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EWC3I - EWOC WORK STATION
USER MANUAL

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Prepared for:

Ms. Janette Hooper
Defence Research Establishment Ottawa
Electronic Warfare Division
Ottawa, Ontario

Prepared by:

Software Kinetics Ltd.
65 Iber Road,
Stittsville, Ontario Canada
K2S 1E7

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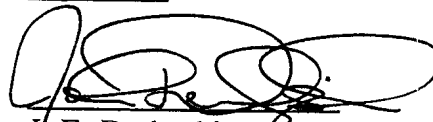
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Approvals

Signature

Date

Project Engineer:


J. E. Derbyshire

12.12.91

Project Manager:

John Perrin
J. P. Perrin

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1.0 INTRODUCTION

The EWC3I Workstations provide an automated command and control network for land EW stations. The EWC3I Workstations are designed to be paired with the EWCC, EWOC (Analyst), FEWOC, DF Stations and Jammer Stations.

The Analyst EWC3I Workstation (AEW) software has been integrated with the DFACTT Analyst Workstation to provide communications, command and control functions to supplement the Analyst Workstation capabilities. It provides the Analyst with tools that support the transmission and reception of reports and allows the Analyst to task intercept and emitter locating assets via a data link.

This document describes the functionality and user interface of the AEW software.

2.0 AEW INTERFACE DESCRIPTION

This section describes the startup and shutdown procedures for the AEW and the user interface and functionality of the communications, command and control tools that have been integrated with the DFACTT Analyst Workstation.

2.1 Startup / Shutdown

This section describes the procedures to startup and shutdown the AEW software. New menu selections from the Analyst Menu are also described.

2.1.1 Analyst Station Startup

The procedure to startup the AEW software is as follows:

1. Select the Analyst Menu sub-menu from the main system menu
2. From the sub-menu select the "start Actra" menu item
3. From the sub-menu select the "start Analyst station" menu item

This procedure initializes and starts the appropriate tasks for the AEW software.

2.1.2 Analyst Station Shutdown

To conduct a controlled shutdown of the AEW tasks select the "shut down Analyst" menu item from the main menu.

2.1.3 Analyst Configuration Browser

The Analyst Configuration Browser is used to define and maintain the states associated with the AEW software. The new states added to the Analyst Configuration Browser are:

- The Operator/Analyst link type
- The default MEROD addresses
- The default report states

The procedure to invoke the Analyst Station Configuration browser is as follows:

1. Select the Analyst Menu sub-menu from the main system menu

2. From the sub-menu select the "configure Analyst" menu item

The "configure Analyst" menu item is enabled only when the AEW is not running. The Analyst Configuration Browser is shown in figure 2.1.3-1.

Analyst Configuration	
Analyst Id:	ANALYST 2
Audio Serv. Addr:	192.42.68.102
Audio Record Side:	Left
Audio Playback Side:	Right
Analyst-Operator Link:	Ethernet
DF Tasks sent to:	FEUOC
DF Master MEROD addr:	11
FEUOC MEROD addr:	22
EWOC MEROD addr:	23
EWCC MEROD addr:	24
Default send address:	22
Exercise Name:	Ex
Report directory:	D:\
Report Classification:	UNCLASSIFIED

Figure 2.3.3-1
Analyst Configuration Browser

2.1.3.1 Operator/Analyst Link Type

The link type defines the type of interface tasks that will be established on startup for the Analyst Station. The possible types of Operator/Analyst link are ethernet and serial. To change from one link type to another the Analyst Workstation must be shutdown, the link type changed in the Configuration Browser and re-started

The serial communication used between the operator and analyst supports a small subset of the messages supported by the ethernet connection. The serial interconnection from the analyst to operator only supports operator tasking messages. Serial communication from the operator to analyst supports intercept messages and DF alert messages.

2.1.3.2 Analyst Station Default MEROD Address

The default send address defines the MEROD address that a report will be sent to if no other address is specified.

