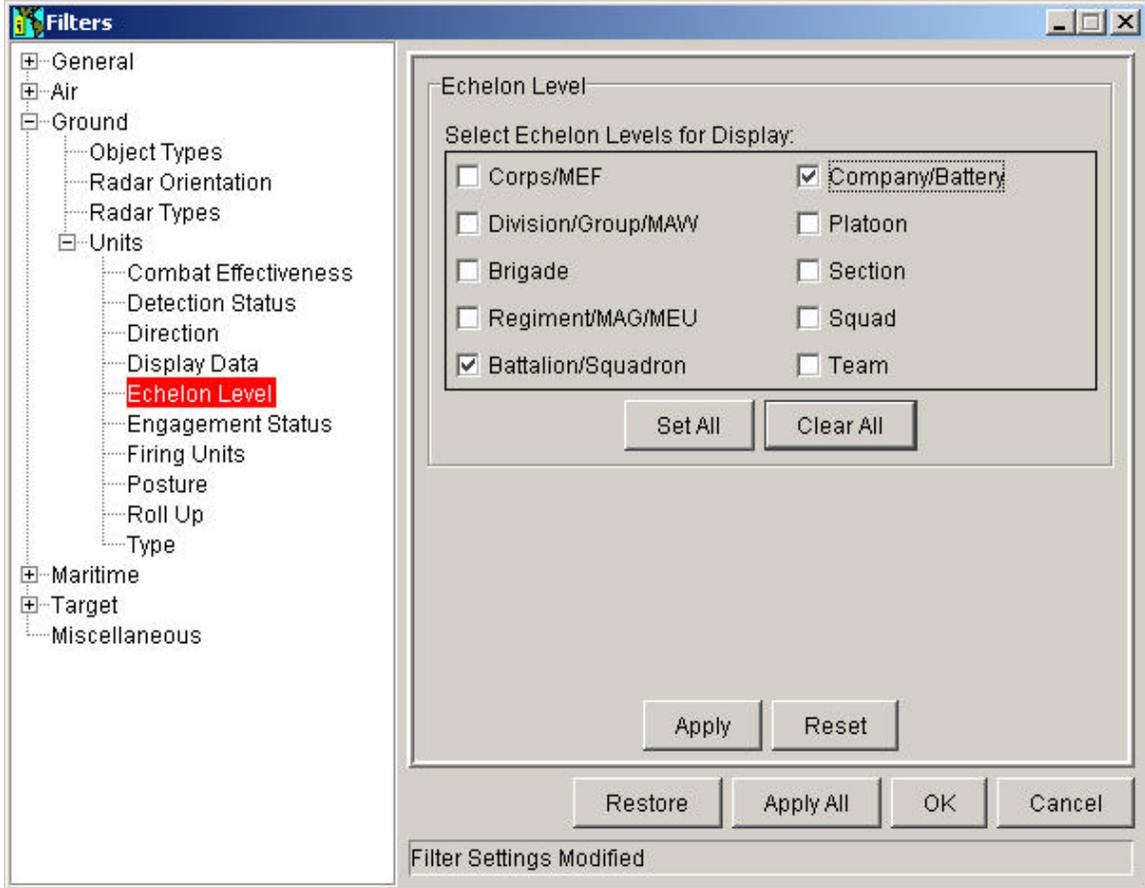
- Artillery
- Mortar Units
- Naval Gun Fire

The range ring shows the maximum range of the indirect weapon with the largest range from the units asset list at the exercise start or when the unit was initialized if the unit was defined after exercise start. These values are set in the Parametric Data. The range shown does not take account of whether the asset has ammunition or is functional nor does it account for environmental factors such as terrain or weather.



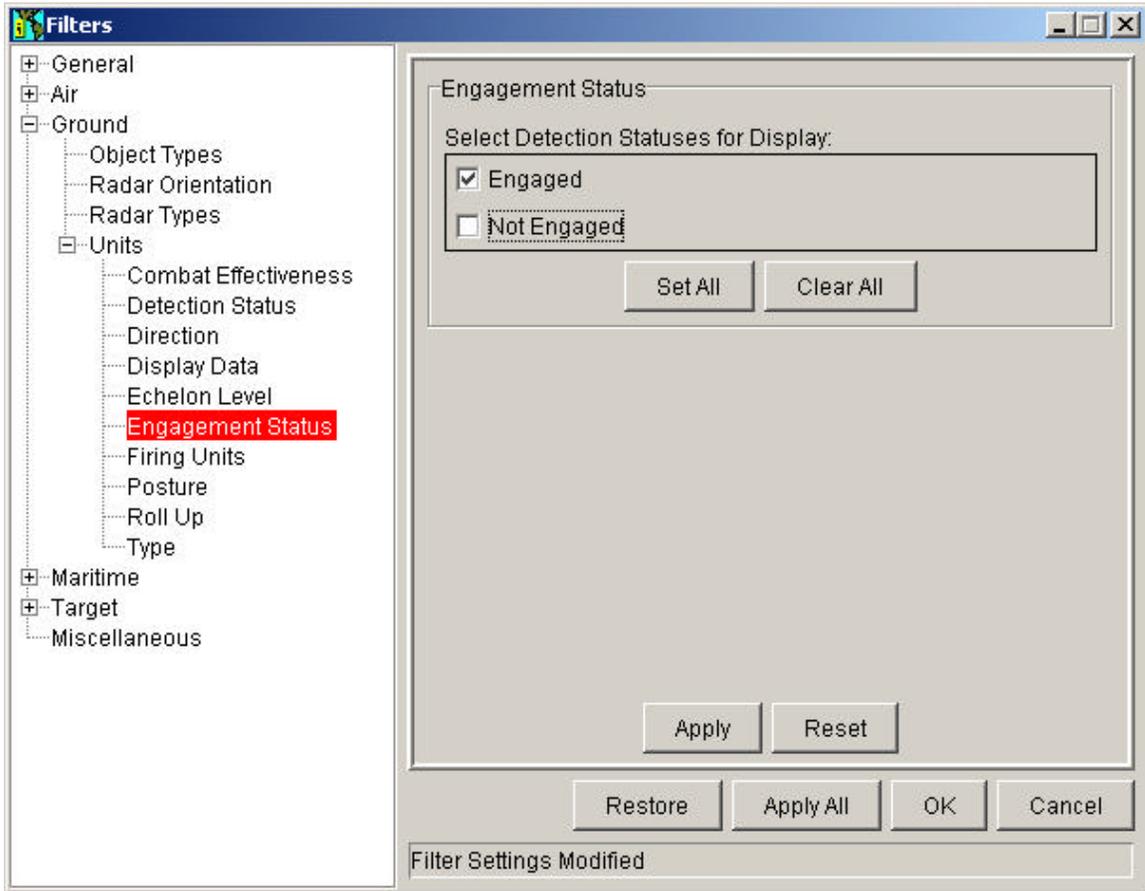
Echelon Level.

This filter allows the user to select a particular echelon or echelons for display. In the example below only units defined as a battalion, a squadron, a company or a battery would be displayed. All units not so defined would not be displayed or reported on.



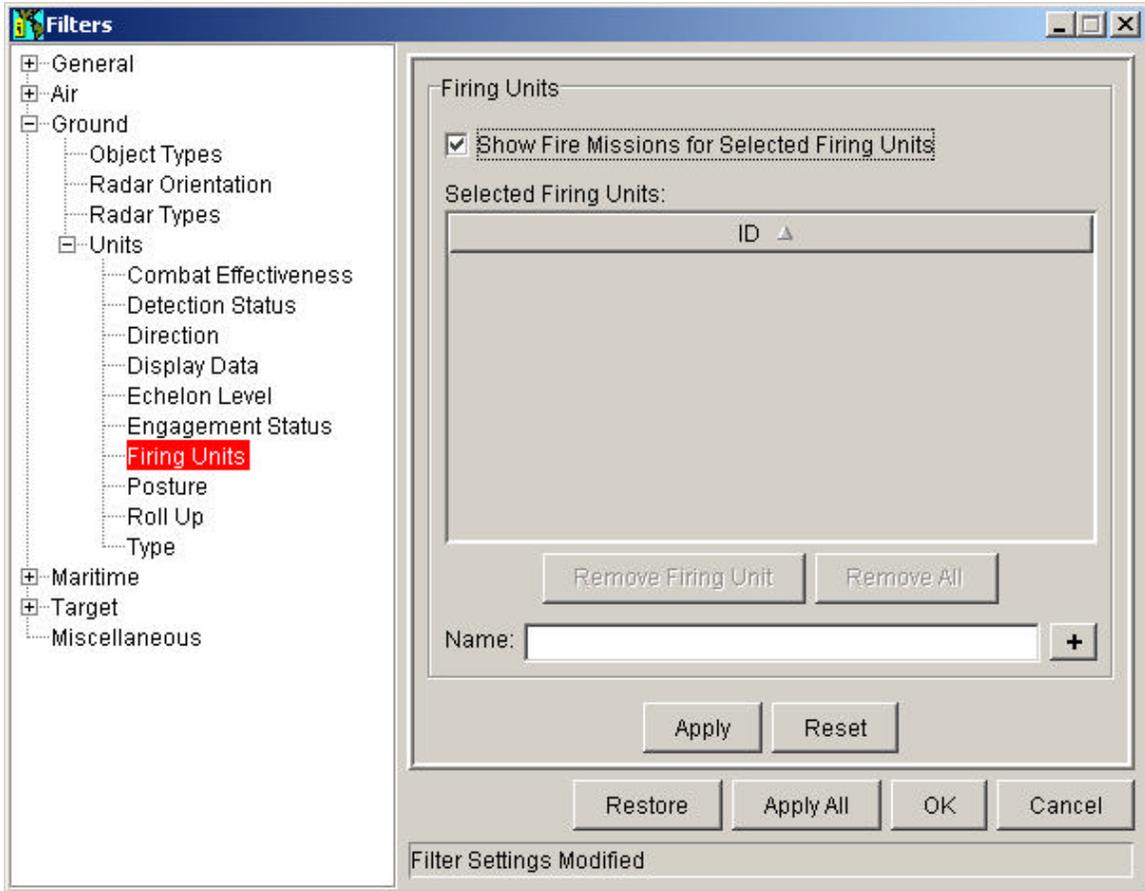
Engagement status.

If this feature is selected only units with the correct status will be displayed or reported on (i.e., if “Engaged” is selected only engaged units will be displayed, if “Not Engaged” is selected only units which are not engaged will be displayed, and if both are selected all units will be displayed). In the example below only units in active ground engagements (i.e., direct fire engagements) will be displayed.



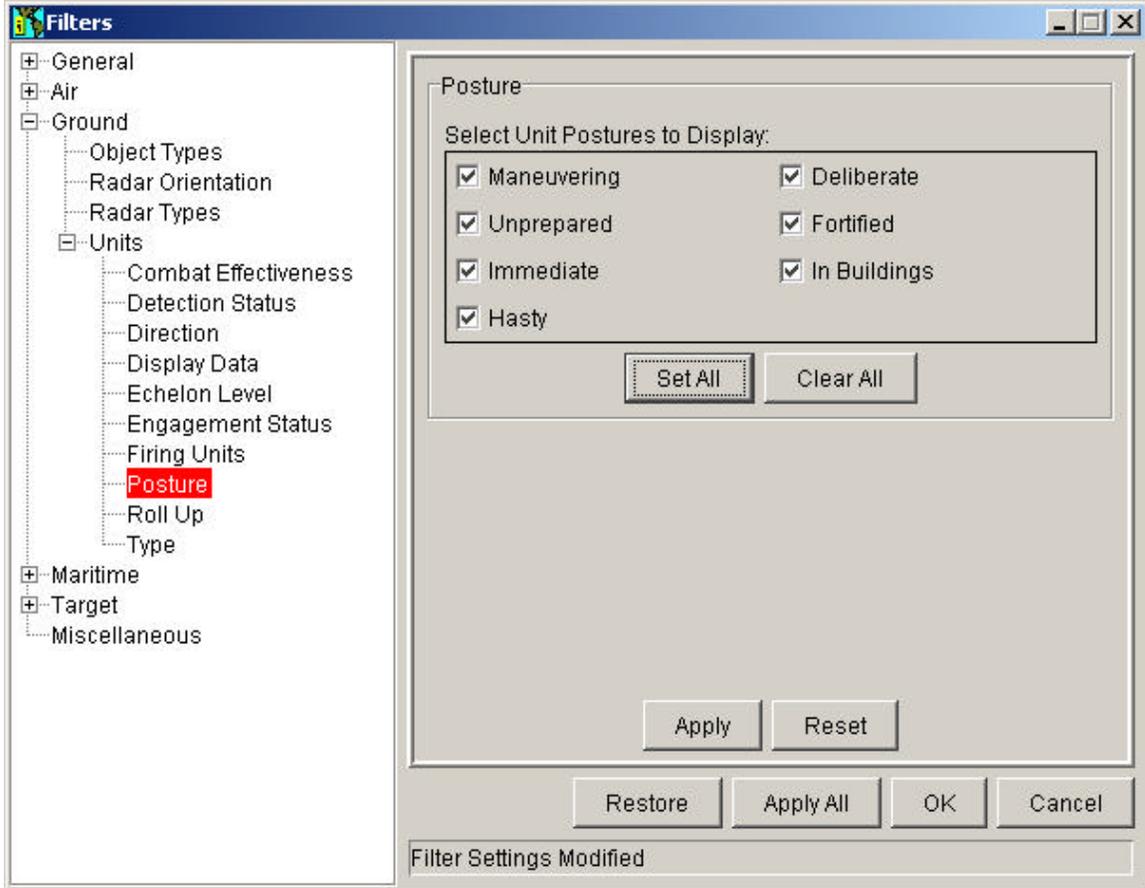
Firing Units.

If this is selected the only fire missions to be displayed will be those of units entered into the panel by their Unit ID.



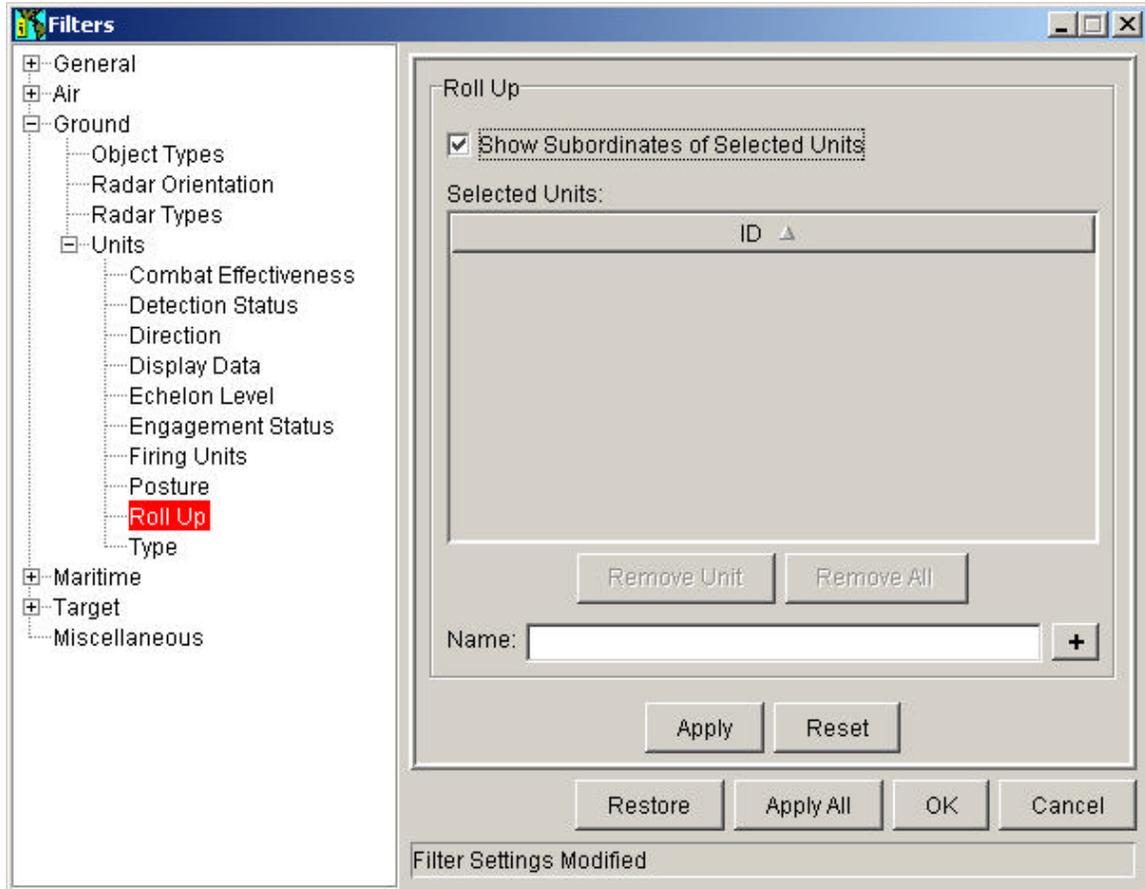
Posture.

This filter allows the user to filter the display of units by their posture. One or more postures may be selected and only units with a selected posture will be displayed or reported on.



Roll Up.

This filter allows the display of a unit and all subordinates (those reporting directly and indirectly)



To filter one or more headquarters units and their subordinates, check the box titled “Show Subordinates of Selected Objects”, then select units using one of the following methods:

- ?? Type in the name of a unit into the “Name” field. Press the “+” button. This sequence may be repeated as many times as desired.
- ?? Draw a bounding box on the map display surrounding the units to be selected by left-clicking the mouse in the center and the dragging the mouse to the outside corner of the area to be selected.
- ?? Clicking directly on the unit to be selected.

Click “Apply” to update the map display with the changes.

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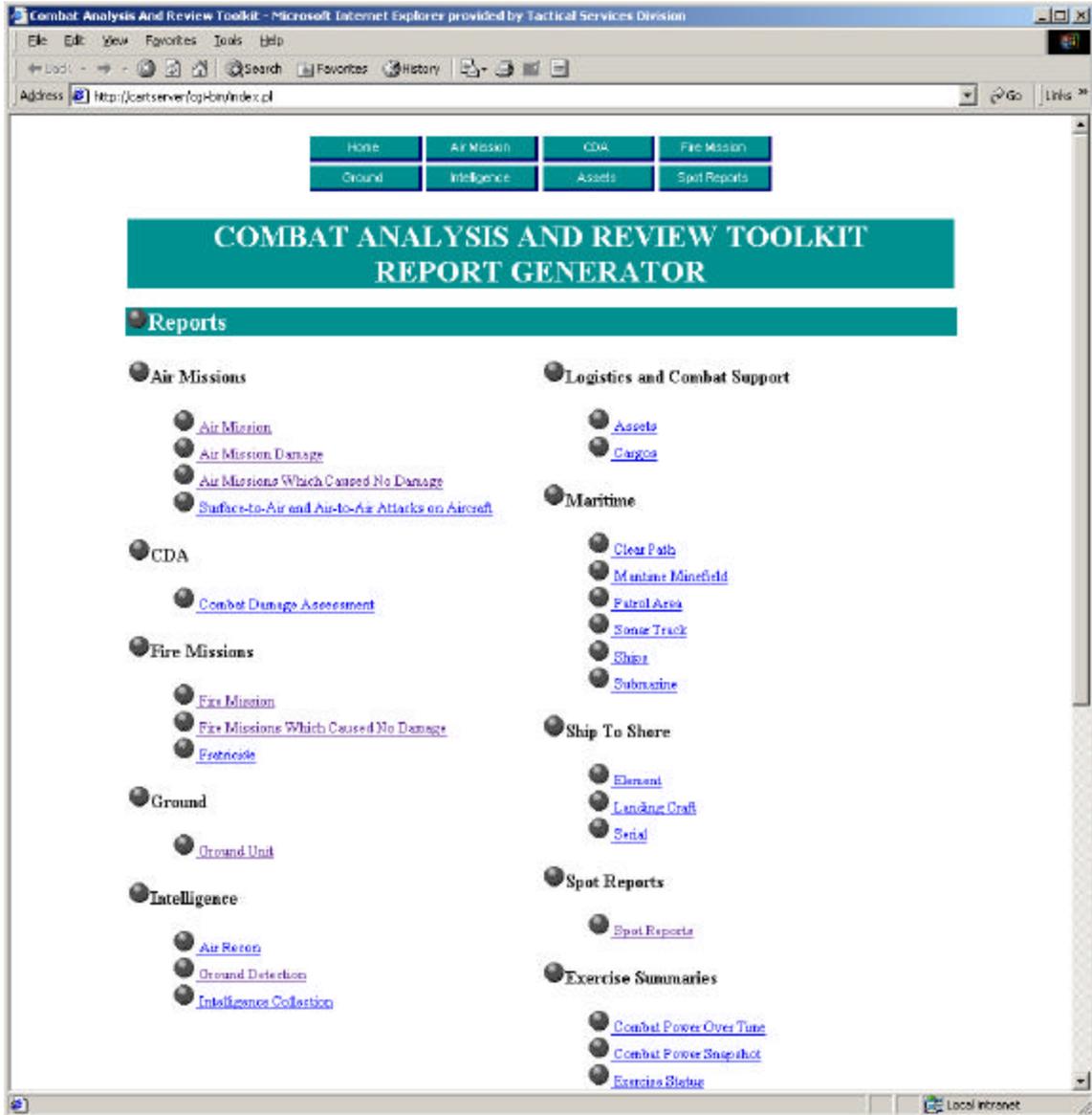
When a headquarters unit is added to the list any of its subordinates are automatically removed. If an attempt is made to add a unit whose headquarters is already in the unit will not be added.

