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User Manual Airbase Operations Wargame (Version 2.0)

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MANAGEMENTUITTREKSEL

Titel	:	User Manual Airbase Operations Wargame
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Het Airbase Operations Wargame (AOW) is een computerondersteund management game van een vliegbasis. De spelers van het Airbase Operations Wargame vervullen de rol van het management van de vliegbasis (ook wel basisstaf genoemd). Alle activiteiten / processen onder het niveau van het management worden gesimuleerd door het computersysteem.

De taak van de spelers is het besturen van de vliegbasis in een omgeving die door een vijand verstoord wordt. Mogelijke acties van die vijand worden beschreven door een scenario.
De spelers krijgen informatie over de status van de vliegbasis door middel van maps en totes en kunnen de activiteiten die op de basis plaatsvinden besturen door het geven van opdrachten.

Er zijn 2 versies van het model beschikbaar:

- Versie 1, AOW-I, het stand alone ofwel single user systeem
- Versie 2, AOW-II, het netwerk ofwel multi user systeem

AOW-I.

Versie 1 van het Airbase Operations Wargame is geïmplementeerd op 1 enkele PC. Er is maar 1 speler, die de rol van basisstaf vervult. Hij beschikt over de volledige informatie van de vliegbasis en heeft toegang tot de complete set van opdrachten.
De speler bestuurt zelf de simulatie, d.w.z. hij kan naar eigen believen de simulatie starten en stoppen. Er is dus geen sprake van tijdsdruk.

AOW-II.

Versie 2 van het Airbase Operations Wargame is geïmplementeerd op een local area netwerk van PC's (zie figuur 1).

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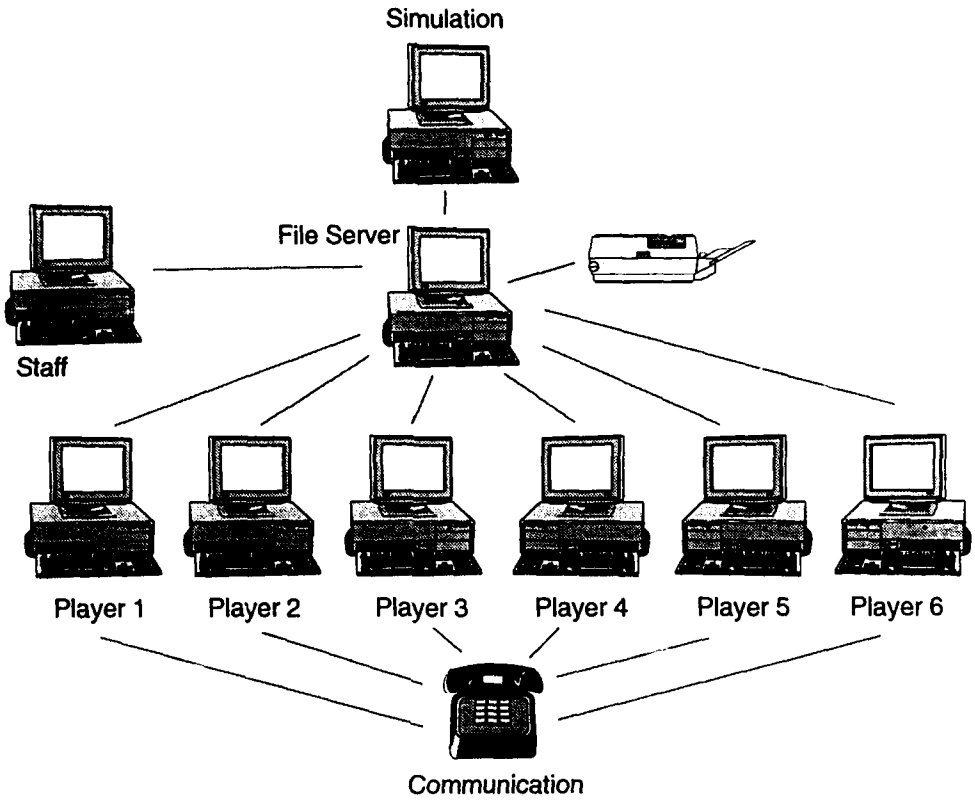

Figuur 1: De layout van de netwerkversie van het Airbase Operations Wargame.

Het aantal spelers van AOW-II kan variëren tussen 0 en 9.
In AOW-II zijn er meerdere spelers die elk een taak binnen de basisstaf uitvoeren. Iedereen heeft slechts die informatie en toegang tot die subset van opdrachten die voor de uitvoerng van zijn taak benodigd is. Via onderlinge samenwerking zullen de spelers de vliegbasis moeten besturen. Daartoe kan het ook nodig zijn voor de spelers om onderling informatie uit te wisselen. Dat kan via het electronisch mail systeem van AOW of via de telefoon.
Bij AOW-II is er tevens een PC voor de spelleiding. Zij kan daarmee de spelsessie besturen, zoals bv. scenario's installeren, simulatie starten en stoppen, de simulatiesnelheid wijzigen.
De spelers kunnen de simulatiesnelheid niet besturen. Hiermee wordt in AOW-II dus tijdsdruk geïntroduceerd voor de spelers. Zij hebben wel de mogelijkheid om aan de noodrem te trekken. Daarmee wordt bereikt dat de simulatie gedurende 3 minuten op reële snelheid zal lopen.