The other address panes define the MEROD addresses for the following stations:

- EWOC
- DF Master
- FEWOC
- EWCC

To make changes to these addresses, delete the current address and type in the new address. After making the change press return.

2.1.3.3 Analyst Default Report Parameters

The default report parameters define the defaults to be used when receiving, sending and saving reports. The states defined are as follows:

- Exercise name
- Directory used to save reports
- Default classification of the reports
- Default MEROD send address
- AEW MEROD address

To make changes to the report parameters, delete the current parameters and type in the data for the new parameter. After making a change press return.

To change the default classification, bring up the pane menu and perform the following:

- Select the pane menu "choose report classification"
- From the displayed list choose the classification

- Select the "OK" button when the correct selection has been made or the "CANCEL" button to make no changes

2.1.3.4 Closing the Analyst Configuration Browser

On closing the Analyst Configuration Browser, if changes have been made in the browser, the user is prompted as to whether these changes should be saved. If the "CANCEL" button is selected, all edited changes are lost and the browser is closed. If the "OK" button is selected, the changes are saved and the window is closed. No prompter is displayed if no changes have been made.

2.1.4 MEROD Address Configuration Browser

The MEROD Address Configuration Browser is common to all of the EWC3I stations and is used to define and maintain a library of station names and corresponding MEROD addresses.

The procedure to invoke the MEROD Address Configuration Browser is as follows:

1. Select the Analyst Stations sub-menu from the main system menu
2. From the sub-menu select the "browse MEROD Station addresses" menu item

The browser consist of three panes; a list pane showing all of the current station names, an address pane and a comment pane. The address pane and comment pane show the current state of the station selected in the list pane. The MEROD Address Configuration browser is shown in figure 2.1.4-1.

MEROD Address Configuration Browser	
DFMASTER	Address: 55
EWCC	
EWOC	
FEWOC	Comment: new
SLAVE	

Figure 2.1.4-1
MEROD Address Configuration Browser

2.1.4.1 Adding and Deleting Station

The menu for the list pane has two selections, one for creating a new station and the other for deleting the currently selected station.

Selecting the delete option deletes the selected item from the browser.

Selecting the create option invokes a series of prompts as follows:

- Enter the name of the station to be added
- Enter the new station's address
- Enter a comment

The list pane is then updated with the new station name. The selection of cancel for the first and second prompt will result in the create process being stopped, but the selection of cancel on the comment prompt will result in no comment and the create process will complete.

On deletion of a MEROD address set in the Analyst Configuration Browser, if the MEROD Address Configuration Browser is closed and re-opened the address will automatically be re-added.

2.1.5 Reports Browser

The Reports Browser software is common to all of the EWC3I stations and provides the interface to the MERODs for communications between the EWC3I stations. This browser shows all incoming and outgoing reports. It provides the capability to create and send reports, as well as browse and send reports created by other AEW tools. When incoming reports are received the browser is automatically updated to show the new report. The reports browser is opened by selecting the "report preparation" menu item from the Analyst Menu of the main system menu. The Reports Browser user interface and functionality are fully described in section 2.2.

2.1.6 Analyst DF Tasking Browsers

The DF Tasking/Task browsers provide the Analyst with the ability to organize and task the DF Master Station. There are two DF tasking browsers available for use on the analyst station. They are the "DF Tasking Browser " and the "DF tasks Browser". The user interface and functionality of these browsers are fully described in section 2.3.

2.1.7 Alert Browser for Analyst

The Alert Browser provides the operator with the ability to send DF alert message to the Analyst. The Alert Browser is automatically updated when a new alert message is received. The Alert Browser user interface and functionality are fully described in section 2.4.

2.1.8 Analyst/Operator Serial Communication

The Analyst Configuration browser must be configured for serial communication before starting the AEW software in order to have the proper tasks started and initialized for serial communication.