To remove some of the units from the list click on one or more objects (either by dragging the mouse across a range of items, or by holding down the “CTRL” key on the keyboard and clicking on the objects to be removed) then click the “Remove Selected” button.

Click on the “Remove All” button to remove all units in the list.

CART REPORT GENERATOR

To start the CART Report Generator, double click on the CART Reports icon. Upon start up the Reports Menu will appear and various menu selections are provided. These selections allow the user to access the individual CART reports to provide textual outputs of desired information.



GENERAL FEATURES

Overview of using Internet Explorer.

The CART Reports are available through Microsoft Internet Explorer. This is the same software that most people use for browsing the Internet if you are familiar with this already you may choose to skip this section.

Navigations.

The Internet is composed of hypertext pages. These pages typically contain links to one or more other related pages. The link typically consists of a text description that you see on the page, and the address of another document that contains related information. Clicking on the link causes a “navigation” to the related page indicated by the link.

CART reports work using this framework. The system is centered on a menu that provides access to reports for the various functional areas that CART supports. The functional areas are listed in alphabetical order. Links to the reports are shown in blue underlined text (if the linked to document has not previously been visited) or purple underlined text (if the linked to document has been previously visited) and have titles such as “Ground Unit” and “Spot Reports”. Clicking on the reports title will cause a navigation to the report.

Internet explorer provides the following button bar by default.



If this button bar is not available, it may be turned on by selecting: View->Toolbars->Standard Buttons. Note that these features are customizable and the setup at your site may vary slightly. From left to right the buttons have the following functions:

- ?? **Back:** As you navigate through documents, Internet Explorer builds a list of the pages that you view. The back button allows you to iterate back through previously viewed pages.
- ?? **Back History:** (the small black triangle between the arrows) Pull up a list of the titles of up to the last 9 pages visited, any of which may be navigated to by clicking on the page title.
- ?? **Forward:** If you have already navigated backwards then the forward button takes you to the pages visited after the first viewing of the current page.
- ?? **Forward History:** The forward history allows viewing the titles of up to 9 pages that you have already stepped backwards over. Any of the titles may be clicked on to view the original page again.

- ?? **Stop:** Interrupt the loading of a page. Note that some reports in CART may take minutes to load. If you interrupt a page loading, you may be able to select a smaller set of items in the report by changing the filters, and obtain the information you were looking for more quickly.
- ?? **Refresh:** Force the page to reload. This will send a request back to the CART server causing the contents of the page to be re-evaluated. This resulting report may differ from the previous report, if the times or filters for the Map Display have been updated. See below for more information on the specifics of CART reports.
- ?? **Home:** Navigate to the ‘home’ page. See “setting home button” below.
- ?? **Search:** This feature has no utility in CART.
- ?? **Favorites:** Allows the display of previously defined links. Can be used to generate report templates or “search sets” that can provide quicker information to report contents. See “Defining a report template” below.
- ?? **History:** Allows access to previously viewed reports. In general Internet Explorer shows the report exactly as it was when first viewed, and does not automatically update the contents to reflect more recent changes.
- ?? **Mail:** This feature has no utility in CART.
- ?? **Print:** Directly print the displayed report to the currently defined printer.

Setting font sizes.

To change the size of text used in the report select “View->Text Size->”. We recommend selecting the smallest size that you can comfortably read.

Searching for items in a report.

Internet Explorer allows searching for a specific item on a page.

To search for a specific item in a report, select the Edit->Find menu or type CTRL-F. Type the text to be searched for into the text box. And click the “Find Next” button. Continue clicking “Find Next” to find additional occurrences.

This can be useful for identifying specific items in a report. For instance to identify the immediate subordinates of a unit ‘1MAR’:

- ?? Run the ground units report displaying the fields Name and Higher HQ;
- ?? Search the report by typing CTRL-F and typing ‘1MAR’ into the text field;
- ?? Click the “Find Next” button to scan the report finding the subordinates of 1MAR.

CART FEATURES

Use of CART filters/report filters.

Almost all CART reports share the same format as that shown below:

The screenshot displays a web-based interface for generating reports. At the top, a teal header bar contains the word "CARGOS" in white, bold, uppercase letters. Below the header, there are two columns of filter boxes. The left column is titled "From" and contains three items: "B/RCN", "1/LSB", and "3LHD". The right column is titled "To" and contains five items: "A1/11", "B1/11", "C1/11", "1AMMO", and "1MED". Below these columns is a "Fields" section with a list of options: "Cargo ID", "DTG", "Supplying Unit", "Destination Unit", and "Contents". To the right of the "Fields" list is a "GO" button.

Below the report title are the *Report Filters*. The filters can be used to limit the number of items that are included in the report. Below the Report Filters is a single selection box showing the *Report Fields*. The report fields define which pieces of information are shown for each item that is reported on. Next to the Report Fields is the go button. After selecting the desired Report Filters and Report Fields, clicking on the Go button generates the report. Note that the filters offer only the options that are currently valid. For instance a “Hierarchy” filter for ground units in a small exercise, might offer only Section, Platoon, Company, Battery, Battalion and Regiment, indicating that no units of size Corps, Division or Brigade are currently defined in the exercise.

When setting filters, all, none or any combination of the filter boxes may be used. For any Report Filter, the report will include only the filter items that are selected. In each Report Filter multiple items may be selected by holding down the CTRL key and clicking on the items in the selection box.

A special case for the Report Filter is if no items are selected. In this case, the filter is not activated, and no filtering for the field is applied to the report.

From	To
B/RCN	A1/11
1/LSB	B1/11
3LHD	C1/11
	1AMMO
	1MED

Fields
Cargo ID
DTG
Supplying Unit
Destination Unit
Contents

GO

In the above example, the report is requesting all Cargos originating from the unit 3LHD. The fields Cargo ID, Destination Unit and Contents are all to be shown. The outputs of the report are shown below.

CARGOS

CARGO ID	DESTINATION UNIT	CONTENTS
CARGO-STS1	A1/11	155MM-HE 2000: Operational
CARGO-STS2	B1/11	155MM-HE 2000: Operational
CARGO-STS3	C1/11	155MM-HE 2000: Operational
CARGO-STS4	1AMMO	155MM-HE 2000: Operational
CARGO-STS5	1AMMO	155MM-HE 2000: Operational
CARGO ID	DESTINATION UNIT	CONTENTS

From

To

B/RCN
 1/LSB
3LHD

A1/11
 B1/11
 C1/11
 1AMMO
 1MED

Fields

Cargo ID
 DTG
Supplying Unit
 Destination Unit
Contents

Note that once a report has been run, the filters are shown at the bottom of the report and the settings that were used to generate the report remain selected. These settings may be adjusted and then report rerun by clicking on the “GO” button again.

In general, the CART reports use the filter settings and time settings that are in effect on the Map Display, in addition to the settings of the Report Filters. For instance, ground units that are filtered off using the map filters, are also filtered out of the CART reports. As a result the Map filters and report filters can be used in combination to narrow down the number of items that appear in a report. See below for an example of how to do this.

Report Time

Reports, in general, are time specific, and use the times defined on the CART map window and referred to in this sections as the “*report period*”. Each report contains a summary box at the bottom as shown below:

Classification:	UNCLASSIFIED
Exercise:	X.I2.2.41_LF_DEMO
Report Time:	050800UFEB03 to 050959UFEB03

For instance, the Cargos report (shown above) shows the contents of each cargo at the end time of the report time period. Rerunning this report at a later point in the exercise will show different results if, for instance, the cargos are delivered to the destination units.

Defining a report template

In cases where the same report settings are used regularly, Internet Explorers’ Favorites can be used to save the settings, to save some time. For instance to print two reports showing the combat effectiveness and location, one showing HQ1/1 and all it’s subordinates, and another showing HQ2/1 and all its subordinates, each hour through the course of an exercise. One approach would be as follows:

- ?? In the map display filters, select the roll-up panel, enter ‘HQ1/1’ into the text field, and press “Apply”.
- ?? In the reports, select the “Ground Units” report by clicking on the shortcut button “Ground
- ?? Select all units in the “Name” filter. In the fields report select the fields Name, Location, and Combat Effectiveness
- ?? Hit “Go”.
- ?? Click on the “Favorites” icon, or select Favorites->Add to Favorites ...
- ?? In the Name field enter HQ1-1 roll-up. Click on the “Links” folder in the box titled “Create in”.
- ?? Check that a new button appears on the Links Toolbar with the title “HQ1-1”. If your links bar is not visible use View->Toolbars->Links to turn it on.
- ?? Repeat the above steps for HQ2/1.
- ?? Then from the CART Map Window set the step size to 60, and press the forward step icon.
- ?? Run the HQ1/1 report by clicking on the first of the newly created buttons. Run the HQ2/1 rollup report by clicking on the other newly created button.
- ?? Repeat the above two steps through to the end of the exercise.

REPORT SHORTCUT BUTTONS



SHORTCUT BUTTON FUNCTIONS

Home. Selection of this button will return the user to the CART Reports menu.

Air Mission. This report lists all air missions in the database. The report can be filtered by aircraft (type), mission (type), side and squadron. The report fields are side, location, heading, speed, status, squadron, aircraft, mission, number of aircraft, takeoff time and ordnance.

CDA. This shortcut gives access to CDA assessments in the database and can be filtered by event kind (air mission, fire mission or ground engagement), attacking unit/mission, damaged unit, weapon, ammo (type) and damaged asset.

Fire Mission. This report provides a listing of all fire missions in the database. The report can be filtered by (fire mission) ID, target kind, firing unit, target name, firing side, firing weapon and projectile (type).

Ground. This button gives the user access to the “Ground Unit” report, which can be filtered by side, unit type, hierarchy and/or controller. Valid report fields are name, side, controller, located at, hierarchy, unit type, speed, heading, mission, and posture.

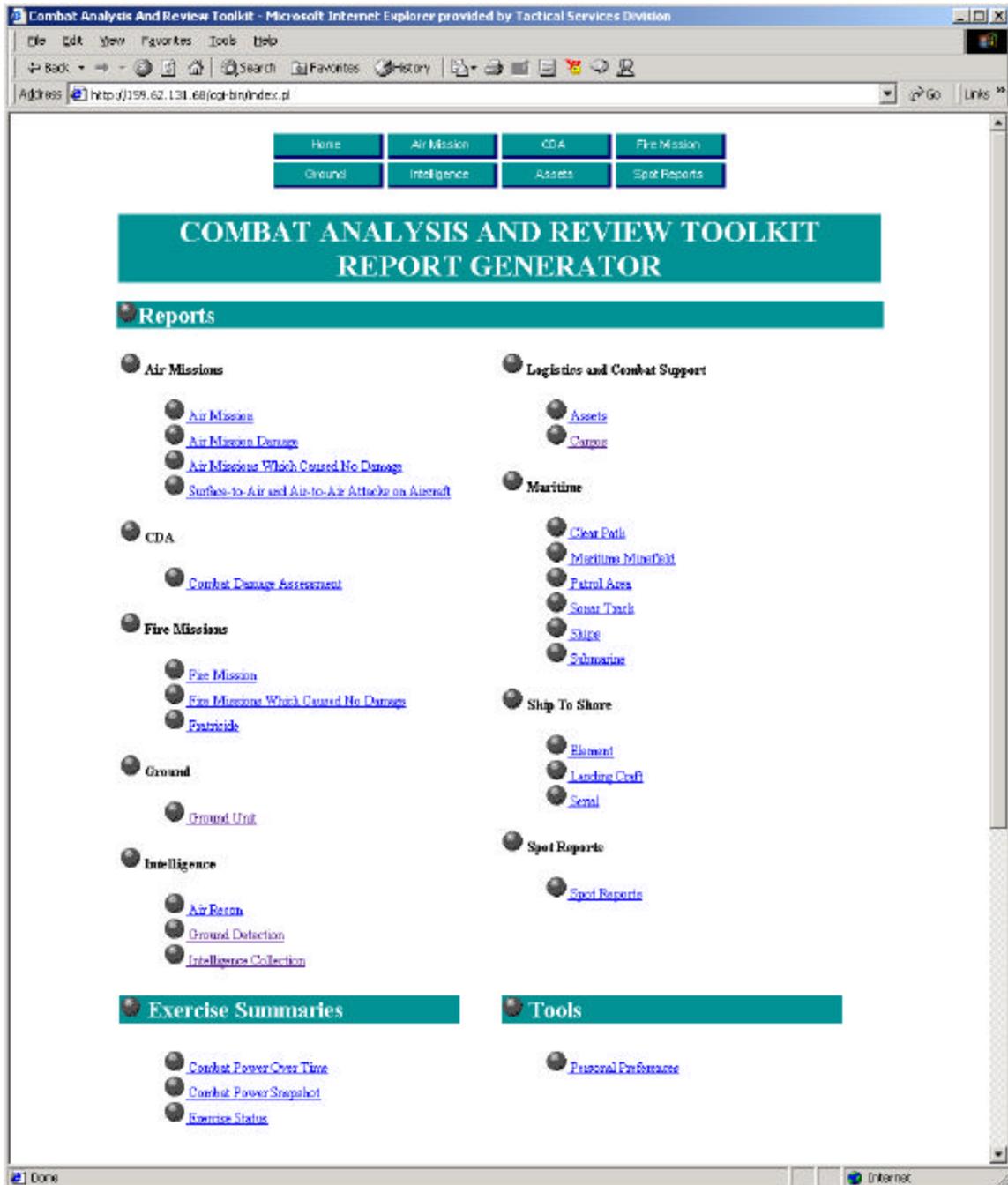
Intelligence. This shortcut allows the user to access the Ground Detection Selection Form which allows the user access to ground detections in the database. Detecting unit, detecting side, detected unit, detected side and method of detection can filter the report on ground detections.

Assets. This is a shortcut to obtain a report of all the assets in the exercise database. Double-clicking on an asset (“155MM-HE”) will create a report listing all units with that asset and the quantity of the asset held by that unit(s).

Spot Reports. This button provides a shortcut to the Spot Report Selection Form (type). This provides access to all spot reports in the database. Message type, unit mission and controller can filter the report.

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MAIN MENU

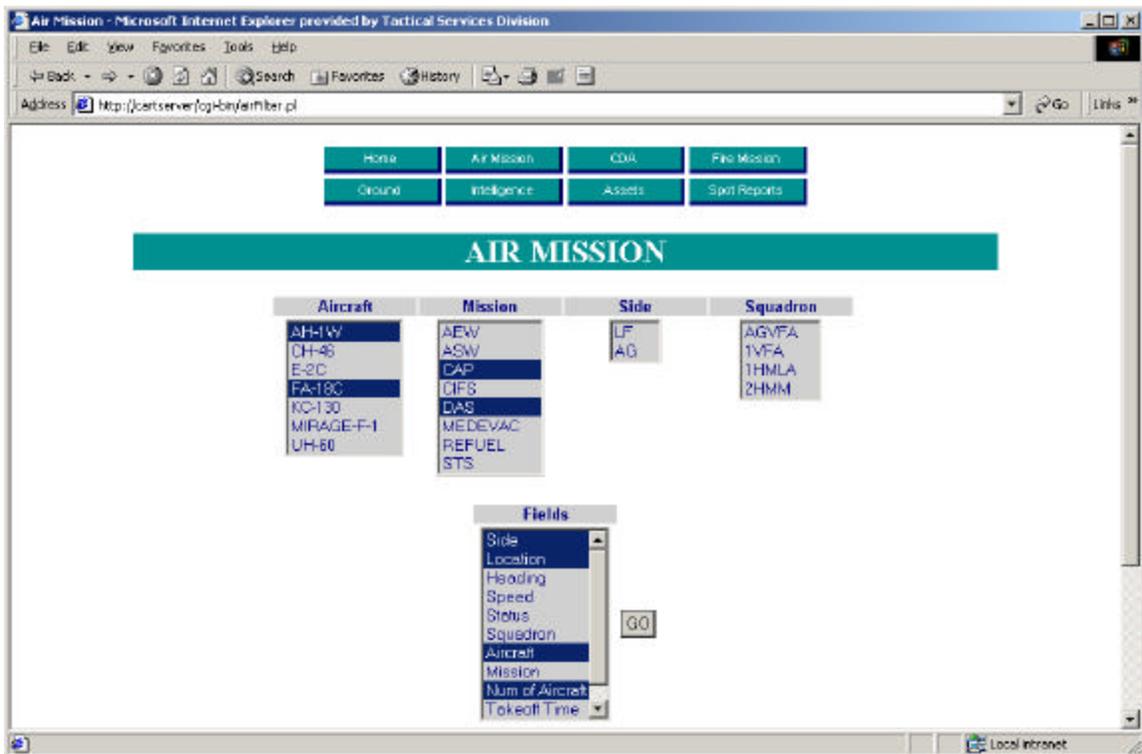


The CART Main Menu lists each of the major reports that are available in the CART system. The reports are listed alphabetically by functional area. The details for each report are described below. Unless noted otherwise, all reports described below are available from this web page.

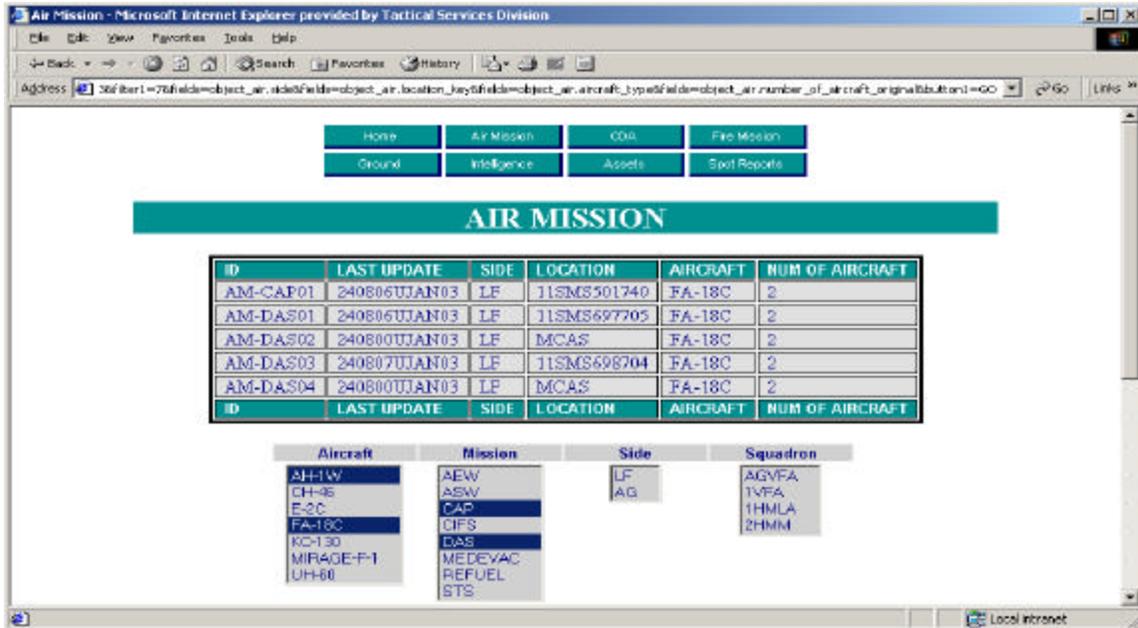
AIR MISSIONS

Air Mission

This report provides general information on all types of air missions. The available filters are aircraft (type), mission (type), side and squadron. The report fields are side, location, heading, speed, status, squadron, aircraft, mission, number of aircraft, takeoff time and ordnance. Air missions that are filtered off in the CART map display are not shown in this report. Air missions that landed (or were destroyed) before the reporting period, or took off after the reporting period are also not reported.