Van het Airbase Operations Wargame zijn zowel een spelershandleiding als een handleiding voor de spelleiding beschikbaar waarin het gebruik van het model (zowel AOW-I als AOW-II) wordt toegelicht.
Dit rapport bevat de spelershandleiding.

ABSTRACT

This report contains the User Manual of the stand-alone and network version of the Airbase Operations Wargame (AOW). It contains all information you need to play an AOW session.
(Hereby all previous manuals of the Airbase Operations Wargame are withdrawn).

SAMENVATTING

Dit rapport bevat de spelershandleiding van de "single user" en "netwerk" versie van het Airbase Operations Wargame (AOW). De handleiding bevat alle benodigde informatie voor het spelen van een AOW sessie.
(Hierbij worden alle vorige handleidingen van het Airbase Operations Wargame ingetrokken).

CONTENTS

1 INTRODUCTION

1.1 Preface

This report contains the User Manual of the stand-alone (version 1.2) and network (version 2.40) systems of the Airbase Operations Wargame (AOW). It contains all information you need to play an AOW session.

(Hereby all the previous manuals of the Airbase Operations Wargame are withdrawn).

Chapter 2 of this manual contains an overview of the underlying principles of the AOW system.

Chapter 3 explains starting the system and the user interface. All available menus are described in detail.

Chapter 4 contains the complete set of tables (totes) that the AOW system uses to present alfanumerical data to the user.

Chapter 5 describes the graphical support of the AOW system by the presentation and manipulation of maps. Maps for infrastructure, defence, disaster control and runway repair are available.

Chapter 6 is used to present you with all orders you can use to control the system.

Chapter 7 gives you an overview of the most important parameters of the objects on the airbase.

Last but not least, chapter 8 describes some applications which can be used together with the AOW to make your own airbase organisation-structure.

The AOW development team would welcome any questions, comments or ideas.

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1.2 Syntax notation

In this manual some standard syntax conventions are being used to describe the use of keyboard and mouse.

1.2.1 Keyboard

Keys of the keyboard are put between brackets.
example [Enter] means the 'Enter' key.

Sometimes you must press two keys at the same time.
example [ALT]+[F7] means pressing the 'Alt' and 'F7' key at the same time.

The following keys are used:

[Home],	[End],	[PgUp],	[PgDn]
[UpArrow],	[DownArrow],	[LeftArrow],	[RightArrow]
[Enter],	[Backspace],	[Insert],	[Spacebar]
[Esc],	[Shift],	[Alt],	[Ctrl]
[+],	[-],	[F1],	[F2]
[F3]	[F5]	[F6]	[F7]
[F8]	[F9]	[F10]	

[Any Key] means any key on the keyboard.
The layout of the keyboard is given in figure 1.1.

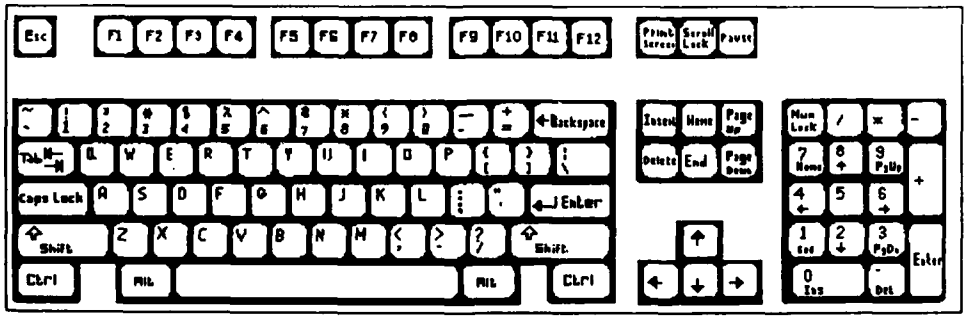


Fig. 1.1: The keyboard.

1.2.2 Mouse

Mousefunctions are denotated between parentheses. The following functions are used: (UpMouse), (DownMouse), (LeftMouse), (RightMouse).
These functions match the cursor control keys on the keyboard.

In addition the mousebuttons can be used:
(LeftButton): selects marked menu item, same as [Enter];
(RightButton): cancels action and returns to previous menu, same as [ESC].
Figure 1.2 shows the mouse layout.

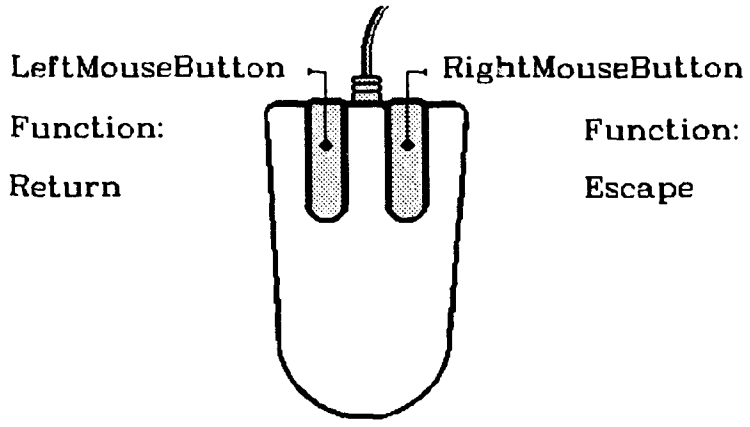


Fig. 1.2: Mouse layout.