The serial connection used when the AEW software is running is the same serial connection that is used to communicate with the operator and over the MEROD. The appropriate connection can be configured or re-configured by selection of one of the following system menu items:

- "start serial comms with operator"
- "start serial comms with MEROD"

Only one menu item is available for selection at a time. The available menu item when selected will re-initialize the serial communications task to handle the desired communication.

2.2 Reports Browser

The Reports Browser (see figure 2.2-1) is displayed by selecting the "report preparation" menu item.

The browser is composed of three panes:

- a list pane of all reports and their send/receive states
- basic report information
- text

The list pane menu will allow the user to perform the following functions:

- print the selected report
- save the selected report to disk

-
- send the selected report over the MEROD to the default address
 - send the selected report to other MEROD station(s)
 - delete the selected report (from the report database and disk)

The report keys in the list pane of the Reports Browser are coded strings that indicate the state of the reports. The key string includes the following fields:

- Receive state
- Send State
- Print State
- Type Code
- Date Time Group

The receive, send and print states are indicated by the letters "R" (if the report has been received), "P" (if the report has been printed) and "S" (if the report has been sent) respectively and are separated by a "|". If a State is false for the report, a blank or " " will appear between the separators.

The valid type codes and their associated types are as follows:

ADM	Adminstration Report
DAT	DF Alert Tasking Report
DF	DF Report
DMT	DF Movement Tasking Report
DTR	DF Tasking Report
DTT	DF Tasks Tasking Report
EWS	EW Summary Report
JMT	Jammer Movement Tasking Report
JTR	Jammer Tasking Report
JTT	Jammer Tasks Tasking Report
ORD	Orders
TAC	Tactical Report
TXT	Text Report

The sending of a report to other MEROD stations will result in a multiple list chooser being displayed. The report is sent to all addresses selected in the chooser when the "OK" button is selected. If the "CANCEL" button selected, the send is cancelled.

The basic report information panes (To,From,Op name, and Classification) cannot be edited after the report has been saved.

The text pane menu allows the user to perform the following functions:

- Basic text edit functions (restore, copy, paste, search)
- Create a report of a certain type (administration, EW summary, orders, tactical, and text report)
- Save created or changed report to disk
- Browse contents of disk

A new report can only be created when there are no reports selected in the list pane. When the "create a report of type" menu item is selected, the user is prompted to select the type of report from a list displayed. If the cancel button is selected or if no type is selected, the creation of a new report is stopped. When a type is selected and the "OK" button is pressed a new report is displayed. The To, From, Op Name and Classification panes are initialized to the default states from the Analyst Configuration Browser. The defaults may be changed by editing these panes before the report is saved.