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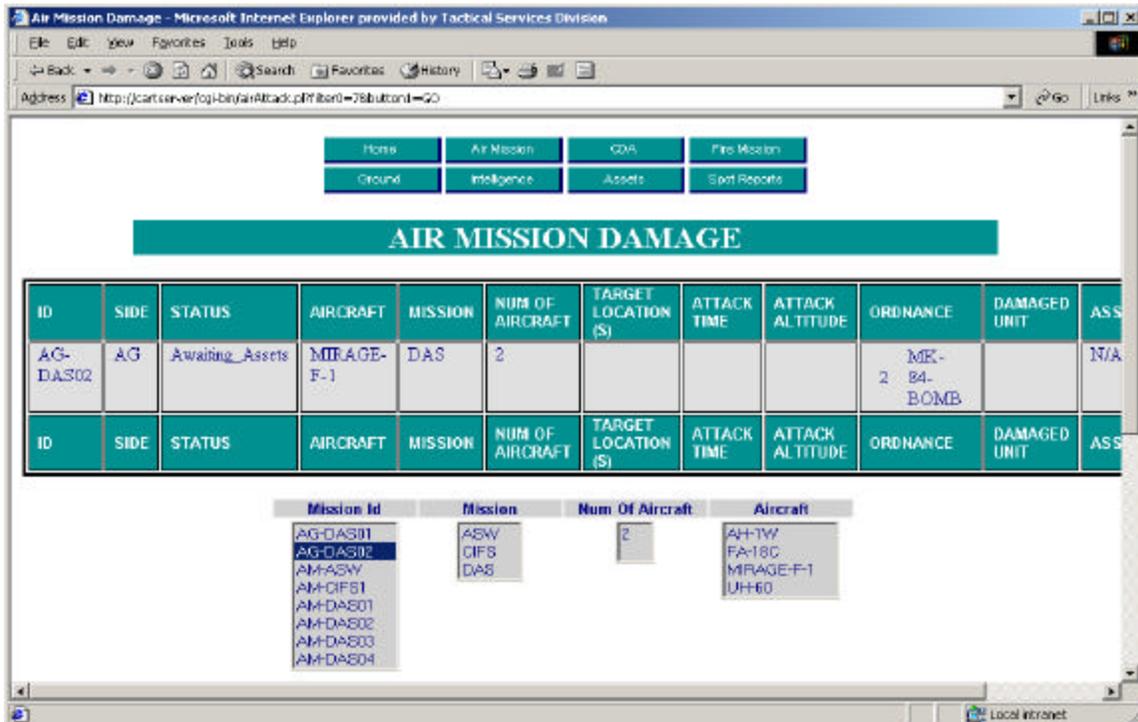
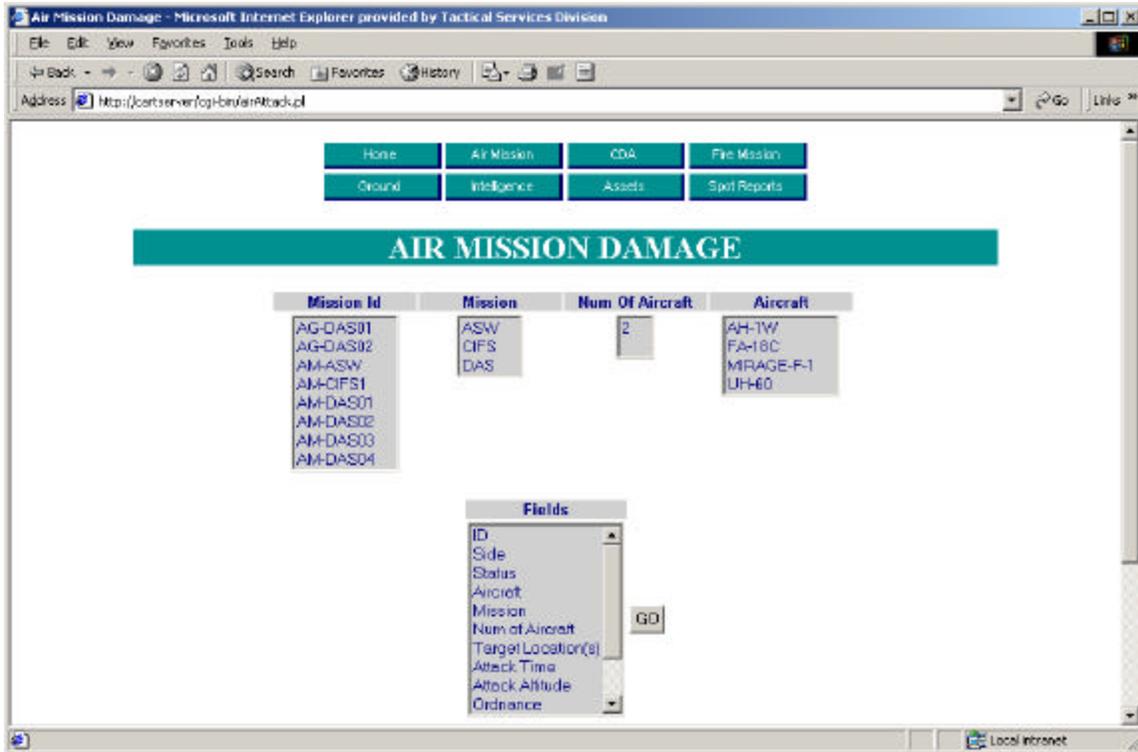
Air Mission Damage

This report lists the CDA inflicted by air missions on ground targets. Only “ARM_RECON”, “ASW”, “CAS”, “CIFS” and “DAS” missions are listed in this report. The available report filters are (air) mission ID, mission (type), number of aircraft and aircraft (type). The report fields are ID, side, status, aircraft (type), mission (type), number of aircraft, target location(s), attack time, attack altitude, ordnance used, damaged unit, asset and damage.

As with the Air Mission report, air missions that are filtered off in the CART map display are not shown in this report. Air missions that landed (or were destroyed) before the reporting period, or took off after the reporting period are also not reported.

This report shows all damage for the air mission, including damage that may currently be outside the time range of the current report.

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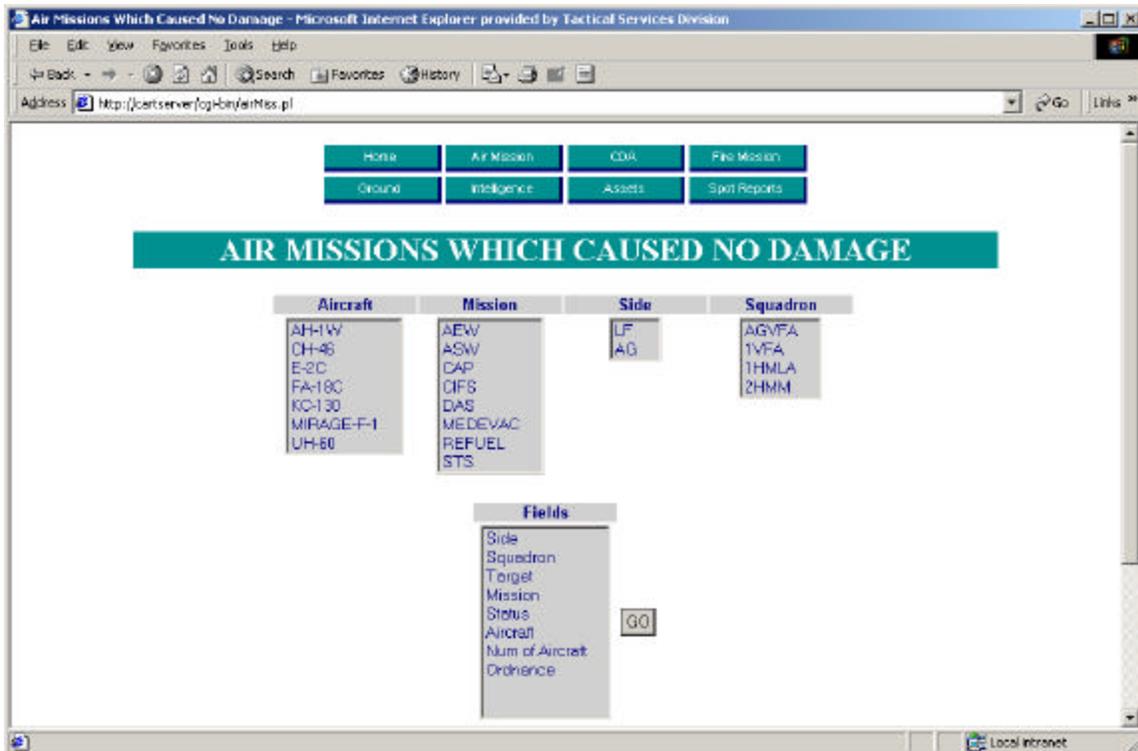


Air Missions Which Caused No Damage

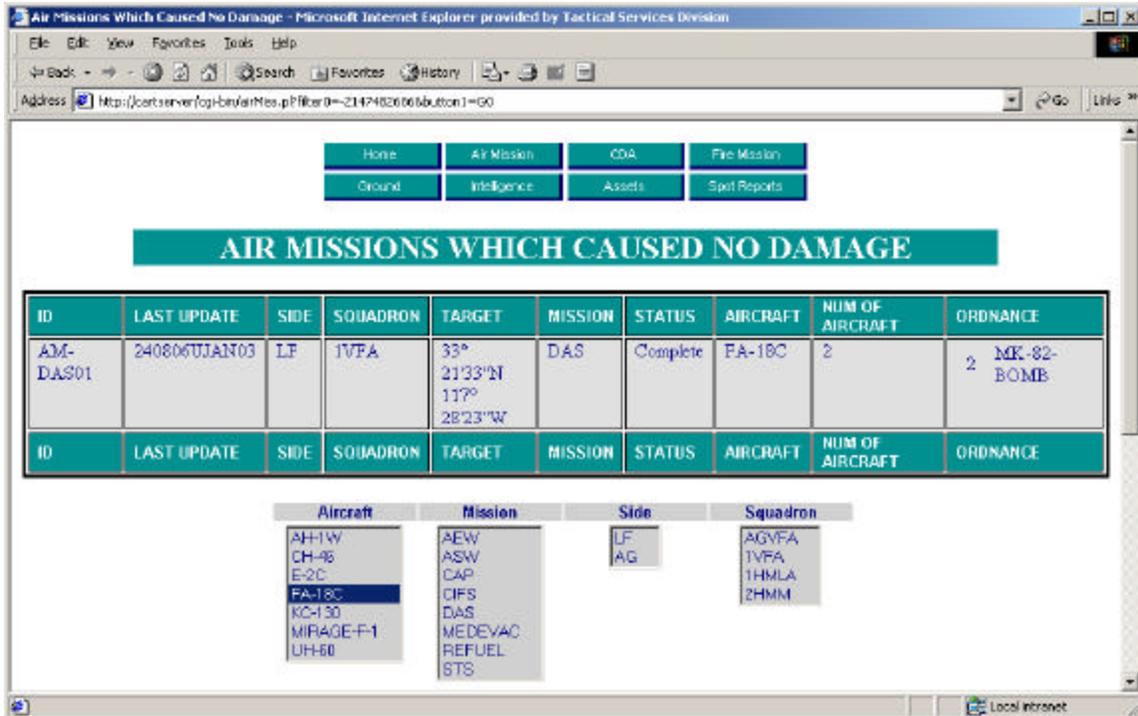
This report is a listing of current air missions that caused no damage. The report shows “CAS”, “CIFS” and “DAS” air missions with a defined target that inflicted no damage or casualties.

As with the Air Mission report, air missions that are filtered off in the CART map display are not shown in this report. Air missions that landed (or were destroyed) before the reporting period, or took off after the reporting period are also not reported.

The report can be filtered by aircraft (type), mission (type), side and squadron and reports the side, squadron, target, mission (type), (air mission) status, aircraft (type), number of aircraft and ordnance (type).



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Surface-to-Air and Air-to-Air Attacks On Aircraft.

This report identifies air-to-air and surface-to-air engagements. The report fields include start (time), shooter (ID of engaging unit), target, event, weapon, ammo (type), damaged asset and K-Kill (damage to asset).

As with the Air Mission report, air missions that are filtered off in the CART map display are not shown in this report. Air missions that landed (or were destroyed) before the reporting period, or took off after the reporting period are also not reported.

The report shows only damage to air missions that occurred during the report period.

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Surface-to-Air and Air-to-Air attacks on Aircraft - Microsoft Internet Explorer provided by Tactical Services Division

File Edit View Favorites Tools Help

Address http://certserver/top/aircraft_engagements.pl

Home Air Mission COA Fire Mission
 Ground Intelligence Assets Spot Reports

SURFACE-TO-AIR AND AIR-TO-AIR ATTACKS ON AIRCRAFT

START	SHOOTER	TARGET	EVENT	WPN	AMMO	DAMAGED ASSET	K-KILL
240816UJAN03	AM-CAP01	AGFRAG1	Air_to_Air	N/A	AIM9-MSL	MIG-21	2
240818UJAN03	THAWK	AGFRAG2	Surface_to_Air	IHAWK-LNCHR	IHAWKMSL	MIG-21	2
START	SHOOTER	TARGET	EVENT	WPN	AMMO	DAMAGED ASSET	K-KILL

Classification: UNCLASSIFIED
 Exercise: X12240_CART
 Report Time: 240800UJAN03 to 240820UJAN03



Local intranet

CDA.

Combat Damage Assessment

This shortcut gives access to CDA assessments in the database and can be filtered by event kind (air mission, fire mission or ground engagement), attacking unit/mission, damaged unit, weapon, ammo (type) and damaged asset.

In this report, simulation objects that are filtered off in the CART map display do not show the damage they inflicted.

The report shows only damage that occurred during the report period.

The CDA report can be used to generate reports similar to the “Air Mission Damage” report and the “Fire Mission” report. However the CDA report facilitates searching for occurrences of particular assets that are damaged and particular units that are damaged.

Note that number of rounds shown, is the number of rounds in a “volley”. This is based upon the way MTWS simulates combat. As a single volley can damage more than a single unit and more than a single type of asset, the same volley may be listed multiple times in the same report. For this reason, adding up the number of rounds, does not provide the number of rounds fired, by a unit or mission; typically it is many times larger. The Fire Mission report or Air Mission report will show the actual number of rounds fired by a mission. Ammunition expended in ground combat can be shown in the Unit Asset History reports.

The CDA report shows changes to the assets of a Unit, thus it is possible to see an entry that shows negative quantities of M-kills or F-kills, or negative quantities of WIAs. This happens when a CDA event inflicts, say a M-kill on an asset, a subsequent event that hits that same asset, will result in the M-kill becoming a K-kill. This is recorded in MTWS as -1 M-kills, and +1 K-kills.

The example shown below illustrates this.

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Combat Damage Assessment - Microsoft Internet Explorer provided by Tactical Services Division

Address: http://cartserver/devAlan/CDA_filter.pl?filter2=-436776333&fields=eventKind+as+ek&fields=target_key&fields=damagedAssetPda

Links: Specify search set HQ1-1 Roll-up

COMBAT DAMAGE ASSESSMENT

ATTACKING UNIT / MISSION	DAMAGED UNIT	DAMAGED ASSET	M-KILLS	F-KILLS	K-KILLS	TROOPS WIA (TOTAL)	TROOPS KIA
ICG (FM2)	3AG	TROOP				1	
IDD (FM7)	3AG	BMP-2	1	1			
IDD (FM7)	3AG	TROOP				3	
IDD (FM9)	3AG	BMP-2	2		1		
IDD (FM9)	3AG	TROOP				6	2
ITANK	3AG	BMP-2	-3	-1	5		
ITANK	3AG	TROOP				8	16
ATTACKING UNIT / MISSION	DAMAGED UNIT	DAMAGED ASSET	M-KILLS	F-KILLS	K-KILLS	TROOPS WIA (TOTAL)	TROOPS KIA

Event Kind	Attacking Unit/Mission	Damaged Unit	Weapon	Ammo	Damaged Asset
Air_to_Surface	FRAG5	1AG	120MM-TNK-GUN	120MM-TNK-RND	SA-6-LNCHR
Fire_Mission	FRAG8	2AG	5/54-NAV-GUN	IHAWK-MSL	SA-6-RADAR
Ground_Engagement	FRAG8	3AG	IHAWK-LNCHR	STINGER-MSL	BMP-2
Surface_to_Air	FM1	4AG	STINGER-LNCHR	MAVERICK-LG-MSL	CH-46
Barrier_Encounter	FM2	6AG	TROOPS	5IN-HE	E-2C
	FM3	VMFA225	LAV-25	MK-82-LGB	FA-18C
	FM7	HMM262	N/A	N/A	IHAWK-SAM
	FM9	A/1/3			LAV-25
	1TANK	2LAI			P-3
	2LAI	7AG			T-64

Fields

DTG

Event Kind

Attacking Unit / Mission

Damaged Unit

Damaged Unit Side

Weapon

Ammo

Rounds

Damaged Asset

M-kills

Done Local intranet

FIRE MISSIONS

Fire Mission. This report provides information about fire missions. Filtering is available for (fire mission) ID, target kind (CE Product, Location, Target, Unit or Airfield), firing unit, target name, firing side, firing weapon and projectile (type).

Fire missions that are filtered off in the CART map display are not shown in this report. Fire missions that finished before the reporting period, or started after the reporting period are also not reported.

The report shows only damage by fire missions that occurred during the report period.

Id	Target Kind	Firing Unit	Target Name	Firing Side	Firing Weapon	Projectile
FM-1DD	Location Unit	1AG	1/1TR	LF	5/54-NAV-GUN	155MM-CLGP
FM-2DDG		A1/11	1AG	AG	2B3-SP-HCW	155MM+E
FM-A11-1		B1/11	1LT		M-198	152MM+E
FM-A11-2		C1/11	1MR			5IN+HE
FM-AG-1		1DD				
FM-AG-2		2DDG				
FM-B11-1						
FM-B11-2						
FM-C11-1						
FM-C11-2						

Fields

- Time On Target
- Mission Status
- Firing Side
- Mission Type
- Target Kind
- Target Id
- Target Location
- Target Asset Class
- Num of Firing Units
- Distribution

GO

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Home Air Mission CDA Fire Mission
 Ground Intelligence Assets Spent Reports

FIRE MISSION

Mission ID1

MISSION ID	TIME ON TARGET	MISSION STATUS	FIRING SIDE	TARGET KIND
FM-B11-1	240802UTAN03	Complete	LF	Unit
FM-B11-2	240820UTAN03	Complete	LF	Unit
MISSION ID	TIME ON TARGET	MISSION STATUS	FIRING SIDE	TARGET KIND

Id	Target Kind	Firing Unit	Target Name	Firing Side	Firing Weapon	Projectile
FM-1DD	location	1AG	1/1 TR	LF	5/54-NAV-GUN	155MM-CLGP
FM-2DDG	Unit	A1/11	1AG	AG	2S3-SP-HOV	155MM+E
FM-A11-1		B1/11	1LT		M-198	152MM+E
FM-A11-2		C1/11	1LT			5IN+HE
FM-AG-1		1DD	1MP			
FM-AG-2		2DDG	2MP			
FM-B11-1						
FM-B11-2						
FM-C11-1						
FM-C11-2						

Fields

- Time On Target
- Mission Status
- Firing Side
- Mission Type
- Target Kind
- Target Id
- Target Name

GO

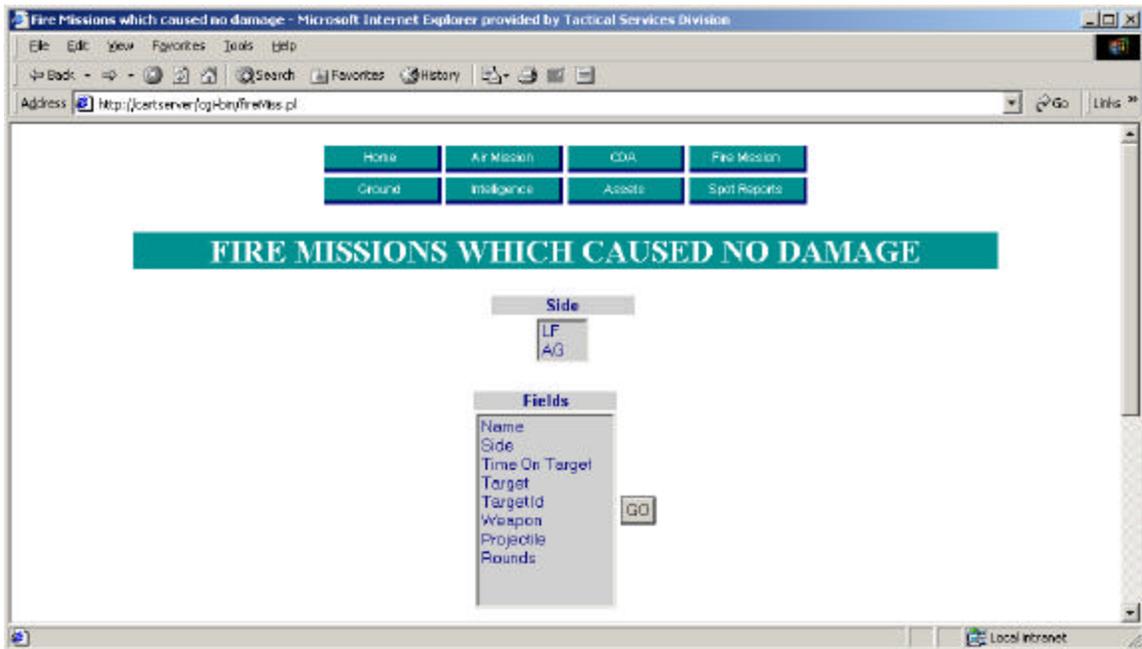
Done Local intranet

Fire Missions Which Caused No Damage.