2 PRINCIPLES

2.1 Simulated organization

The AOW system simulates that part of an airbase organization that consists of everything below the level of the airbase management team. (See figure 2.1.). The players of AOW play the part of that management team. The communication between the players and the AOW system is a model of the real world communications between the airbase commander and his staff and a real airbase.

Fig. 2.1: **Simulated organization.**

2.2 Communications

The players play the part of the airbase management team. The managementteam is presented with information in alphanumeric format (totes) and graphic format (basemaps). You can influence activities on the airbase by giving commands. Besides your orders a scenario controls part of the simulation without you knowing it. The scenario controls the enemy, the environment of the airbase and the tasking the airbase is presented with. A scenario is preplanned by the staff. Anytime you issue a command the situation of the game at that time is saved for a possible restart. See figure 2.2.

Fig. 2.2: Communications between players and AOW.

2.3 Sortie generation

The heart of the AOW system is the sortie generation section. This part sees to it that airtasks are tasked, prepared and flown, if these airtasks are planned by the players. Without outside disturbances sortie generation will continue until no more planned airtasks, personnel, equipment, or supplies are left. In this situation the only task of the managementteam is to plan the airtasks. See figure 2.3.

Fig. 2.3: Undisturbed sortie generation.

2.4 Support

To facilitate sortie generation a number of supplies and equipment must be available. This availability is controlled by a number of support processes. Activation of these support processes is a task of the managementteam. See figure 2.4.

Fig. 2.4: Supporting sortie generation.

2.5 Outside disturbances

When outside disturbances are activated by the scenario, sortie generation will be obstructed. Consequences of the disturbances are slower operations, less production and losses in personnel and equipment. See figure 2.5.

Fig. 2.5: Outside disturbances.

2.6 Countermeasures

To counter the consequences of disturbances you can take measures either to prevent disturbances (active defence) or to minimize the effect of disturbances (passive defence). If this is not enough to prevent degradation of the sortie generation you can either try to remove the effects of the disturbances (repair, medical service) or to reconstitute the airbase organization to lessen the impact (management). See figure 2.6.

Fig. 2.6: Countermeasures to disturbances.

2.7 Management

The possibilities that are available to control the airbase organization are the allocation of personnel and equipment, and the activation or deactivation of processes within the organization. These actions should be initiated by perception of the situation from the maps and totes. Your actions can be implemented by translating them into commands that are available to control the organization.

An overview of the most important processes that are available to control the allocation of personnel and equipment is shown in figure 2.7.

Further details on these processes and the commands that activate them are given in chapter 6.

Fig. 2.7: Managementprinciple.

2.8 Network principles

There are two versions of the AOW model:

- AOW-I, the stand alone, single user version
- AOW-II, the network, multi user version

Both systems simulate the same airbase processes.
In this section we will describe the basic differences between the two versions of the model.

2.8.1 Physical layout

The stand alone version is played on a single PC. The network version is played on a PC-LAN system, that has a layout like figure 2.8.