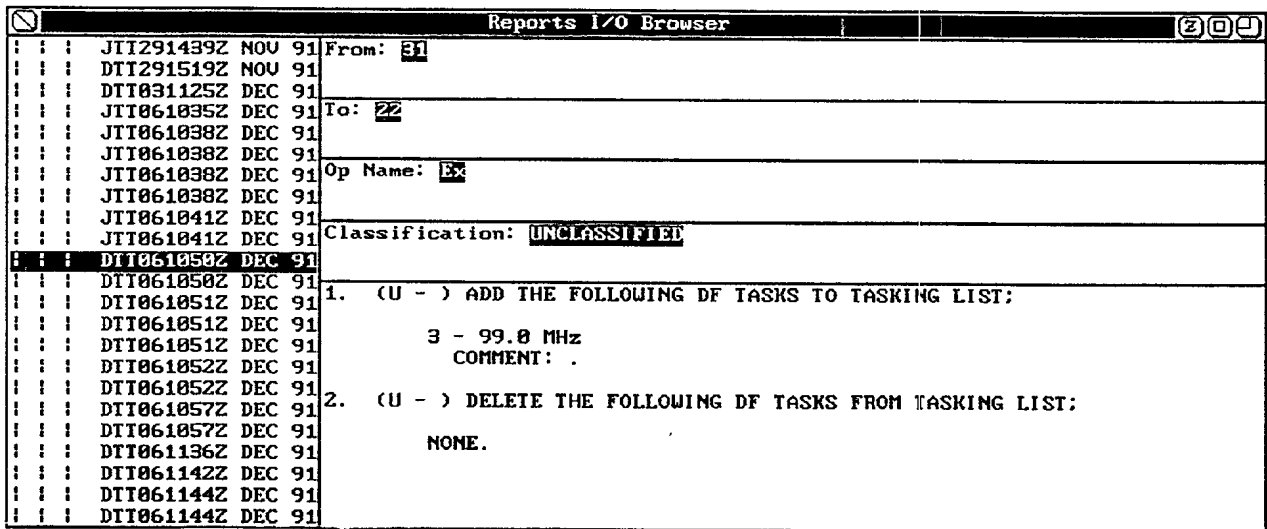


Figure 2.2-1
Reports Browser

2.3 Analyst Station DF Tasking Browsers

This sections describes the functionality and user interface of the DF Tasking Browser and the DF Tasks Browser.

2.3.1 DF Tasking Browser

The DF Tasking Browser (see figure 2.3.1-1) is used for the DF Tasking of the DF Master Station.

The DF Tasking Browser provides the functionality to:

- Create new tasks
- Organize tasks by task types
- Construct a DF tasking message based on organization of the tasks within the browser

The browser is divided into three distinct task type sections:

- Currently assigned tasks
- Tasks to be assigned
- Tasks to be cancelled

Each area is composed of the same number and kind of panes. The panes are as follows:

- List pane of tasks indicated by task id
- Time of creation pane
- State pane
- Frequency pane
- Comments pane

A task can have one of five states and will be displayed in only one task type section as follows:

- Create - Tasks to be assigned
- Assigned - Currently assigned tasks
- To be cancelled - Tasks to be cancelled

-
- Cancelled - Not displayed
 - Re-use of old task - Tasks to be assigned

2.3.1.1 Currently Assigned Task Section

The menu for the current task list pane provides the following functions:

- Remove the currently selected assigned task and place it in the list pane for the tasks to be cancelled (enabled only if task is selected)
- Open a DF Task Browser
- Create a new DF Task report(see section 2.3.1.4)

On the selection of the "Remove assigned task" menu item, the task id selected in the current task list pane is moved to the tasks to be cancelled list pane.

On selection of the "Browse all tasks" menu item, the DF Tasks Browser is displayed. This browser is described in section 2.3.2.

2.3.1.2 Tasks to be Assigned Section

The menu for the new tasks to be assigned list pane provides the following functions:

- Create a new task
- Delete selected task
- Retrieve an old task that was cancelled (enabled only if cancelled tasks exist)
- Create a new DF task report (see section 2.3.1.4)

On selection of the "Create new task" menu item, the user is prompted for a frequency, and a comment. A new task is created and time stamped with the current time and is added to the tasks to be assigned area of the browser.

On selection of the "Delete task" menu item, the currently selected task in the tasks to be assigned list pane is removed.

On selection of the "Retrieve old Task" menu item, a list prompt is displayed requesting the selection of the task to be retrieved. The tasks are displayed as task ids and frequencies. On selection of a task the user is prompted for a new comment. The old task is then retrieved , time stamped with the current time and added in the tasks to be assigned section.

2.3.1.3 Cancelled Tasks Section

The menu item for the tasks to be cancelled list pane provides the following functions:

- Change selected task back to assigned (enabled only if task is selected)
- Create a new DF task report (see section 2.3.1.4)

On selection of the "change selected task back to assigned" menu item, the task selected in the tasks to be cancelled list pane is moved back to the currently assigned tasks list pane.