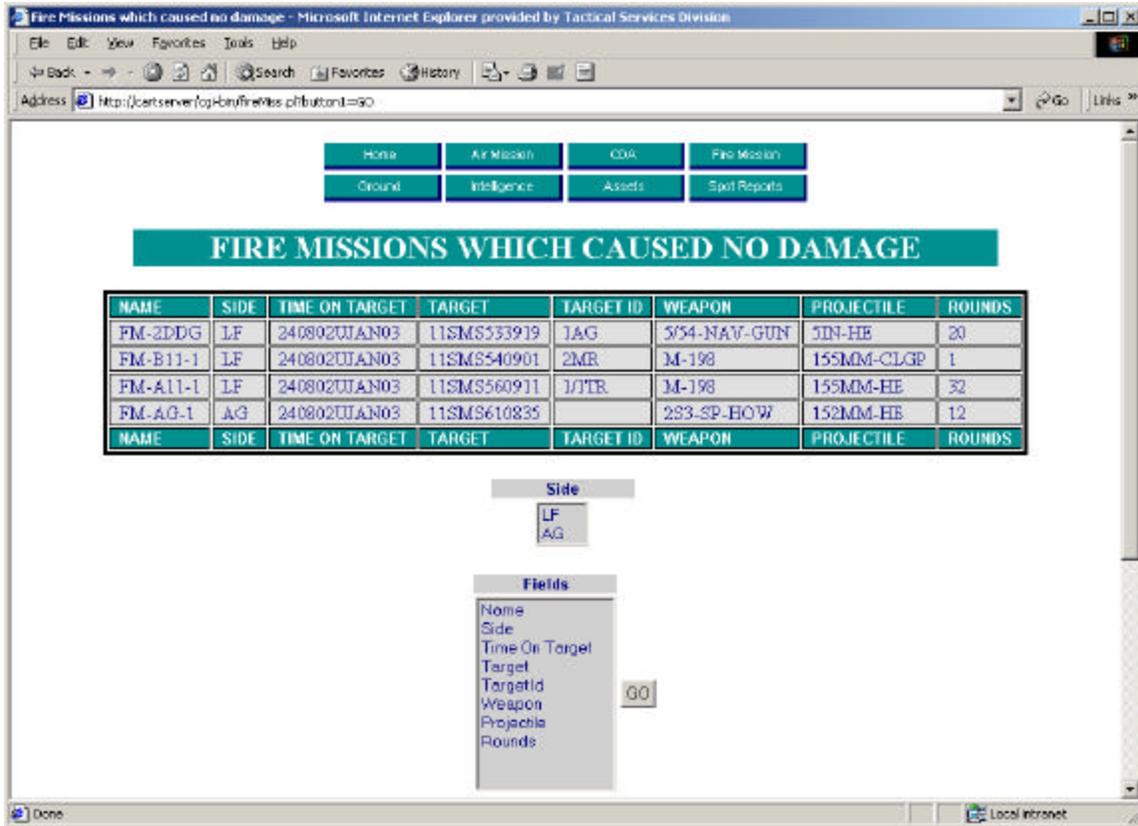
This report list fire missions which caused no damage (i.e., “no assessment”).

Fire missions that are filtered off in the CART map display are not shown in this report. Fire missions that finished before the reporting period, or started after the reporting period are also not reported.

Fire missions that caused damage outside of the report period are not reported even if they caused no damage during the report period.



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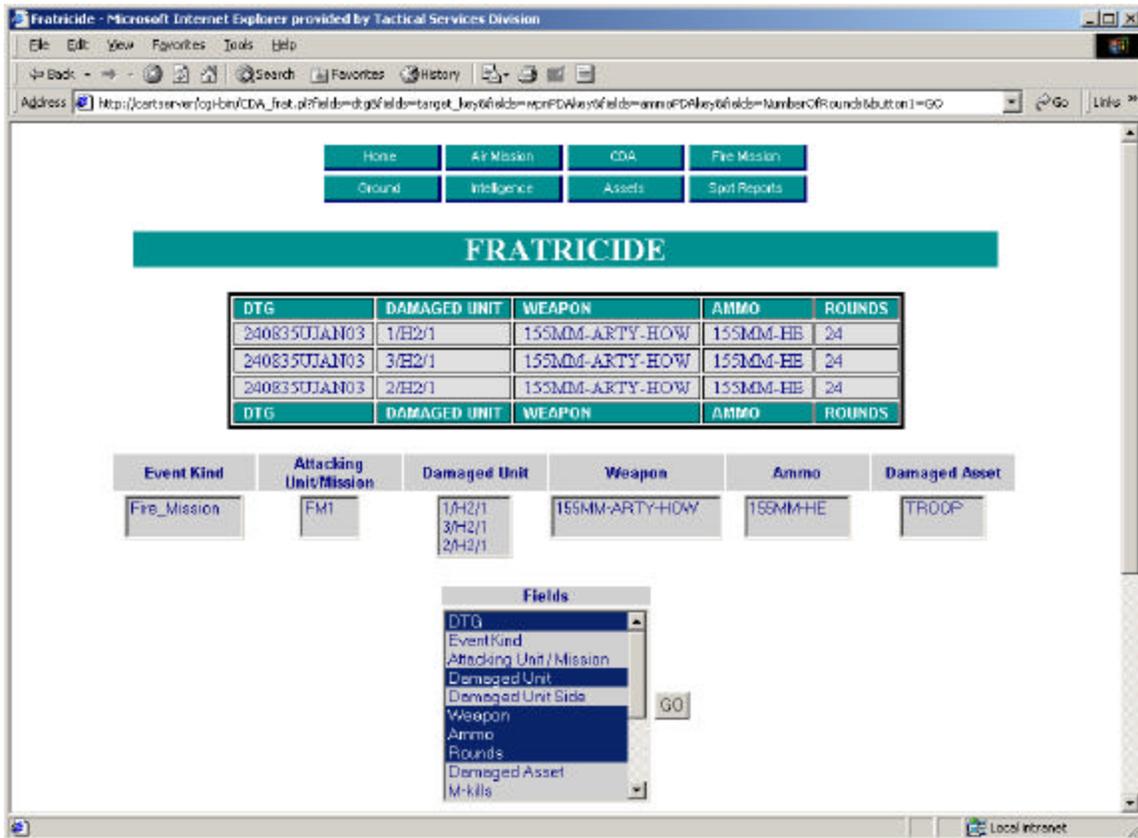
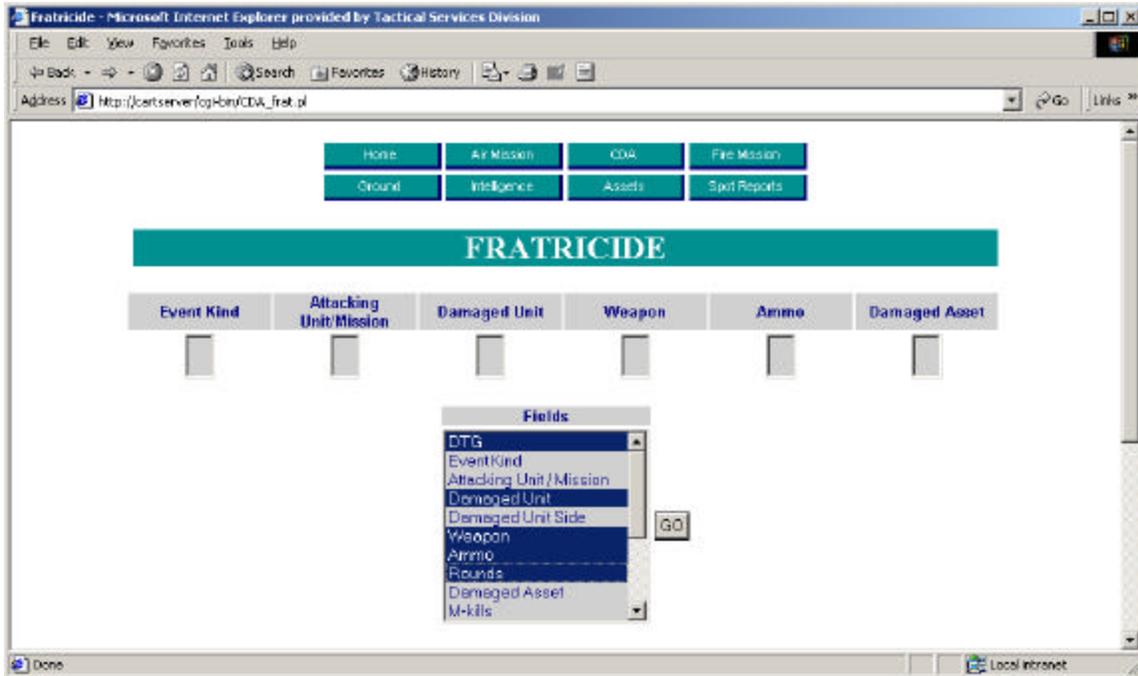
Fratricide.

This report lists all missions (both air and indirect fire), which inflicted same-side casualties. (Note same side ground combat is not possible in MTWS.)

Fire missions and air missions that are filtered off in the CART map display are not shown in this report. Fire missions and air missions that finished before the reporting period, or started after the reporting period are also not reported.

Fire missions that caused damage outside of the report period are reported even if they caused no damage during the report period.

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GROUND

Ground Unit.

This accesses the Detailed Ground Unit Report. Side, Unit Type, Hierarchy and Controller can filter this report. Report fields are name, side, controller, located at, hierarchy, unit type, speed, heading, mission, posture, formation, engaged, higher HQ, subordinates, combat effectiveness and rollup.

Ground units that are filtered off in the CART map display are not shown in this report. Ground units that were created after the reporting period, or deleted before the reporting period are not shown.

Ground units that are not visible on the map display, because they are located on another simulation object, for instance, on board a ship, or being transported on a ship-to-shore element, *are* included in the ground unit report. All values shown for units are as they were at the end of the report period.

The screenshot shows a web browser window titled "Ground Unit - Microsoft Internet Explorer provided by Tactical Services Division". The address bar contains a URL with various parameters. The main content area displays a report titled "GROUND UNIT".

NAME	SIDE	LOCATED AT	HIERARCHY	UNIT TYPE	MISSION	POSTURE	FORMATION	ENGAGED
HMM262	LF	1LHA	Squadron	ASQ	Defend	Unprepared	Circle	False
VMFA225	LF	1CVA	Squadron	ASQ	Defend	Unprepared	Circle	False

Below the table, there are filter sections:

- Name:** A list of unit names including 1/3MAR_CP, 1AG, 1ENG, 1LAI, 1TANK, 2AG, 2LAI, 3AG, 4AG, 5AG.
- Side:** A dropdown menu with options LF and AG.
- Unit Type:** A dropdown menu with options TANK, IFY, ASQ, LA, NR, ENG, AD.
- Hierarchy:** A dropdown menu with options Platoon, Company, Battery, Battalion, Squadron.
- Controller:** A dropdown menu with options AGAIR_1, AIRCON, CONT_1.

At the bottom, there is a "Fields" section with a list of report fields: Name, Side, Controller, Located At, Hierarchy, Unit Type, Speed, Heading, Mission, Posture. A "GO" button is next to the list.

The “rollup” reports the combat effectiveness for the unit and all of the units subordinates. The rollup is calculated by summing the combat power of all subordinate units, (and the subordinate’s subordinates etc) and dividing this value by the initial combat power of the unit and all the subordinates.

By contrast the “subordinates” field shows only the unit’s immediate subordinates.

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Clicking on the unit name in the Detailed Ground Unit Report brings up the Situation Report on that unit (see below).

The screenshot shows a web browser window titled "Situation Report on unit - Microsoft Internet Explorer provided by Tactical Services Division". The address bar shows a URL: http://carserver/devAlan/showUnitEN.pl?UnitName=A/1/3. The page content includes a navigation menu with buttons for Home, All Mission, CDA, Fire Mission, Ground, Intelligence, Assets, and Sect Reports. Below this is a large teal header that reads "SITUATION REPORT ON UNIT: A/1/3".

NAME	A/1/3
LAST UPDATE	050800UFEB03
UNIT KIND	FY
LOCATED AT	11SMS546670
SIDE	LF
SUBTYPE	0
CONTROL FUNCTION	CONT 1
ATTACH KIND	NOT_ATTACHED
SPEED	0
HEADING	0
COMBAT POWER	0
COMBAT EFFECTIVENESS	N/A
COMBAT STATUS	NO_COMBAT
MISSION	Defend
POSTURE	Unprepared
FORMATION	Vee
FRONT SIZE	300
EXTERNAL	False
SIMULATED FLAG	True
SUPPRESSED	False
ATTACK ENABLED	False
SPECIAL WEAPONS LOCKED	True
CASUALTY LIMIT	0.40
TACTICS	Tight
ENGINEERING TASK	False
ESM CAPABLE	False
MOUNTED	False
MOPP LEVEL	0
LIDS FLAG	True
ILLUMINATED	False
SMOKED	False

Below the table is a section titled "Other Reports Available" with a teal background. Underneath, there are links for "A/1/3 Unit Readiness Unit Rollup Asset History". At the bottom left, there is a classification box showing "Classification: UNCLASSIFIED", "Exercise: X.I2.2.41 LF DEMO", and "Report Time: 050800UFEB03 to 050959UFEB03". To the right of this box is the Marine Corps logo.

The situation report shows all available information for the given unit. Values shown are correct for the time at the end of the report period. Using "Other Reports Available" the

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Unit Readiness, Unit Rollup and Asset History reports on that specific unit can be called-up.

The last update shows the date that any item of data was last changed by the simulation system during the reporting period.

The situation report is also used for displaying information on ships and is accessed from the Maritime, Ships report (see the information on the Ships report which is described below).

Unit Readiness Report

The screenshot shows a web browser window titled "Unit Readiness Report A1/11 - Microsoft Internet Explorer provided by Tactical Services Division". The address bar shows "http://cartserver/cgi-bin/showEquipment.pl?UnitID=1710707340". The page has a navigation menu with buttons for Home, Air Mission, COA, Fire Mission, Ground, Intelligence, Assets, and Split Reports. The main heading is "UNIT READINESS REPORT A1/11".

Equipment

ASSET	LAST UPDATE	INITIAL	OPERATIONAL	%	M.KILL	F.KILL	K.KILL
127MM-BALL	240800UJAN03	6000	6000	100.00%	0	0	0
155MM-CLGP	240800UJAN03	80	80	100.00%	0	0	0
155MM-HE	240803UJAN03	800	768	96.00%	0	0	0
155MM-ILLUM	240800UJAN03	120	120	100.00%	0	0	0
155MM-SMK	240800UJAN03	120	120	100.00%	0	0	0
155MM-WP	240800UJAN03	120	120	100.00%	0	0	0
40MM-HE-GREEN	240800UJAN03	4800	4800	100.00%	0	0	0
SA-BALL	240800UJAN03	21100	21100	100.00%	0	0	0
5.0-TRUCK	240800UJAN03	14	14	100.00%	0	0	0
HMDWV	240800UJAN03	8	8	100.00%	0	0	0
M-198	240800UJAN03	8	8	100.00%	0	0	0
FUEL	240800UJAN03	1800	1800	100.00%	0	0	0
RATONS	240800UJAN03	1359	1359	100.00%	0	0	0
WATER	240800UJAN03	906	906	100.00%	0	0	0
30CAL-MG	240800UJAN03	6	6	100.00%	0	0	0
40MM-MG	240800UJAN03	4	4	100.00%	0	0	0
M-16	240800UJAN03	121	121	100.00%	0	0	0
M-203	240800UJAN03	8	8	100.00%	0	0	0
M240-MG	240800UJAN03	6	6	100.00%	0	0	0
SAW	240800UJAN03	4	4	100.00%	0	0	0

Personnel

LAST UPDATE	HEALTHY	WIA	KIA
240800UJAN03	151	0	0

Other Reports Available

The Unit Readiness report is selected directly from the unit Situation Report. It reports all the assets and personnel controlled by the given unit, at the time at the end of the report

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period. The value shown as the initial value is defined at the start of the exercise, or if the Unit is created during the exercise it is the value when the unit is initialized through the Command Entry window on Maui.

Unit Rollup

The Unit Rollup report is available from the unit Situation Report. The Unit Rollup report shows a variation of the Unit Readiness report, showing the assets controlled by unit and all of its subordinates.

The screenshot shows a web browser window titled "Unit Rollup Report For A1/11 - Microsoft Internet Explorer provided by Tactical Services Division". The address bar shows a URL: "http://cortts.server/top/bur/showEquipmentRollup.zf?UNITID=1710707946".

Navigation buttons include: Home, Air Mission, COA, Fire Mission, Ground, Intelligence, Assets, and Split Reports.

UNIT ROLLUP REPORT FOR A1/11

Equipment Rollup

ASSET	LAST UPDATE	INITIAL	OPERATIONAL	%	M.KILL	F.KILL	K.KILL
90CAL-MG	240800UTAN03	6	6	100.00%	0	0	0
12.7MM-BALL	240800UTAN03	6000	6000	100.00%	0	0	0
155MM-CLGP	240800UTAN03	80	80	100.00%	0	0	0
155MM-HE	240803UTAN03	4000	768	19.20%	0	0	0
155MM-ILLUM	240800UTAN03	120	120	100.00%	0	0	0
155MM-SMK	240800UTAN03	120	120	100.00%	0	0	0
155MM-WP	240800UTAN03	120	120	100.00%	0	0	0
40MM-HE-GREN	240800UTAN03	4800	4800	100.00%	0	0	0
40MM-MG	240800UTAN03	4	4	100.00%	0	0	0
5.0-TRUCK	240800UTAN03	14	14	100.00%	0	0	0
FUEL	240800UTAN03	1800	1800	100.00%	0	0	0
HMD/AV	240800UTAN03	8	8	100.00%	0	0	0
M-16	240800UTAN03	121	121	100.00%	0	0	0
M-198	240800UTAN03	8	8	100.00%	0	0	0
M-203	240800UTAN03	8	8	100.00%	0	0	0
M240-MG	240800UTAN03	6	6	100.00%	0	0	0
RATIONS	240800UTAN03	1359	1359	100.00%	0	0	0
SA-BALL	240800UTAN03	21100	21100	100.00%	0	0	0
SAW	240800UTAN03	4	4	100.00%	0	0	0
WATER	240800UTAN03	906	906	100.00%	0	0	0
ASSET	LAST UPDATE	INITIAL	OPERATIONAL	%	M.KILL	F.KILL	K.KILL

Personnel Rollup

LAST UPDATE	HEALTHY	WIA	KIA
240800UTAN03	151	0	0

Subordinate Units

Asset History

The Asset History report is selected from the unit Situation Report. It shows the changes to the assets and personnel of the unit, over the report period.