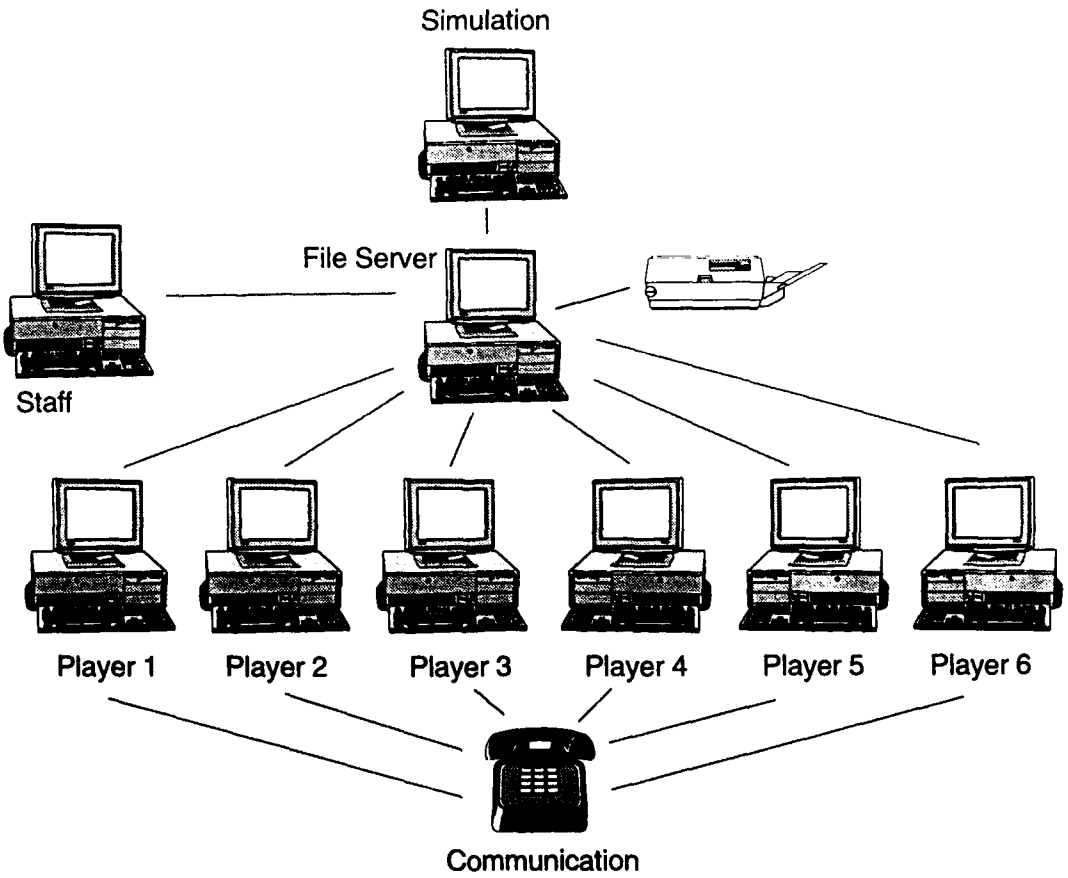


Fig. 2.8: Network principle

The AOW-II system consists of four station types:

(1) NOVELL LAN network server
(2) Simulation-station
(3) Staff-station
(4) Player-station

The functions of these station types will be described.

2.8.1.1 The NOVELL LAN network server

The *NOVELL LAN network server* is the central unit of the LAN network system. The network server provides several network services as file-storage and controlling the peripherals like printers. When a PC is logged in on the network server these services are available for the user. It is not possible to communicate from PC to PC directly: all PCs in the LAN-network can be considered *autonomous* PCs.

2.8.1.2 The simulation-station

The simulation-station is the central unit of the AOW-II system. The tasks of the simulation-station are:

- To control the entire network communication between PCs.
- To run the simulation of the airbase.
- To attempt to solve network errors without the players noticing.
- To check the available space on the harddisc of the network server regularly. If the available space is insufficient to continue the AOW-II session without problems (less than 200 Kb), the simulation-station will attempt to solve this problem.

Because the PCs in a PC-LAN network cannot communicate directly with each other a system is designed to approach a PC in the PC-LAN network from any other PC in this network, without using the PC-LAN network server. This completely autonomous system assigns the simulation-station as the central unit of the AOW-II model that controls all communication.

The simulation-station also offers a number of start-up options to restart the game if a crash of the simulation-station occurs without loss of information of the game situation. The only thing a user will notice of a restart is that the simulation in AOW-II temporarily halts.

2.8.1.3 The staff-station

The staff-station allows you to control the AOW-II simulation-system. After starting up the AOW-II system, the system is in a passive state: all stations, including the simulation-station, are waiting for the start signal from the staff-station. Thereby the staff-station is the controller of the AOW-II system. With the staff-station it is possible to install scenarios, save or restore player-orders and load game situations. It is also possible to start, halt or reset the simulation. The staff-station has access to all totes, maps and orders in the AOW-II system.
The staff-station is identical to a player-station, with the addition of some specific commands to control the game session (which means controlling the simulation-station).

2.8.1.4 The player-station

The player-station is used by a course-member to play the AOW-II game. Every player has his own seperate task in the management team of the airbase and the players will work together to achieve a predetermined goal, like maximizing sortie generation and trying to survive.
The user-interface of the player-station is basically the same as that of the staff-station, naturally without the specific staff commands as described in the previous section. The player-station is in many ways the same as the station from the AOW-I (*single-user*) system. The current AOW-II system is developed for a maximum of nine players and one staff-station. Summarised:

- Simulation-station (1)
- Staff-station (1)
- Player-stations (0..9)

2.8.2 Management

In AOW-I the management of an airbase is performed by one single user. In AOW-II several users form one management team. That is why the decisions taken by the player are split up in AOW-II according to the function a player has in the management team of the airbase. In AOW-I all these decisions were taken by the single player.
Another difference between the two versions is the information a player can obtain from the system. In AOW-I the single player has all the information available from the system. In AOW-II a player has only a part of this information. A player can only obtain that information he normally would have on an airbase considering his function in the management team.

2.8.3 Communication

From the above section it is clear that the management team members have to cooperate with each other to manage the airbase, for they are not completely informed and have no total control. To do so they need to communicate with each other. To be able to do so an electronic mail system is available in the AOW-II model. It is also possible to communicate by telephone.

2.8.4 Time pressure

In the AOW-I model the player controls the simulation time. The player has to stop the simulation to give instructions to the system and restart the simulation to look at the effects of the instructions given.

In AOW-II time pressure is introduced by letting the simulation time run continuously. The simulation is now controlled by the staff-station (see figure 2.8) and instructions can now be given to the system without halting the simulation.