DF Tasking Browser for DF Master	
Current Tasks	
2	Date Time: 061202Z DEC 91
	Task State: ASSIGNED
	Freq: 40.0 MHz
	Comments:
New tasks to be assigned	
4	Date Time: 061202Z DEC 91
	Task State: CREATE
	Freq: 200.0 MHz
	Comments:
Tasks to be cancelled	
3	Date Time: 061202Z DEC 91
	Task State: TO BE CANCELLED
	Freq: 600.0 MHz
	Comments:

Figure 2.3.1-1
DF Tasking Browser

2.3.1.4 Creation of a New DF Task Report

On selection of the "create new DF task report" menu item:

- All tasks in the new tasks to be assigned pane are moved to the current list pane

- All tasks in the tasks to cancelled pane are removed from the browser
- A new report is generated and will appear in the Report browser. The report contains a list of tasks to be assigned and a list of tasks to be cancelled

2.3.2 DF Tasks Browser

The DF Tasks Browser (see Figure 2.3.2-1) provides the ability to:

- Create new tasks
- Browse all tasks regardless of state

The DF Tasks Browser is composed of the following panes:

- list pane of all task indicated by id
- four data entry panes showing, date time of creation, creating station name, frequency tasked, and a comment for the selected id in list pane

When the "Create new task" menu time is selected the user is prompted for the frequency and a comment. A new Task is created and time stamped with the current time and the new task is added to the list pane

DF Tasks Browser	
5	Date Time: 041405Z DEC 91
6	
7	CELS Station: DF Master
	Freq: 120.0 MHz
	Comments:

Figure 2.3.2-1
DF Tasks Browser

2.4 DF Alert Browser

The DF Alert Browser is used by the analyst to respond to Alerts received from the operator. The alerts are assigned a priority at the time of creation at the Operator Station. These priorities should determine what level of importance these alerts may have in the current situation.

The procedure for invoking the DF Alert Browser is to select the menu item "browse alerts". The Alert Browser is shown in figure 2.4-1.

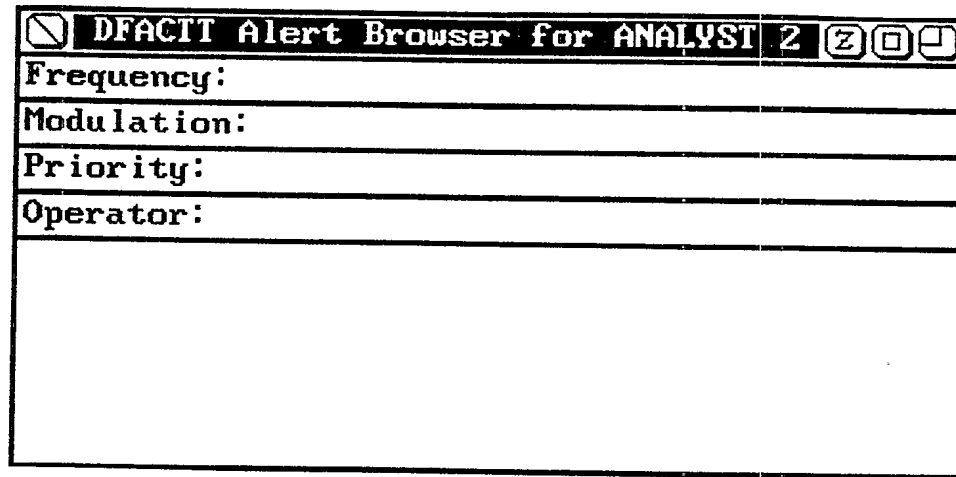


Figure 2.4-1
DFACTT Alert Browser

The browser is composed of the following panes:

- list pane of alerts
- 4 text panes showing the attributes of the currently selected alert (frequency, modulation, priority, and operator)

The text pane menu allows the user to perform basic text edit functions (restore, copy, paste, save).

The list pane menu will allow the user to perform the following functions:

- delete an alert by selecting "Remove alert from list"
- create an alert DF tasking report by selecting "make the alert a DF tasking"

If the text pane(s) for the selected report are edited prior to send a DF tasking report the edited information will be used in the report.

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This document describes the functionality and user interface of the AEW software.

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