ASSET HISTORY: 4AG

Equipment History

ASSET	LAST UPDATE	RATIONALE	OPERATIONAL	M-KILL	F-KILL	K-KILL	COMMENT
125MM-TNK-RND	050800UFEB03	Initial	100000	0	0	0	INITIAL
125MM-TNK-RND	050814UFEB03	Attrition	83333	0	0	0	
FUEL	050800UFEB03	Initial	1000	0	0	0	INITIAL
FUEL	050814UFEB03	Attrition	833	0	0	0	
FUEL	050859UFEB03	Simulation	831	0	0	0	
FUEL	050959UFEB03	Simulation	829	0	0	0	
T-64	050800UFEB03	Initial	6	0	0	0	INITIAL
T-64	050814UFEB03	Attrition	0	3	2	1	
ASSET	LAST UPDATE	RATIONALE	OPERATIONAL	M-KILL	F-KILL	K-KILL	COMMENT

Personnel History

LAST UPDATE	RATIONALE	HEALTHY	WIA ROUTINE	WIA PRIORITY	WIA EMERGENCY	KIA	COMMENT
050800UFEB03	Initial	36	0	0	0	0	INITIAL
050814UFEB03	Attrition	29	3	1	2	1	mounted troops
LAST UPDATE	RATIONALE	HEALTHY	WIA ROUTINE	WIA PRIORITY	WIA EMERGENCY	KIA	COMMENT

Other Reports Available

4AG [Situation](#) [Unit Readiness](#) [Unit Rollup](#)

The above report shows the unit 4AG, which was hit by 7 Maverick missiles at 8:14 (this information would be available from the CDA report). The damage is shown with losses or damage of 6 T-64s and associated personnel losses and destruction of ammunition. The damage calculated by the simulation is shown with a rationale of “Attrition”. Note that the figures shown are not adjustments to the totals of assets as they are in the CDA report. The final line of the Equipment history table should be read as saying that at 0814 the unit has 0 operational T-64s, 3 M-kills, 2 F-kills, and 1-K-kill.

The rationale “simulation” shown for the fuel indicates the use of fuel for moving assets. “Simulation” is also used to indicate the consumption of water and rations and the use of ammunition.

Transfers when shown include the source (if being received) or destination (if being transferred out) and if used, the cargo.

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Note that users using command entry assign rationales and comments when entering asset update commands and asset allocate commands. Available rationales include Air_Adj, Fire_Adj, Ground_Adj, Other_Adj, Airlift, Attrition, Initial, Magic, Maintenance, Medevac, Merge, Resupply, Simulation, Split, Transfer.

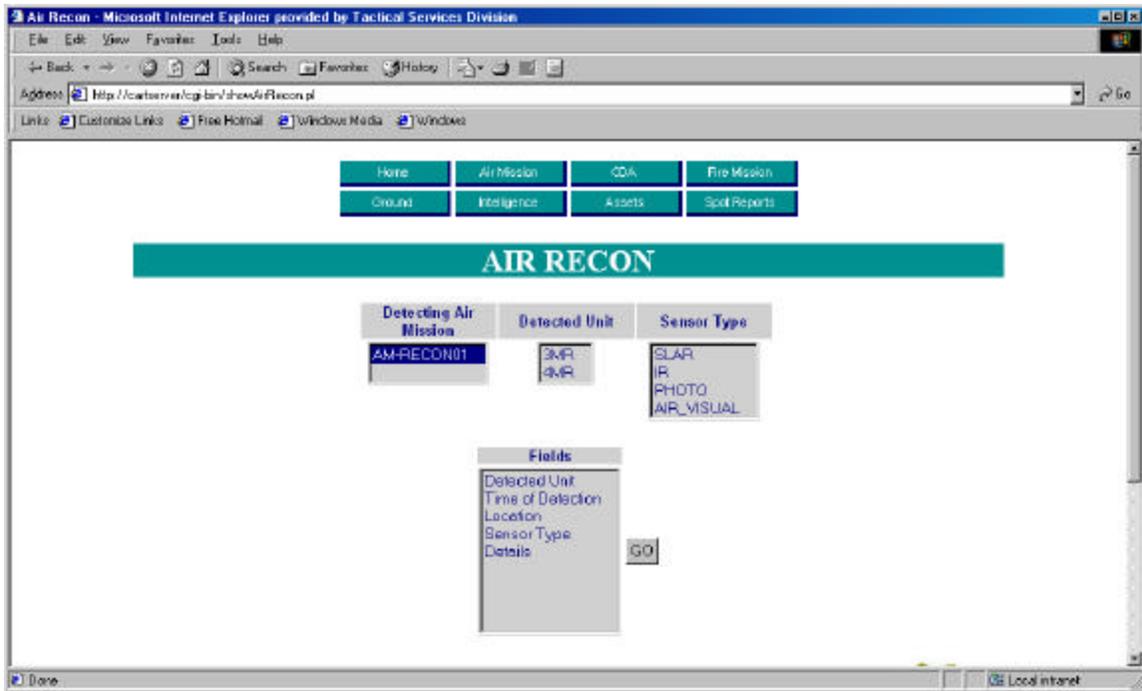
INTELLIGENCE

Air Recon.

This report lists the detections acquired by air recon missions.

Air missions that are filtered off in the CART map display are not shown in this report. Air missions that landed (or were destroyed) before the reporting period, or took off after the reporting period are also not reported.

This report shows all intelligence information gathered by the displayed air mission, including information gathered outside the report period.



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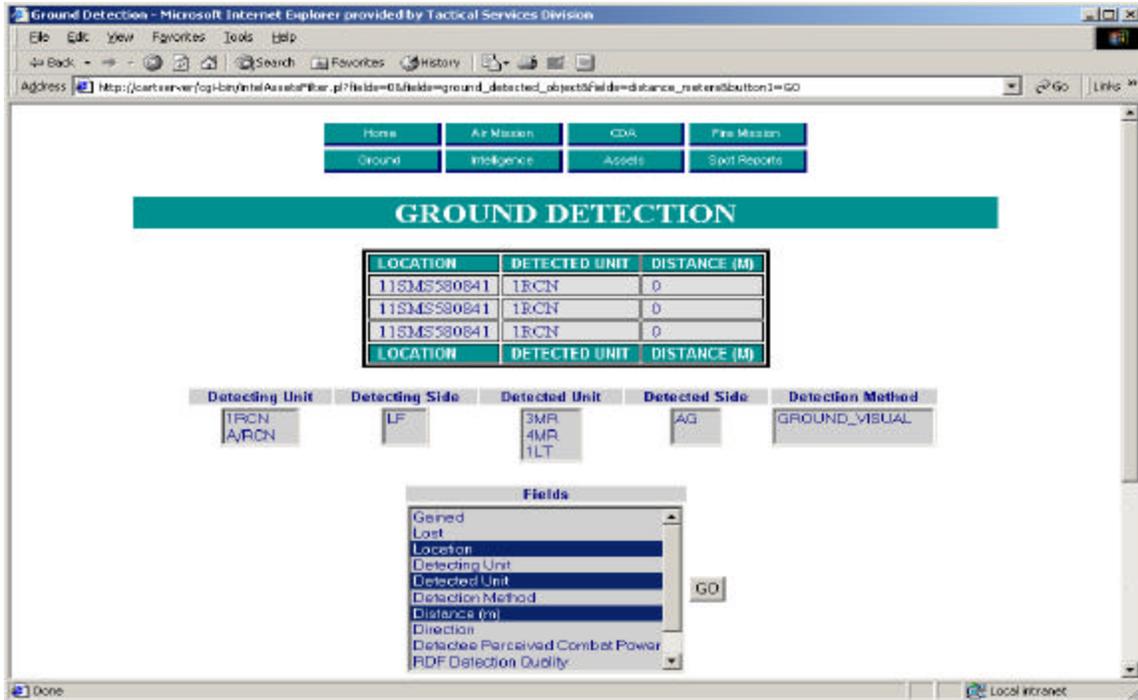
DETECTING AIR MISSION	DETECTED UNIT	TIME OF DETECTION	LOCATION	SENSOR TYPE	DETAILS		
AM.RECON01	3MR	100911090700	11SM599883	IR	12 DAMAGED ARMORED AT 11SM599883		
				PHOTO	6 DAMAGED ARMORED AT 11SM599883		
					6 DESTROYED ARMORED AT 11SM599883		
	4MR			100911090700	11SM604880	AIR_VISUAL	6 DAMAGED ARMORED AT 11SM599883
							6 DESTROYED ARMORED AT 11SM599883
						SLAR	4 OPERATIONAL ARMORED AT 11SM604880
	100911090700	11SM604880	IR			4 OPERATIONAL ARMORED AT 11SM604880	
						8 DAMAGED ARMORED AT 11SM604880	
			PHOTO			4 OPERATIONAL ARMORED AT 11SM604880	
				6 DAMAGED ARMORED AT 11SM604880			
				2 DESTROYED ARMORED AT 11SM604880			
			AIR_VISUAL	4 OPERATIONAL ARMORED AT 11SM604880			
	6 DAMAGED ARMORED AT 11SM604880						
	2 DESTROYED ARMORED AT 11SM604880						
DETECTING AIR MISSION	DETECTED UNIT	TIME OF DETECTION	LOCATION	SENSOR TYPE	DETAILS		

Ground Detections.

The Ground Detections Report reports the ground detections and can be filtered by detecting unit, detecting side, detected unit, detected side and method of detection (e.g., GSR, GES, visual). The report fields are (time) gained, (time) lost, location, detecting unit, detected unit, detection method, distance, direction, detectee perceived combat power, RDF detection quality, aural detection quality and assets (detected).

Ground Detections that are filtered off in the CART map display are not shown in this report. Ground Detections that were lost before the reporting period, or were gained after the reporting period are also not reported.

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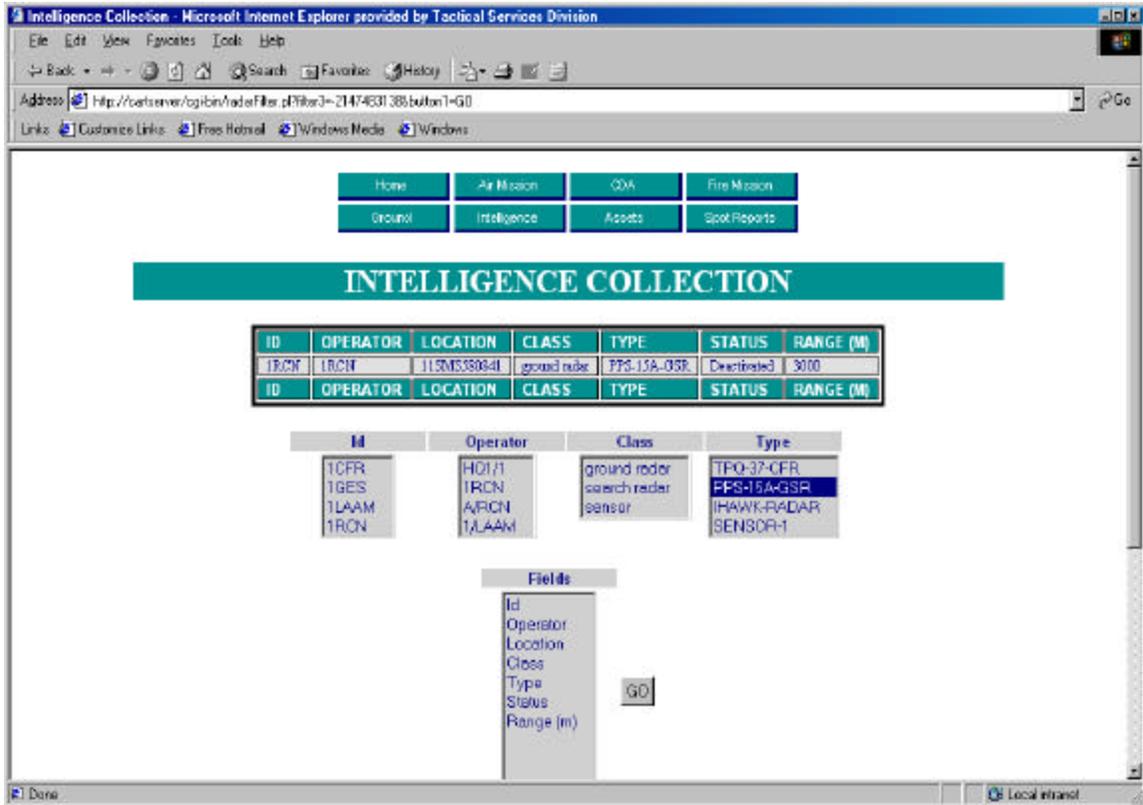
Intelligence Collection.

This is a report of the defined intelligence collection areas and fields. The full sets of items reported by this report are ground sensors (GES), ground surveillance radars (GSR), counter fire radars (CFR) and search radars (PAR). Note that what is reported is the presence of a radar area or active sensor field, and not the actual presence of assets. To identify the location of all intelligence assets the Assets report should be used (see the next section).

This report can be filtered by ID, operator, class and (sensor) type. Report fields are ID, operator, location, class, type, status and range.

Reporting of intelligence collection assets are not affected by the filters from the CART Map Window.

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LOGISTICS AND COMBAT SUPPORT

Assets.

This brings up a list of all assets in the exercise database. Clicking on an asset in the list creates a report that lists all units possessing that asset and the quantity possessed. Clicking on a unit in this report will output the Unit Readiness Report for that unit.

DESCRIPTION	CLASSIFICATION
12.7MM-BALL	Ammu
152MM-AP	Ammu
152MM-HE	Ammu
152MM-ILLUM	Ammu
152MM-SMK	Ammu
155MM-CLGP	Ammu
155MM-HE	Ammu
155MM-ILLUM	Ammu
155MM-SMK	Ammu
155MM-WP	Ammu
2.75-19-FFAR	Ammu

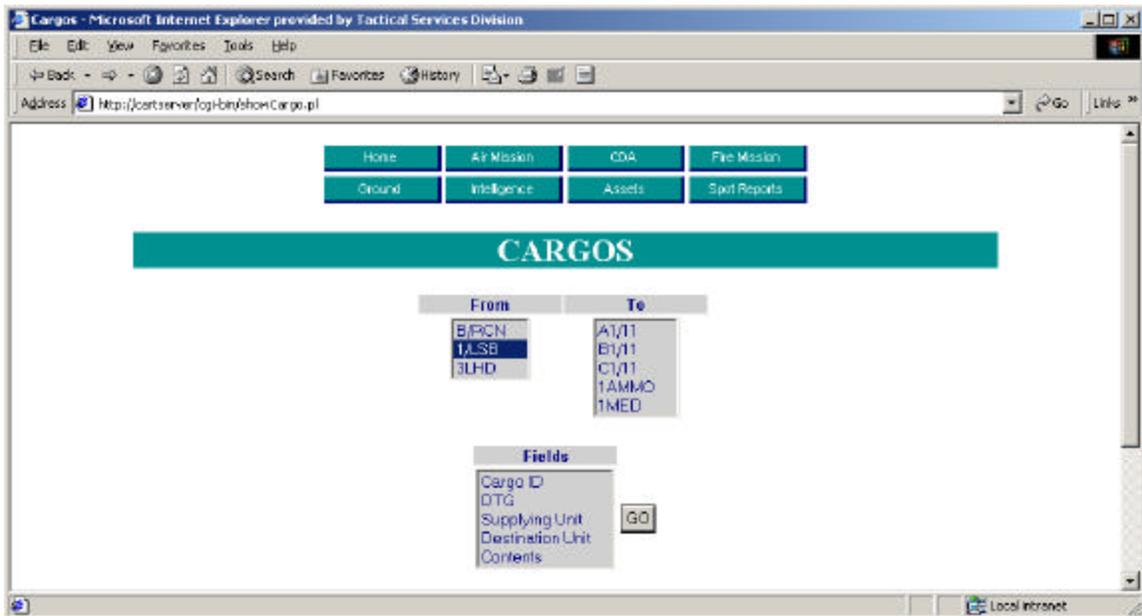
UNIT	OPERATIONAL	M-KILL	F-KILL	K-KILL
10LSE	2500	0	0	0
1AMMO	10000	0	0	0
10CARGO	2500	0	0	0
20CARGO	2500	0	0	0
30CARGO	2500	0	0	0
3LHD	30000	0	0	0
A1/11	768	0	0	0
B1/11	800	0	0	0
C1/11	776	0	0	0
CARGO-STR1	2000	0	0	0
CARGO-STR2	2000	0	0	0
CARGO-STR3	2000	0	0	0

Cargos

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This report lists the cargos defined in the database and can be filtered by supplying and destination unit. The report fields are Cargo ID, (creation) DTG, Supplying Unit, Destination Unit and contents.

The CART map filters do not affect the Cargos Report. Cargos that were delivered before the reporting period, or were created after the reporting period are not reported. Cargos that were delivered during the reporting period are typically shown with an empty contents list, reflecting the fact that the assets are controlled by the unit and not the Cargo.

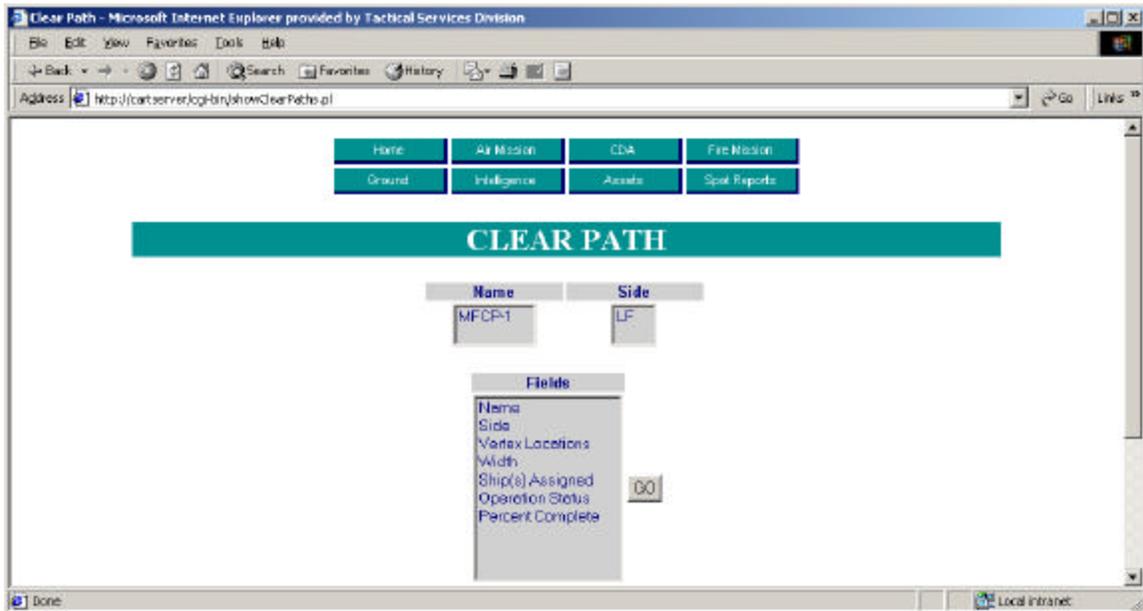


MARITIME

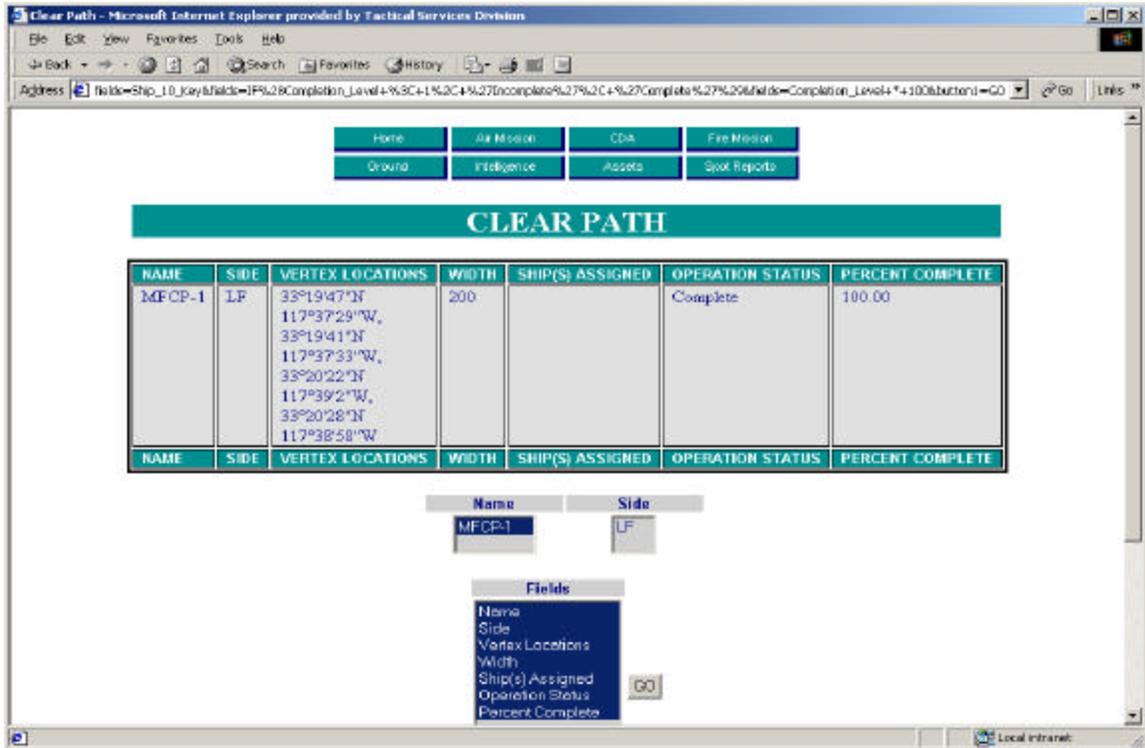
Clear Path

This report lists the cleared paths through maritime minefields (i.e., anti-ship). Name and/or side may filter this report. As shown below the fields available are: name, side, vertex locations, width, ship or ships assigned to clear the path, status of the clearing operation (i.e., the operation is complete or not) and the percent complete.