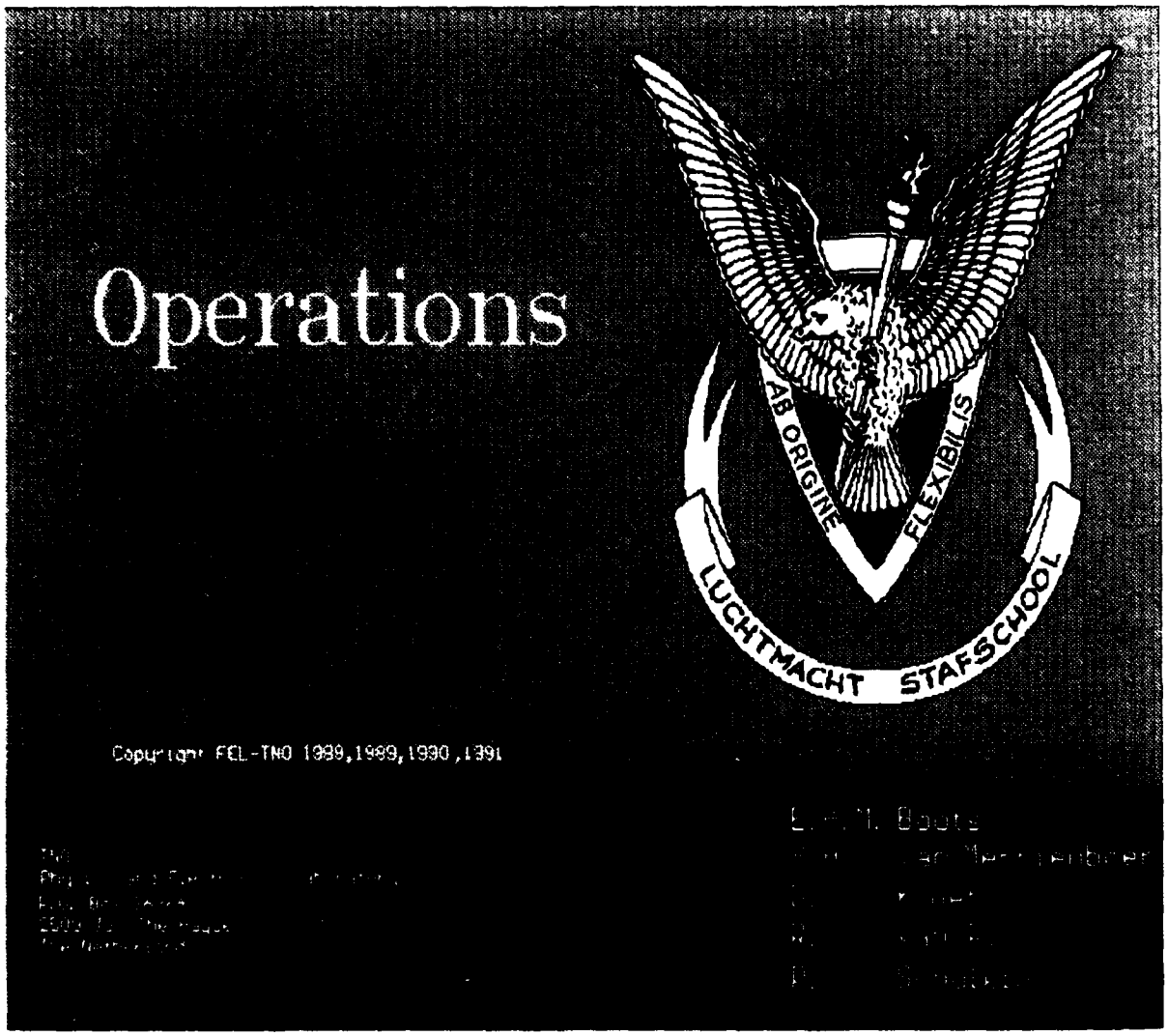


Fig. 3.1: The introduction screen of the Airbase Operations Wargame.

3 MENUS

3.1 Startup

AOW-I

The Airbase Operations Wargame I (AOW) is installed on the harddisk of your Personal Computer (PC). To play the game you will have to have the following hardware available:

- Systemunit;
- Monitor;
- Keyboard;
- Mouse is optional, but recommended;
- Printer is optional. (Required: HP Laser Jet).

To start the game do as follows:

1. Turn on the systemunit and monitor
2. Wait for the DOS prompt C:
3. Type "AOW" [Return]
4. After the introduction screen (see figure 3.1) press [Return]

The game is menu controlled. You are in the Shell Menu now. The use of this menu is described in chapter 3.2.

AOW-II

The staff will install the AOW-II system on the network and will start the game. The game is menu controlled. You are in the Main Menu now. The use of this menu is described in chapter 3.2.

3.2 Use of menus

Each menu contains a number of choices called items. Items are actions or invoke the activation of a previous or a next menu. A light coloured bar indicates which menu item is currently selected. This bar can be moved along the menu items by pressing *[UpArrow], [DownArrow], or*

using (UpMouse) en (DownMouse). In addition the first and last item of the menu can be selected by pressing [Home] and [End].
Pressing [Enter] or (LeftButton) activates the selected item and initiates an action.
Pressing [Esc] or (RightButton) cancels the current menu and activates the previous menu if applicable.