Clear Paths not shown on the CART Map Window are not shown in the report.



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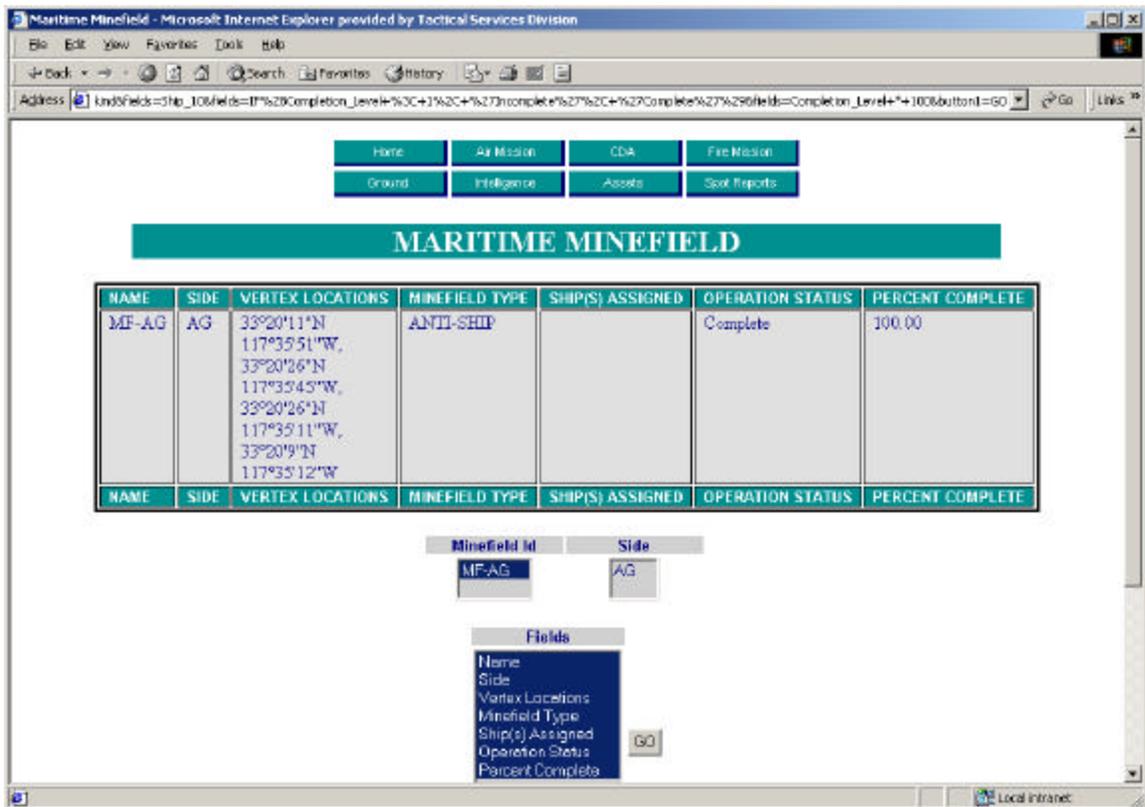
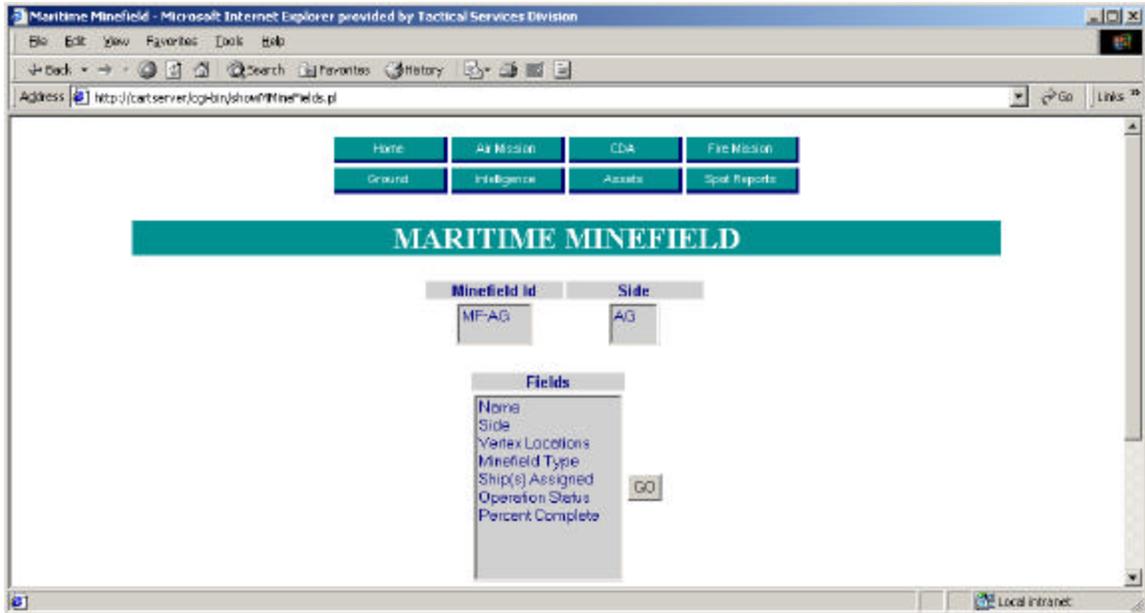


Maritime Minefield

This report lists the maritime minefields (i.e., anti-ship), which are in the exercise database. Minefield ID and/or side can filter the report. The fields available are: name, side, vertex locations, minefield type, ship(s) assigned, operational status and percent complete.

Minefields that are not visible in the CART map window are not included in the report.

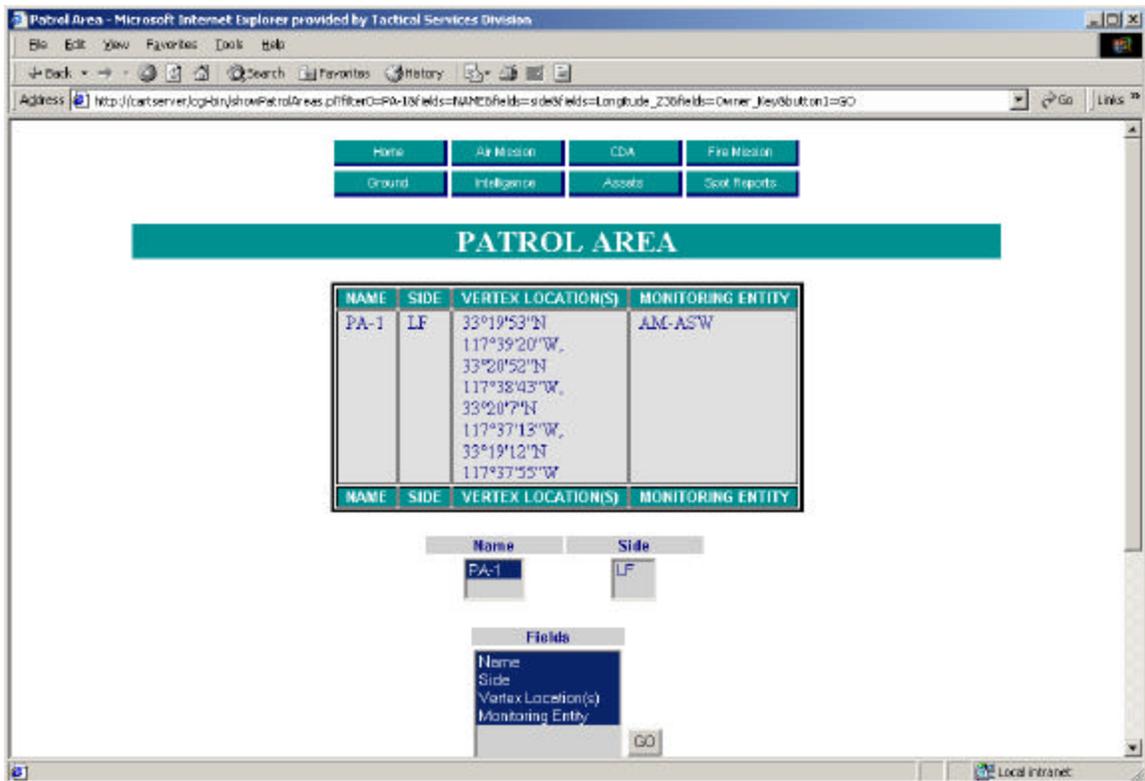
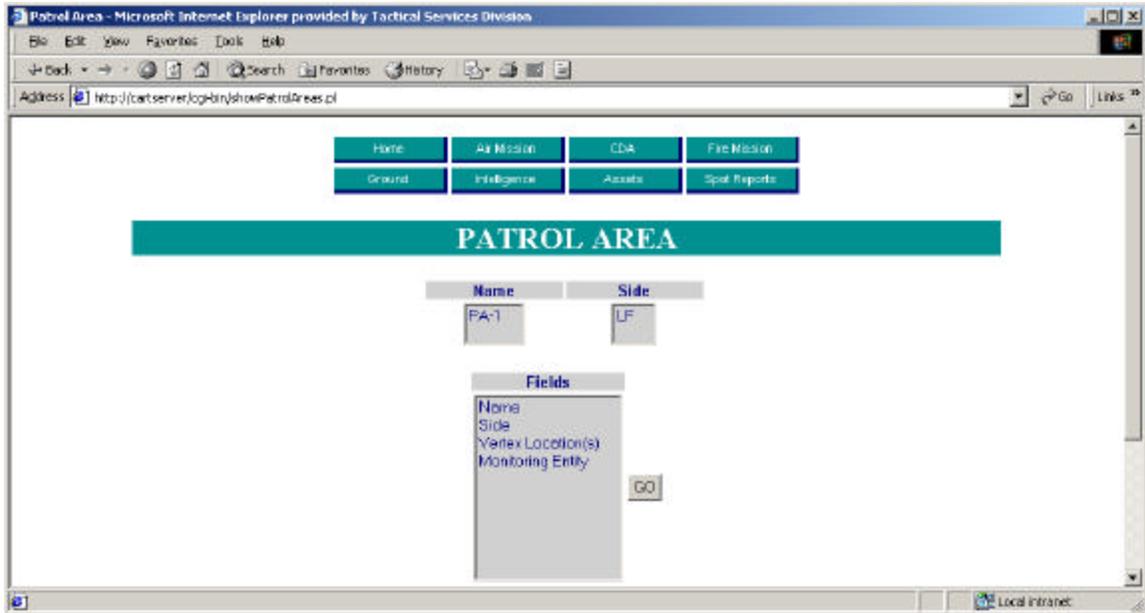
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Patrol Area.

This report lists the maritime patrol areas. Name and/or side may filter the report. Name Side, Vertex Locations, and Monitoring Entity are reported.

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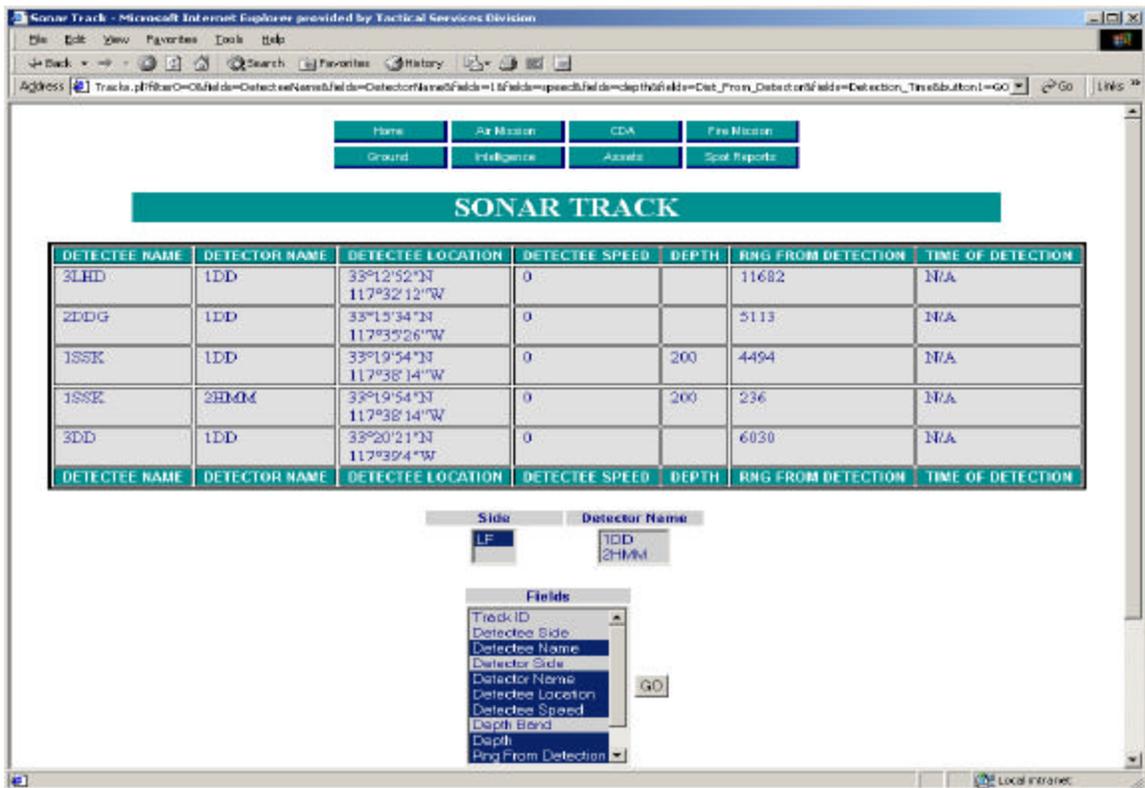
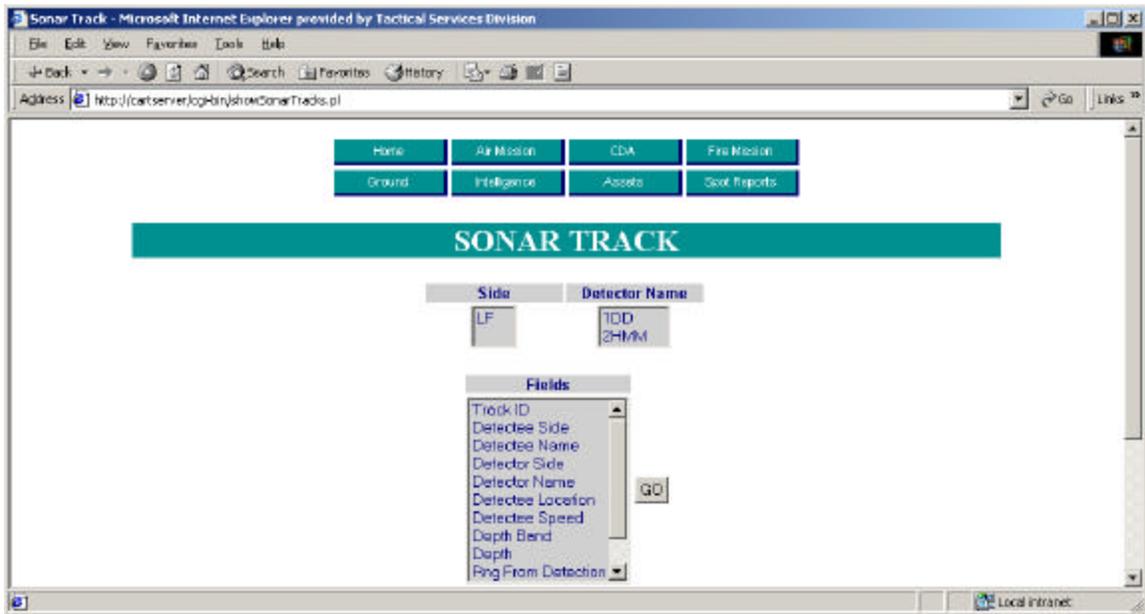


Sonar Track.

This report lists the sonar tracks acquired by the various maritime objects (i.e., ships, submarines and ASW air missions). Side and/or detector name may filter the report. The fields available are: track ID, detectee side, detectee name, detector side, detector name,

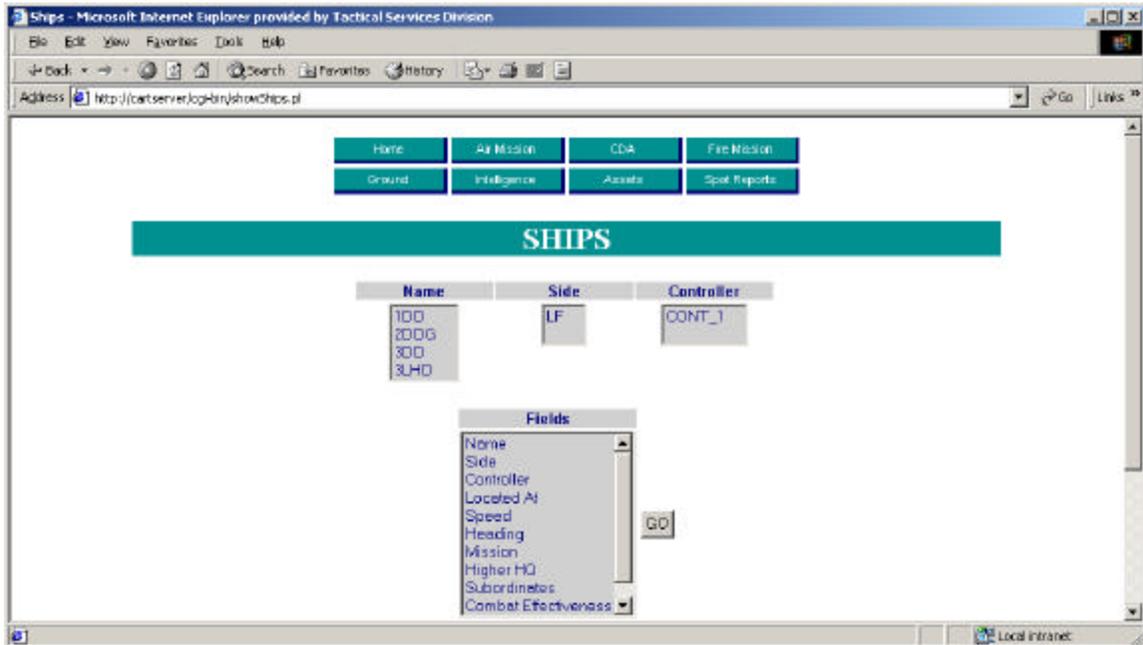
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detectee location, detectee speed, depth band, depth, range from detection, bearing from detection and time of detection.



Ships.

This report lists the ships, which are defined in the exercise database. The report can be filtered by name (ship ID), side and/or controller. The fields available are: name, side, controller (ID), located at (i.e., location of ship), speed, heading, mission (type), higher HQ, subordinates, combat effectiveness and rollup.