3.3 Hotkeys

You can activate the totes or maps through the menus as explained in 3.2 and 3.3. Beside regular menu selection hotkeys can be used to execute a menu choice directly.
A hotkey is a key-combination that invokes a desired action from various places in the system. All the totes and maps in AOW have a hotkey.
There are some restrictions to the places in the system from where you can use hotkeys:

* You can invoke totes and maps from the menus, the graphic map menu and the order menu;
* You cannot invoke totes and maps from the order selection table;
* You cannot invoke totes and maps when inserting/editing or deleting an order;

The AOW system currently facilitates 23 hotkeys. The hotkeys and their corresponding function are listed below:

Hotkey	Function
System Support:	
[F1	Global Help Function.
[F2]	Repeat Item Function.
[F3]	Print Tote.
Airtasks / Missions:	
[F5]	Mission Tote.
[SHIFT]+[F5]	Mission Completed Tote.
[Alt]+[F5]	Airtask Overview Tote.
Air Operations:	
[F6]	Wing Operations Tote.
[SHIFT]+[F6]	Pilot Tote.
[ALT]+[F6]	Aircraft Battle Damage.

Personnel:

[F7]	Personnel Specific Tote.
[SHIFT]+[F7]	Personnel Task Tote.
[ALT]+[F7]	Personnel Shift Tote.

Equipment:

[F8]	Airdefence Tote.
[SHIFT]+[F8]	Supply Tote.
[ALT]+[F8]	Transport Tote.

Battle Damage:

[F9]	Disturbance Tote.
[SHIFT]+[F9]	Airbase Status Tote.
[ALT]+[F9]	Aircraft Battle Damage.
[CTRL]+[F9]	Airbase Battle Damage.

Graphical Maps:

[F10]	D.C.C. Map.
[SHIFT]+[F10]	Defence Map.
[ALT]+[F10]	Runway Map.
[CTRL]+[F10]	Building Map.

The list of hotkeys for the totes is stated in chapter 4.1 and the list of hotkeys for the maps is stated in chapter 5.1. A functionkey template is included in appendix C.

3.4 Structure of menus

Figure 3.2 gives an overview of the available menus.

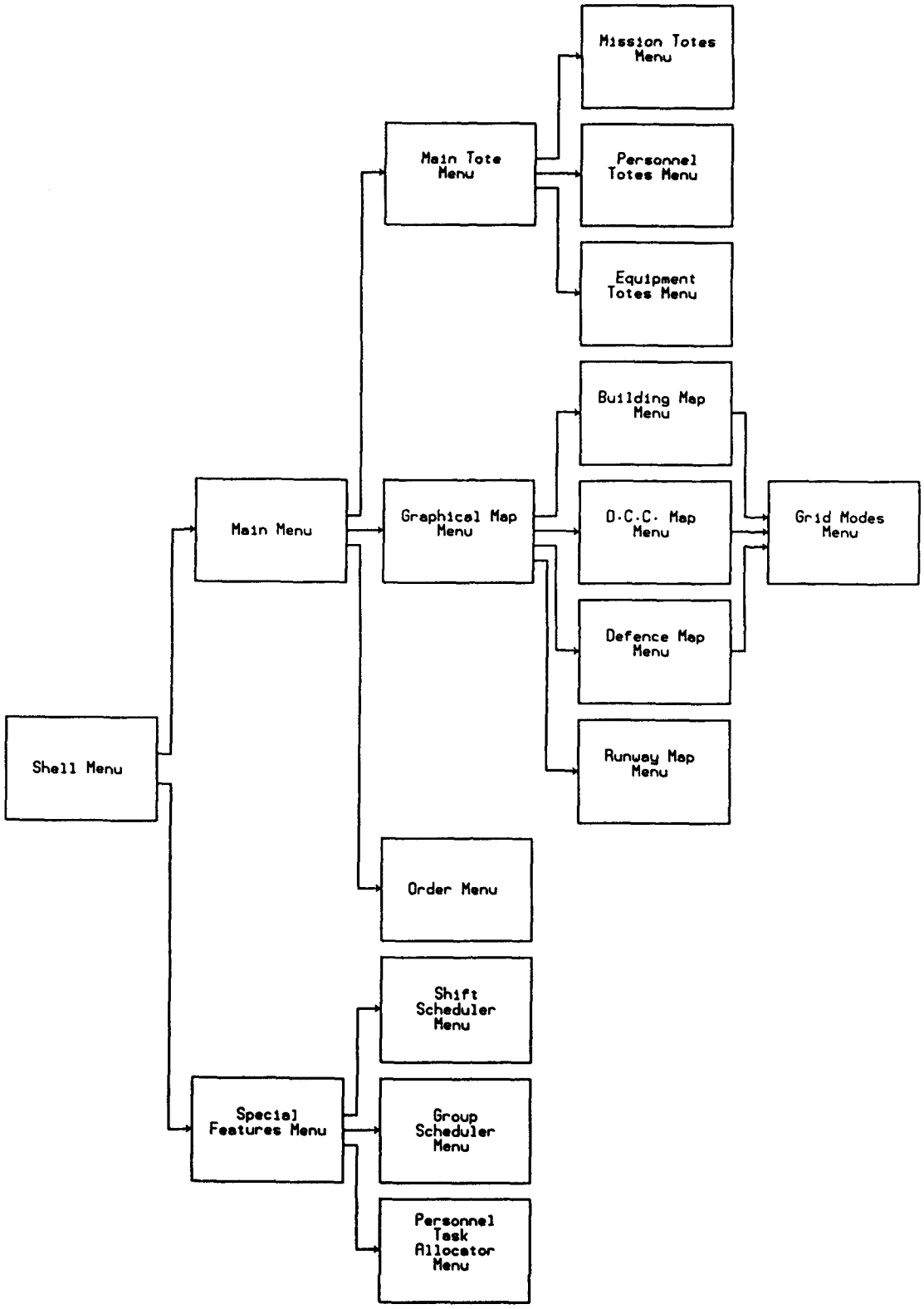


Fig. 3.2: Menus of the Airbase Operations Wargame.