Ships that are filtered off in the CART map display are not shown in this report. Ships that were created after the reporting period, or deleted before the reporting period are not shown.

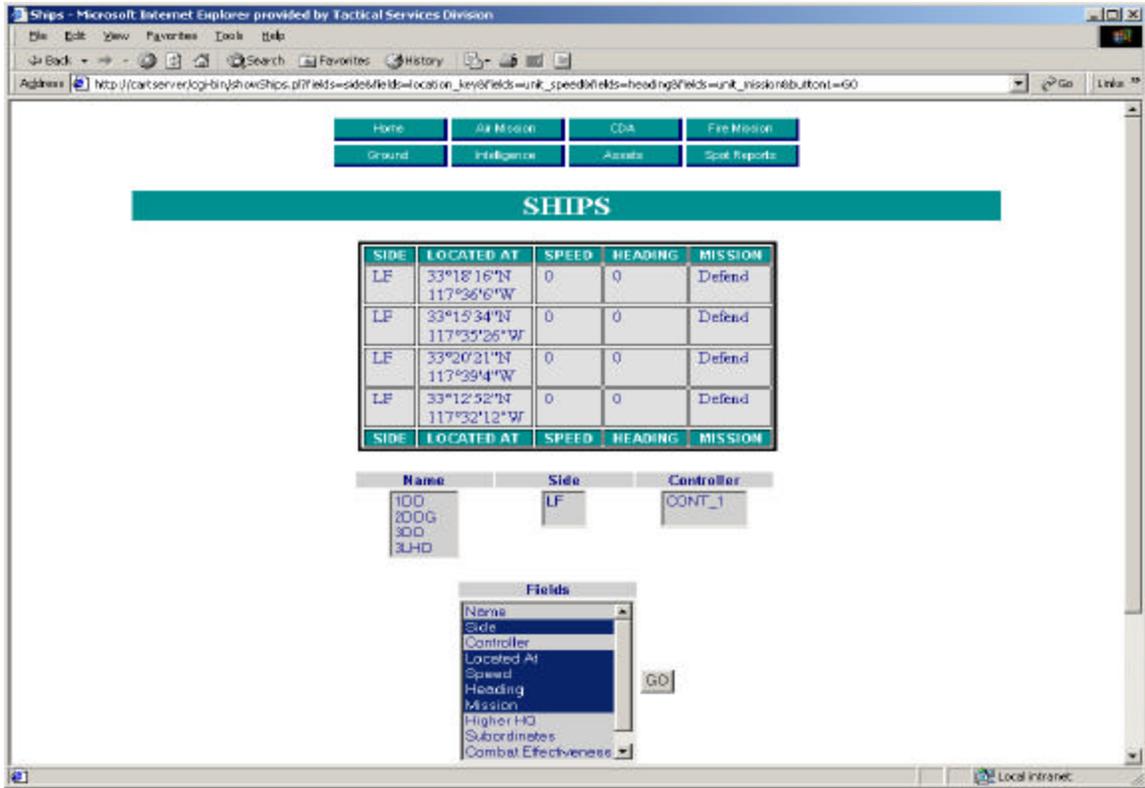
All values shown for ships are as they were at the end of the report period.

The “rollup” reports the combat effectiveness for the ship and all of the ship’s subordinates. The rollup is calculated by summing the combat power of all subordinate ships and units, (and the subordinate’s subordinates etc) and dividing this value by the initial combat power of the ship and all the subordinates.

By contrast the “subordinates” field shows only the ship’s immediate subordinates.

Clicking on the unit name in the Ships Report brings up the Situation Report on that unit (see section “Ground Unit Report”) and this provides access to the Asset Histort, Unit Readiness, and Unit Rollup reports.

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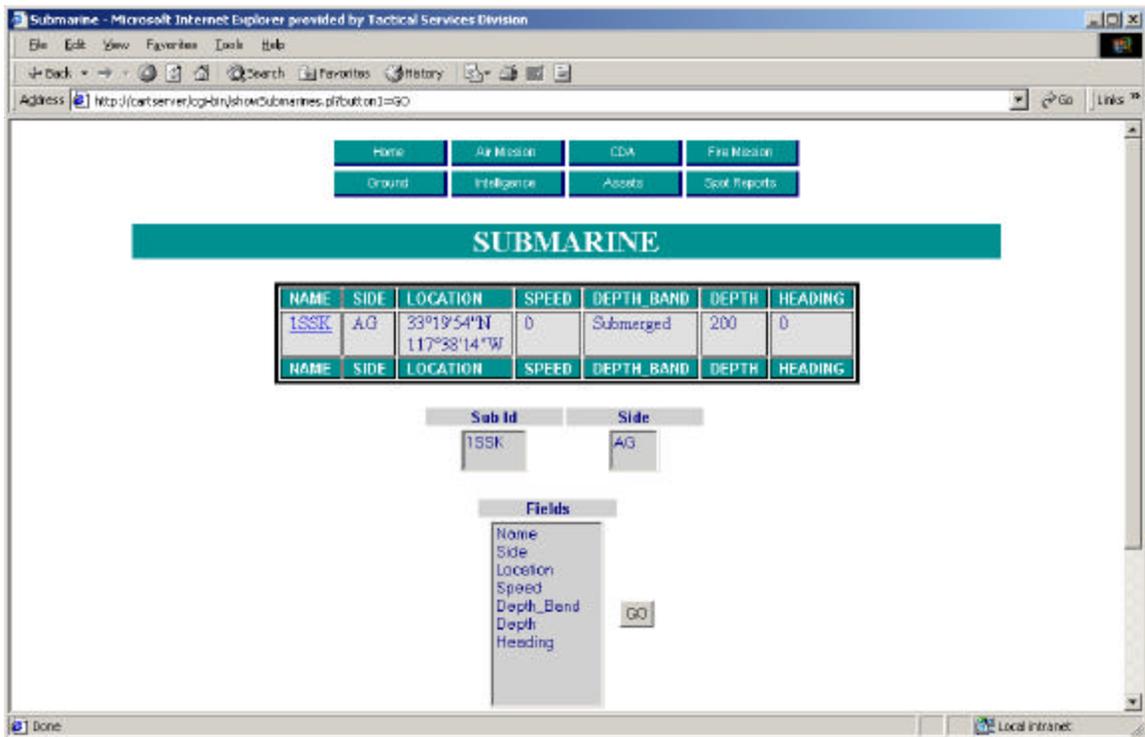
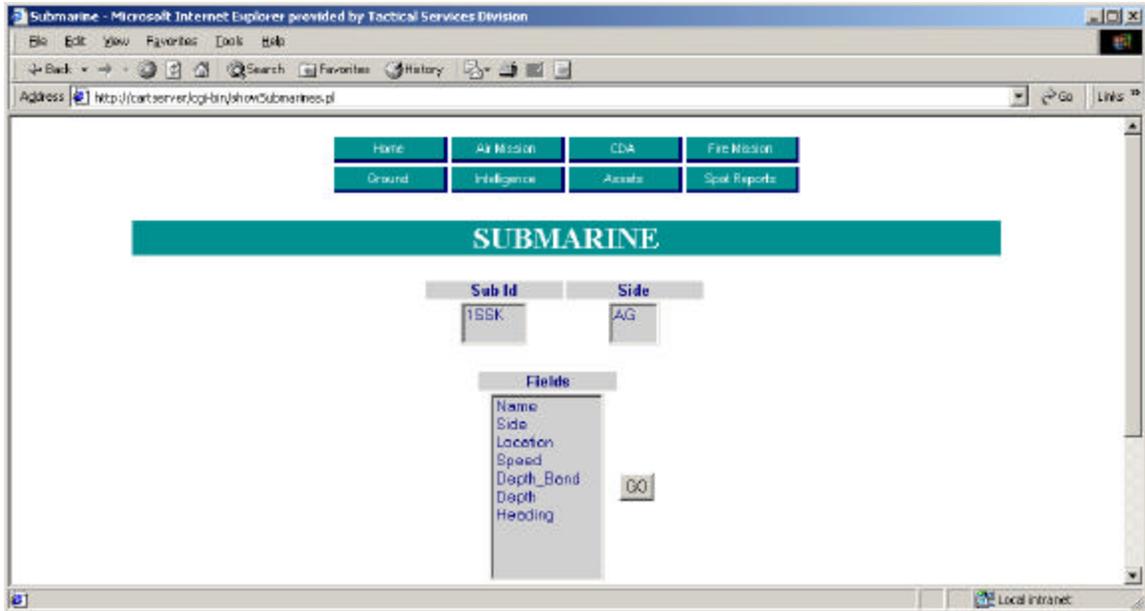
Submarine.

This report lists the submarines, which are defined in the exercise database. Sub ID and/or side can filter the report. Fields available are Name, Side, Location, Speed, Depth Band, Depth and Heading. Clicking on the name of the submarine brings up the Submarine Asset Report (which shows the assets controlled by the submarine, using the same format as the Unit Readiness report).

Submarines that are filtered off in the CART map display are not shown in this report. Submarines that were created after the reporting period, or deleted before the reporting period are not shown.

All values shown for submarines are as they were at the end of the report period.

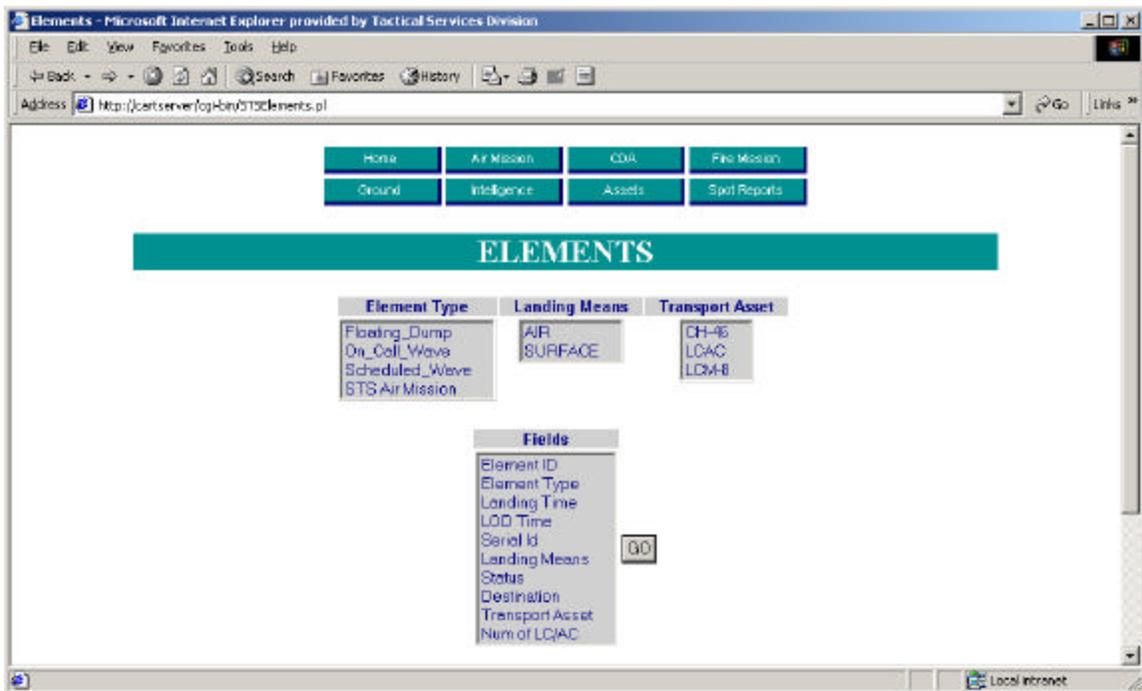
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SHIP-TO-SHORE

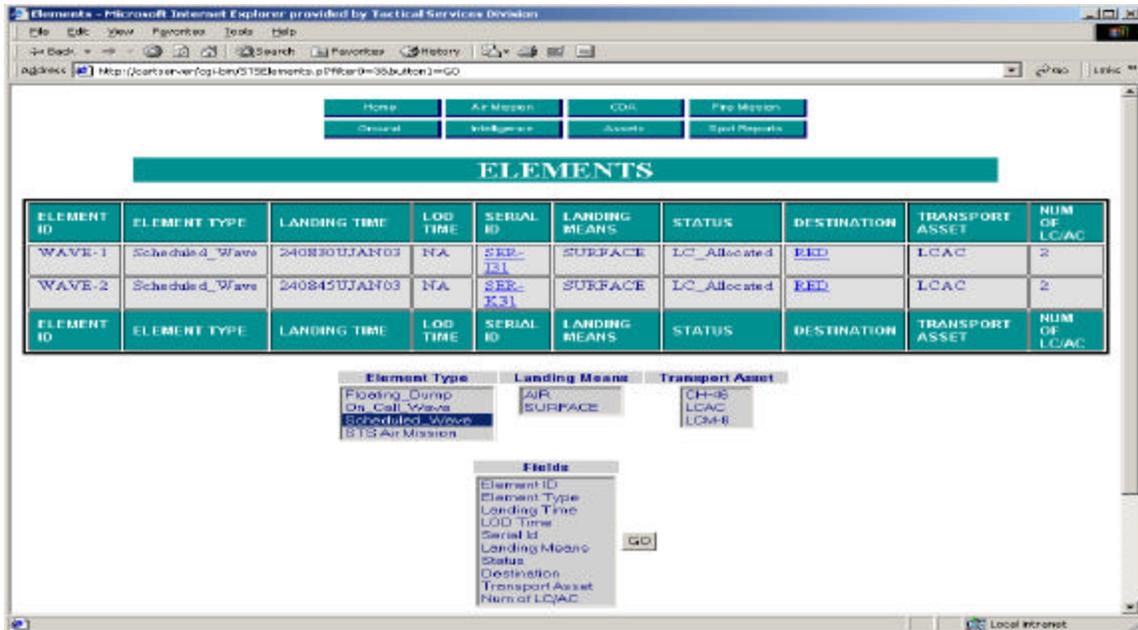
Element.

This provides a report of ship-to-shore elements defined in the database. This report can be filtered by element type, landing means (air and/or surface) and the transporting asset. Valid report fields are element ID, element type, landing time, LOD time, serial ID, landing means, destination, transport asset and the number of landing craft/aircraft.



Display of elements in this report are not affected by the CART Map Window filters. Clicking on a serial id will show the serial contents. Clicking on the destination will show the beach information (locations of beach, rendezvous point, LOD, and transport area) or landing zone information (side, location, and type)

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Landing Craft.

This report lists the landing craft availability over the report period broken down by landing craft type and shown by beach and by total for all beaches.

Results shown in the Landing Craft Availability report are not affected by the CART filters.

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The screenshot shows a web browser window titled "Landing Craft Availability Report - Microsoft Internet Explorer provided by Tactical Services Division". The address bar shows "http://jeetsserver/top/Html/013/LandingCraft.pl". The page content includes a navigation menu with links for Home, Air Mission, COA, Fire Mission, Ground, Intelligence, Assets, and Spirt Reports. The main heading is "LANDING CRAFT AVAILABILITY REPORT" followed by "LC Availability For RED Beach".

LC TYPE	DTG	TOTAL	ALLOCATED	AVAILABLE	NON OPERATIONAL
LCM-8	0301240800	6	4	2	0
LCAC	0301240800	8	7	1	0
LC TYPE	DTG	TOTAL	ALLOCATED	AVAILABLE	NON OPERATIONAL

Below this is a section for "LC Availability Summary For All Beaches" with an identical table structure and data.

At the bottom left, there is a classification box:

Classification: UNCLASSIFIED

Exercise: X12 2.40_CART

Report Time: 240800UJAN03 to 240809UJAN03

A US Marine Corps logo is located in the bottom right corner of the page content.

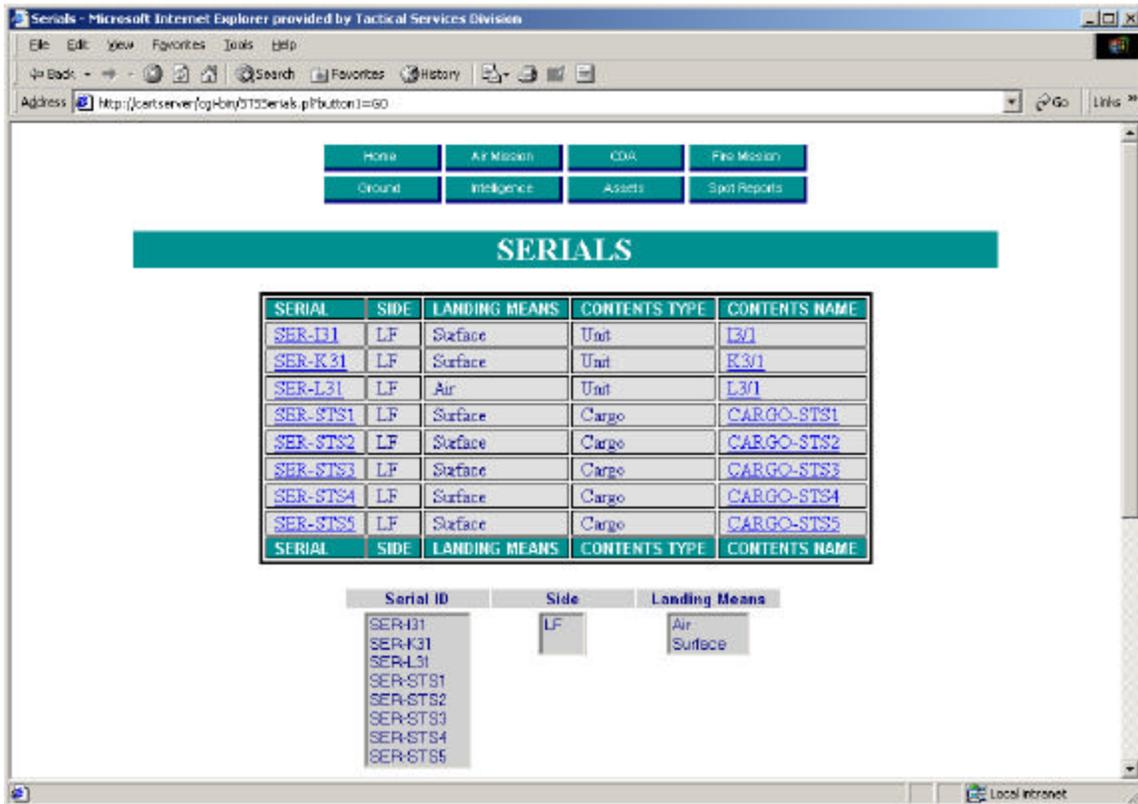
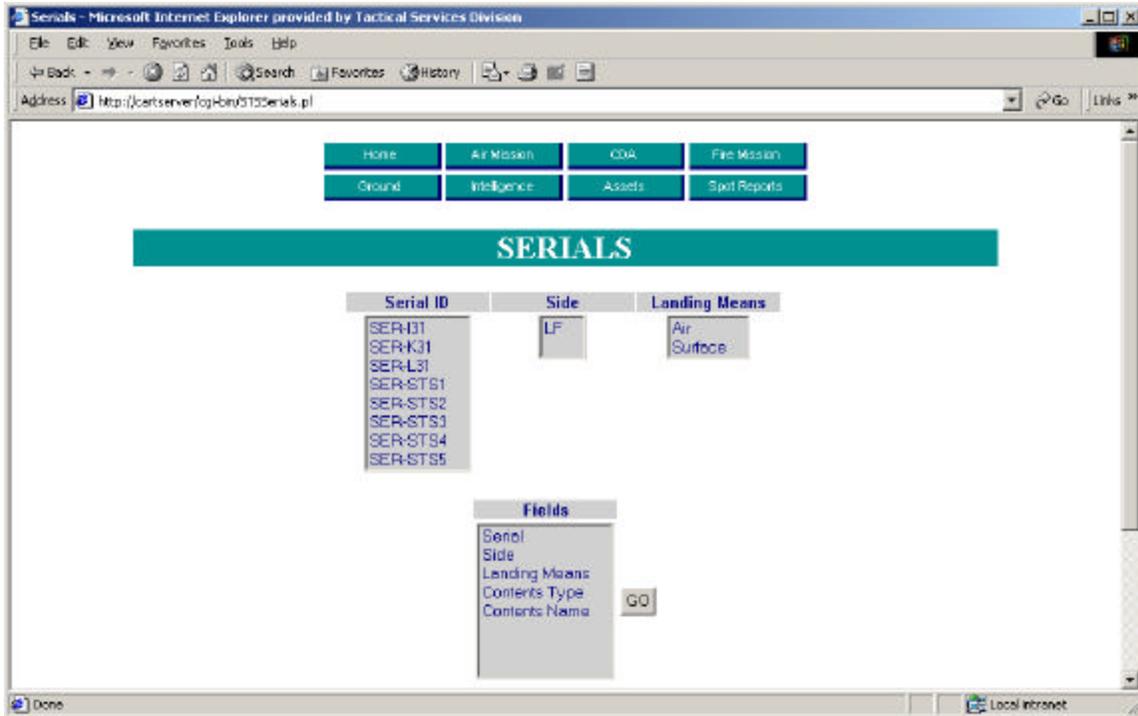
Serial.