3.5 Definition of menu items

3.5.1 Shell menu

The shell menu contains the following menu items:

1. **Return to DOS:** end the playing session and return to DOS prompt. Confirmation of this choice will be asked for.
2. **(*) Create Universe File:** create a new initial situation with the scenario tools.
3. **(*) Display Universe File:** display the current situation with the display universe tools.
4. **Install Scenario:** choose a predefined scenario from disk.

THIS OPTION WILL DELETE ALL PREVIOUS SAVED SNAPSHOTS

5. **Run Scenario:** play chosen predefined scenario.
6. **Special Features**
   - **Return to Shell Menu:** return to the shell menu.
   - **Personnel Task Allocator:** see chapter 8.3.
   - **Shift Scheduler:** see chapter 8.1.
   - **Group Scheduler:** see chapter 8.2.
   - **Show available input files:** show files in current directory that are legitimate datafiles.
   - **(*) Print order log file:** dump all order information to printer.
   - **(*) Edit universe file:** edit universe file with the universe editor toolbox.
   - **(*) Edit universe file with Turbo:** edit universe file as an ASCII file.
   - **(*) Install monitor:** configure AOW to different monitors.

N.B. The (*) marked items are secured with a password, you won't need these items for a regular playing session.

3.5.2 Main menu

AOW-I

Actually the main menu consists of three components: a system information display, a messages display and a menu.

The system information display contains the following information:

1. **Datafile**: file which contains all the system information of the current system time.
2. **Orderfile**: file which contains the list of orders still to be executed.
3. **User**: function of the player in the airbase managementteam.
4. **System Time**: current system time.
5. **Pause Interval**: interval time (timestep to simulate).
6. **Memory available**: remaining total available memory (Bytes).
   Memory max Block: remaining connected block of available memory (Bytes).
7. **Mouse available**: indicator of mouse support.
8. **Printer available**: indicator of printer support.
9. **Serial number**: serial number of the specific game.

In the messages display the messages generated by the system for the player are presented. Each time a message is generated the player has the following options: save the message, give an order (and save the message) or continue the game.

The main menu contains the following menu items:

1. **Return to shell**: end game and return to shell menu. Confirmation is asked for.
2.(*) **Generate Universe File**: save current situation on disk. Normally an automatic save is performed anytime an order is given. Use this extra save option only if you simulate for a long time without givi.._g orders.
3. **Simulate [Interval]**: specify the interval time (timestep to simulate, see chapter 6, page 6.4.), and start simulation from the current system time until the system time plus the interval time.
4. **Simulate [Until]**: specify the system end time (point of time to end the simulation, see chapter 6, page 6.4.), and start simulation from the current system time until system end time.

THE SIMULATION CAN BE STOPPED ANYTIME WITH [ESC]

5. **Totes >>**: main tote menu. See chapter 4.
6. **Maps >>**: graphical map menu. See chapter 5.
7. **Orders >>**: Order menu. See chapter 6.
8.(*) **Debug:** special functions for checking out the system and locating problems. For Staff Only.
9. **Review Messages:** review messages that were saved earlier in the game.

N.B. The (*) marked items are secured with a password, you won't need these items for a regular playing session.

Items with >> are provided with a submenu.

AOW-II

The main menu consists of two components: a system information display and a menu.

The system information display contains the following information:

1. **User** : function of the player in the airbase managementteam.
2. **Simulation Time** : current system time.
3. **Simulation Status** : status of the simulation: simulating or halted (simulation is paused).
4. **Scenario** : file which contains the list of orders of the scenario.
5. **Last [Next] Update** : time of the last [next] update. At each update a file is generated and distributed among the players. The file contains all the system information of the current system time.
6. **Simulation Speed** : the speed at which the simulation runs (number of times faster than real time).
7. **Messages in Pool** : the number of messages in pool.
8. **Alarm Status** : indicator of alarm status: no alert or counter agression.
9. **Ground Raid Alarm** : indicator of ground raid alarm: white, yellow, red.
10. **Air Attack Warning** : indicator of air attack warning: white, red.

The main menu of the player station contains the following menu items:

1. **Return to Shell** : Terminates the AOW-II playerstation.
2. **Totes >>** : Main tote-menu (see chapter 4).
3. **Maps >>** : Graphical map-menu (see chapter 5).
4. **Orders >>** : Order-menu (see chapter 6).
5. **Send Message** : Send a message to one or all players.
6. **View Messages** : View messages in message-pool (if any).
7. **Clear Message Pool** : Clear all messages from message-pool.
8. **Slow Run (3 minutes)** : Forces the AOW-II system to simulate at speed 1:1 realtime for 3 minutes. Only to be used in emergency.