Provides a report of all serials defined in the database. Serial ID, side and landing means, can filter this report. Report fields are Serial, side, landing means, contents type and contents name.

The contents of the Serials Report are not affected by the filter settings or report period settings in the CART Map Window.

Clicking on the serial name shows the serial contents, including a breakdown of any cargo contents contained in the serial. Clicking on the contents name shows the Unit Readiness report, or Cargo Assets Report (which shows the cargo's assets in the same format as the Unit Readiness report).

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Spot Reports.

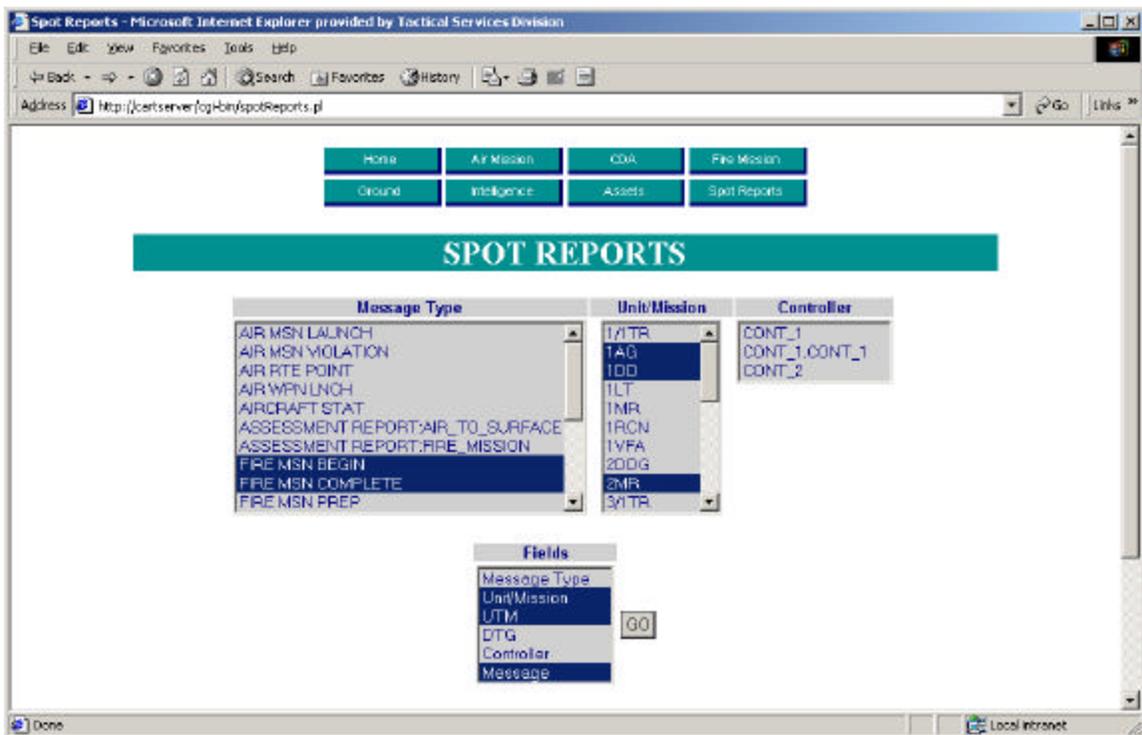
Spot Reports

This report provides access to all the spot reports generated by MTWS while the CART Server is connected. Message type, unit or mission and controller can filter the report. Message type, unit or mission, UTM, DTG, Controller, and Message are reported.

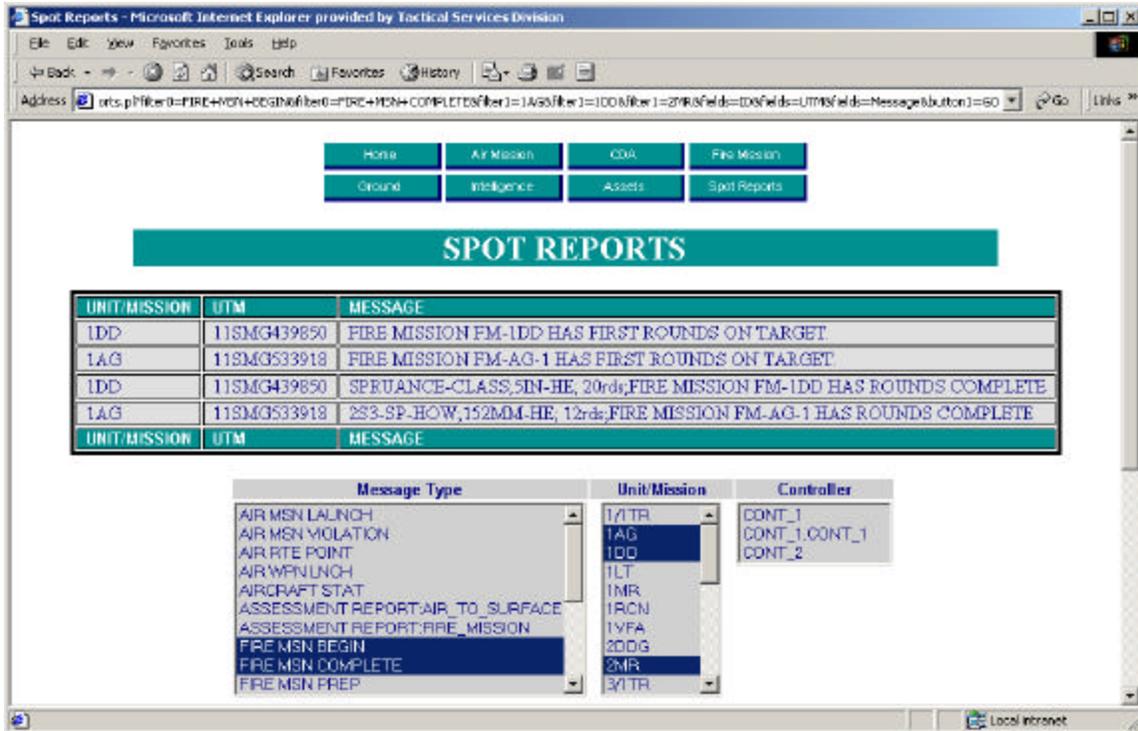
No action is necessary to enable particular controllers in CART. The spot reports can be used to show information on aspects of the simulation not currently supported by, for instance, creation or destruction of structures or other CE products, or environmental aspects such as NBC contamination areas, weather zones etc.

Spot reports can also be used to summarize related events, for instance selecting the mission id for an air mission shows the entire life cycle of the air mission, including any engagements entered into, damage sustained, and results of air mission including air or surface tracks detected, assets destroyed etc.

As the handling of the spot reports in CART is very different from all other information, the Spot Reports report also can be used to validate the results gained from CART. The spot reports show the exact same information sent to the users and, thus presents the same truth that was available during the simulation. If a situation arises where the results of the after action analysis are disputed, the spot reports can be used to determine whether the problem exists in CART, the simulation, or the users' recollections.



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EXERCISE SUMMARIES

Combat Power Over Time

This provides a listing of total combat power and combat effectiveness by side over the selected time period, reporting a single line for times that are separated by a given time period. By default the report assigns a time interval to generate a report that shows approximately 20 entries. The time period may be set by entering a number into the text box, and selecting a unit type (minutes, hours, days) and then pressing “GO”.

The combat power over time is not affected by the filter settings on the CART map window.

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The screenshot shows a web browser window titled "Combat Power Over Time - Microsoft Internet Explorer provided by Tactical Services Division". The address bar shows the URL "http://oertserver/top/bn/unit_combat_power_over_time.pl". The page features a navigation menu with buttons for Home, Air Mission, COA, Fire Mission, Ground, Intelligence, Assets, and Spat Reports. Below the menu is a large teal banner with the text "COMBAT POWER OVER TIME".

TIME	LF		AG		CIV		NS	
	COMBAT POWER	COMBAT EFFECTIVENESS						
240800UJAN03	15984	100	8127	100	0	0	0	0
240801UJAN03	15984	100	8127	100	0	0	0	0
240802UJAN03	15984	100	7784	95	0	0	0	0
240803UJAN03	15984	100	7829	93	0	0	0	0
240804UJAN03	15984	100	7613	93	0	0	0	0
240805UJAN03	15984	100	7613	93	0	0	0	0
240806UJAN03	15984	100	7613	93	0	0	0	0
240807UJAN03	15984	100	7459	91	0	0	0	0
240808UJAN03	15984	100	7459	91	0	0	0	0
240809UJAN03	15984	100	7459	91	0	0	0	0

Below the table is a filter input field set to "1 Minute" with a "GO" button. At the bottom left, there is a summary section:

Classification:	UNCLASSIFIED
Exercise:	XI2240_CART
Report Time:	240800UJAN03 to 240809UJAN03

At the bottom right is the Marine Corps logo.

Combat Power Snapshot

This provides a listing of all units and their combat power and combat effectiveness for all non-filtered units. At the bottom of a report is the aggregate combat power and combat effectiveness for the reported units.

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Combat Power Snapshot: 240809UJAN03 - Microsoft Internet Explorer provided by Tactical Services Division

Address: <http://jointsrvr/fog/hby/unit/CombatPower.pl>

Home Air Mission COA Fire Mission
 Ground Intelligence Assets Spot Reports

COMBAT POWER SNAPSHOT: 240809UJAN03

Unit Combat Powers

UNIT NAME	SIDE	COMBAT POWER	COMBAT EFFECTIVENESS
1LAAM	LF	200	100
1LSS	LF	421	100
1DL	LF	0	N/A
1FUEL	LF	0	N/A
1HMLA	LF	178	100
1HMM	LF	178	100
1MED	LF	0	N/A
1ORD	LF	0	N/A
1VFA	LF	219	100
2DDG	LF	0	N/A

Combat Power Snapshot: 240809UJAN03 - Microsoft Internet Explorer provided by Tactical Services Division

Address: <http://jointsrvr/fog/hby/unit/CombatPower.pl>

C121	LF	557	100
E21	LF	726	100
F21	LF	726	100
G21	LF	1152	100
H21	LF	10	100
H21A	LF	132	100
H21B	LF	132	100
J21	LF	726	100
K21	LF	726	100
L21	LF	726	100
1AG	AG	280	94
1LT	AG	175	100
1MR	AG	1340	79
2MR	AG	1883	100
3MR	AG	1883	100
4MR	AG	1883	100
AGFUEL	AG	0	N/A
AGORD	AG	0	N/A
AGVFA	AG	219	100

Total Combat Powers

SIDE	COMBAT POWER	COMBAT EFFECTIVENESS
LF	11234	100
AG	7063	95

Classification: UNCLASSIFIED
 Exercise: X12 2.40 CART
 Report Time: 240800UJAN03 to 240809UJAN03



Exercise Status. This provides the status of the CART Server and if there is a current exercise, key information about the current exercise.

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MTWS Exercise Analysis

The screenshot shows a Microsoft Internet Explorer browser window titled "Exercise Status - Microsoft Internet Explorer provided by Tactical Services Division". The address bar shows the URL "http://cart.server/top/Html/exerciseStatus.pl". The page content includes a navigation menu with links for Home, Air Mission, COA, Fire Mission, Ground, Intelligence, Assets, and Spw Reports. Below this is a large teal header for "EXERCISE STATUS".

The "Server Status" section contains the following table:

CART DATABASE	Up
CART DATA CAPTURE	Connected
CART SERVER	midst3c
YOUR CLIENT IP	159.62.131.173

The "Exercise Data" section contains the following table:

EXERCISE NAME	X.2.2.40_CART
START TIME	240800UJAN03
MOST RECENT UPDATE	240809UJAN03
CLASSIFICATION	UNCLASSIFIED
PARAMETRIC DATA	BASELINE

A Marine Corps logo is located in the bottom right corner of the page content. The browser's status bar at the bottom indicates "Local intranet".

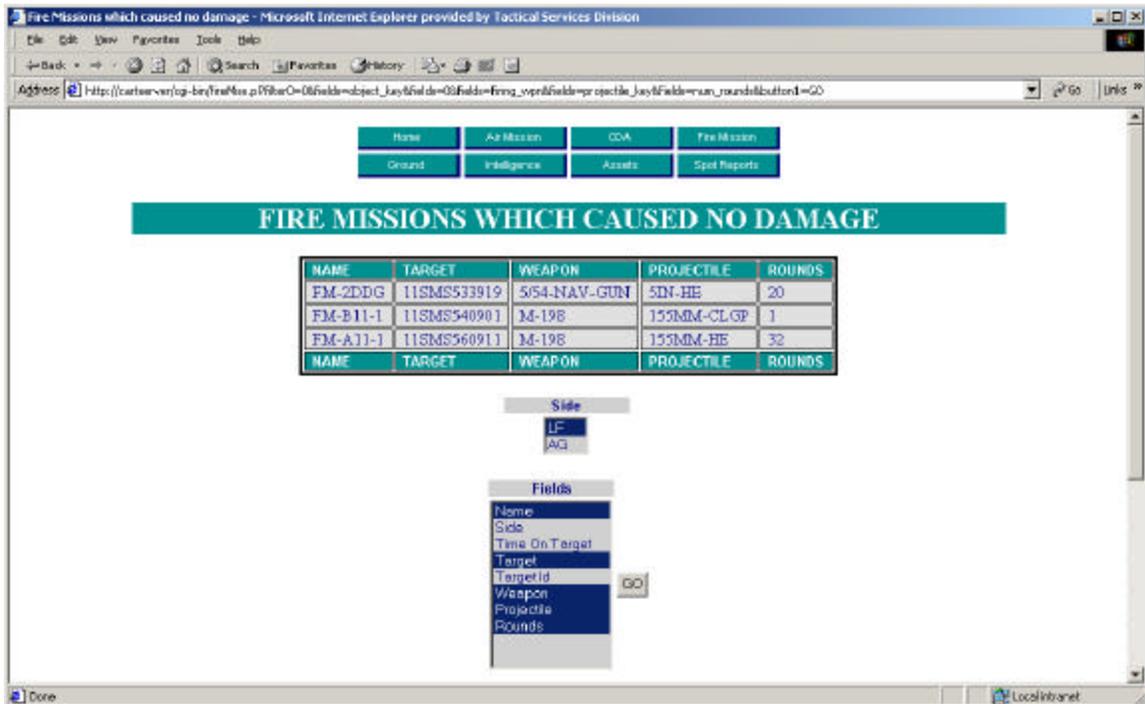
CART DATA TRANSFER TO MICROSOFT PRODUCTS

CART DATA TRANSFER

To Excel Spreadsheets

CART provides the capability to export numerical ranges within a report matrix to an Excel spreadsheet for charting purposes.

Select any CART report.



Left click on the mouse and drag the cursor across the report data. Notice that the data is now highlighted. Select Ctrl-C and copy the data.

NAME	TARGET	WEAPON	PROJECTILE	ROUNDS
FM-2DDG	11SMS533919	5/54-NAV-GUN	5IN-HE	20
FM-B11-1	11SMS540901	M-198	155MM-CLGP	1
FM-A11-1	11SMS560911	M-198	155MM-HE	32
NAME	TARGET	WEAPON	PROJECTILE	ROUNDS

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Left click on the Start icon, left click on Programs and open Microsoft Excel. Select Ctrl V and paste the data to the spreadsheet.

Name	Target	Weapon	Projectile	Rounds
FM-2DDG	11SMS533919	5/54-NAV-GUN	5IN-HE	20
FM-B11-1	11SMS540901	M-198	155MM-CLGP	1
FM-A11-1	11SMS560911	M-198	155MM-HE	32
Name	Target	Weapon	Projectile	Rounds

To Microsoft Word

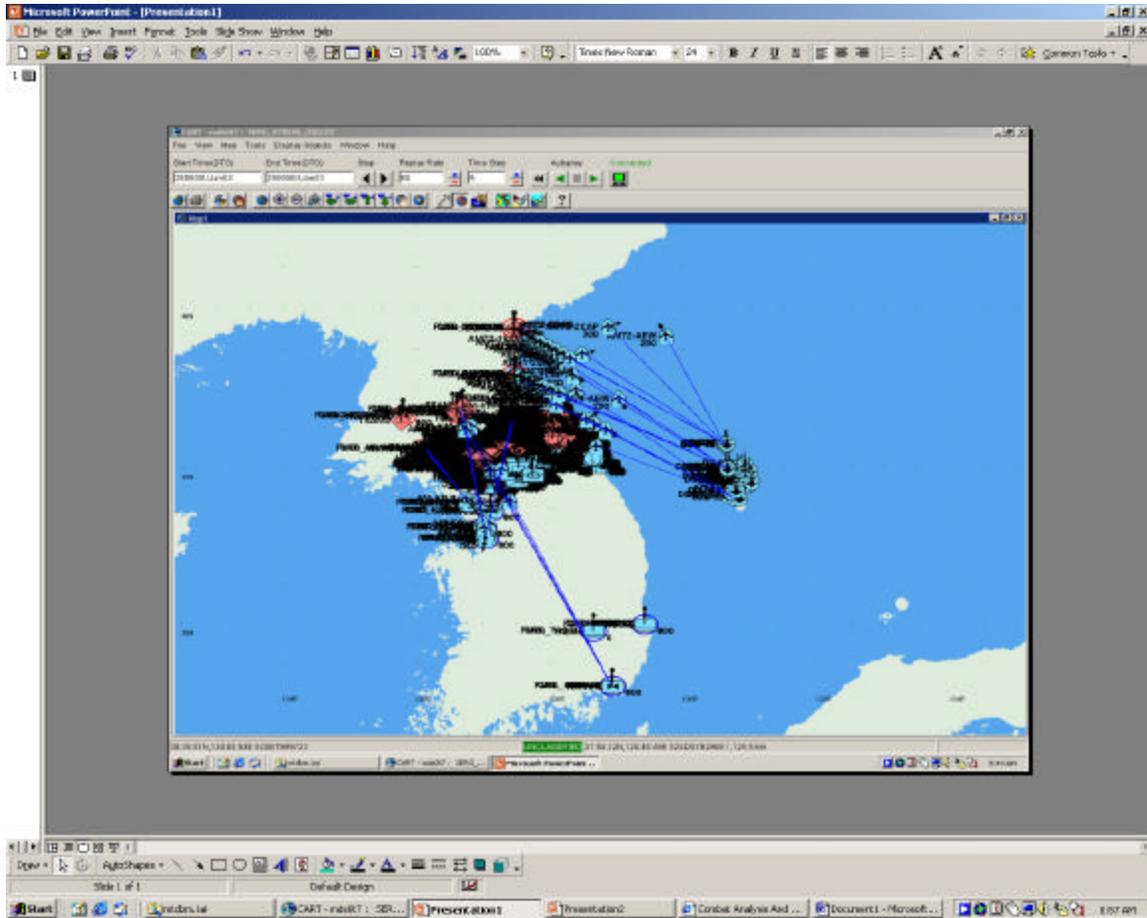
CART SCREEN CAPTURES AND TRANSFER

Since the CART client operates on a pc workstation using Windows 2000 for an O/S normal screen displays can be captured and inserted directly to Microsoft PowerPoint and Microsoft Word.

To: PowerPoint

Select the CART Tactical Display. Press the “Print Screen/SysRq” button on the keyboard to capture the whole screen, or Alt-Print Screen to capture the currently selected window. Left click on the Start icon, left click on Programs and open Microsoft PowerPoint. Select a new slide. Select Ctrl V and paste the CART Tactical Display to the new slide.

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To: Word

Select the CART Report Generator. Press the “Print Screen/SysRq” button on the keyboard. Left click on the Start icon, left click on Programs and open Microsoft Word. Select Ctrl V and paste the CART Report Generator to the new document.