N.B.: Items with >> are provided with a submenu.

4 TOTES

4.1 Tote Menu

The AOW system currently facilitates 15 totes in 5 categories. The Main Tote Menu contains the following submenus and totes with their corresponding hotkeys (see chapter 4.2):

		Hotkey
Mission Totes:	Mission totes menu.	
- Mission Tote.		[F5]
- Mission Completed Tote.		[SHIFT]+[F5]
- Airtask Overview Tote.		[ALT]+[F5]
Personnel Totes:	Personnel totes menu.	
- Personnel Specific Tote.		[F7] (*)
- Personnel Task Tote.		[SHIFT]+[F7] (*)
- Personnel Shift Tote.		[ALT]+[F7]
- Pilot Tote.		[SHIFT]+[F6]
Equipment Totes:	Equipment totes menu.	
- Airdefence Tote.		[F8]
- Supply Tote.		[SHIFT]+[F8]
- Transport Tote.		[ALT]+[F8]
- Wing Operations Tote.		[F6]
- Aircraft Battle Damage.		[ALT]+[F9] / [ALT]+[F6]
- Airbase Battle Damage.		[CTRL]+[F9]
Airbase Status Tote.		[SHIFT]+[F9]
Disturbance Tote.		[F9]

The menus are presented in chapter 3.3. The totes are presented in chapter 4.3.

(*) First, the personnel global tote will appear. After selection of a personnel team by pressing [Enter] or (LeftButton), the Personnel Specific or Personnel Task Tote will appear, depending on your choice in the personnel totes menu.

4.2 Tote use

A tote is presented as a scrolling table with lines of information. To examine a tote you can use the following keys:

-	[UpArrow] or (UpMouse)	Scroll one line up;
-	[DownArrow] or (DownMouse)	Scroll one line down;
-	[Home]	Jump to the first line;
-	[End]	Jump to the last line;
-	[PgDn]	Scroll one page down;
-	[PgUp]	Scroll one page up;
-	[Enter] or (LeftButton)	If available, specific information of the selected item will be presented;
-	First letter	Jump to the first item with this letter;
-	[Esc] or (RightButton)	Exit the tote and return to the previous menu;
-	[F3]	Print the tote.

4.3 Tote layout

Every tote is presented including all data needed to interpret its information.

4.3.1 MISSION TOTE

MISSION TOTE T(00/00:00)

NR	TYPE	AC	ETOT	ATOT	ETD	ATD	ETA	ATA	STAT	PRIO

HOTKEY: [F5]

Mission Tote:

T(00/00:00): system time in days, hours and minutes.
NR: mission number.
TYPE: mission type. See table 1.
AC: number of aircraft.
ETOT: estimated time over target in days, hours and minutes.
ATOT: actual time over target in days, hours and minutes.
ETD: estimated time of departure
= (time over target) - (1/2 * flying time).
ATD: actual time of departure.
ETA: estimated time of arrival
= (time over target) + (1/2 * flying time).
ATA: actual time of arrival.
STAT: mission status. See table 2.
PRIO: priority: (1=high, 30=low)

N.B. [Enter] or (LeftButton): displays the pilots and aircraft, assigned to the mission that is currently highlighted.

Table 1: Mission types.

MISSION TYPE	
STAN	: Standard
VDIS	: Vertical Dispersal
PLAN	: accepted Airtask (Planned)
QRAL	: Quick Reaction Alert
BCAP	: Base Cap
XSER	: X-servicing

Table 2: Mission status.

STATUS
in PREParation
STARt-up
READy
WAIT (waiting for the take-off authorization)
TAXY
OUTB(ound)
INBO(und)
LANDed
CANCelled

4.3.2 MISSION COMPLETED TOTE

MISSION COMPLETED TOTE T(00/00:00)

NR	TYPE	AC	ETOT	ATOT	ETD	ATD	ETA	ATA	STAT	PRIO

HOTKEY: [SHIFT]+[F5]

Mission Completed Tote:

T(00/00:00): system time in days, hours and minutes.
NR: mission number (if reduced with R).
TYPE: mission type, See table 1.
AC: number of aircraft.
ETOT: estimated time over target in days, hours and minutes.
ATOT: actual time over target in days, hours and minutes.
ETD: estimated time of departure
= (time over target) - (1/2 * flying time).
ATD: actual time of departure.
ETA: estimated time of arrival
= (time over target) + (1/2 * flying time).
ATA: actual time of arrival.
STAT: mission status, See table 2.
PRIO: priority: (1=high, 30=low).

Table 1: Mission Types.

MISSION TYPE	
STAN	: Standard
VDIS	: Vertical Dispersal
PLAN	: accepted Airtask (Planned)
QRAL	: Quick Reaction Alert
BCAP	: Base Cap
XSER	: X-servicing

Table 2: Mission status.

STATUS
LANDed
COMPleted
CANCelled
DIVErted
REFUsed

4.3.3 AIRTASK OVERVIEW TOTE

AIRTASK OVERVIEW TOTE T(00/00:00)

NR	PR	TYPE	AC	AC_TP	FLY_T	TOT	FUEL/WEAP	MOS	ECM	AUT

HOTKEY: [ALT]+[F5]

Airtask Overview Tote:

T(00/00:00): system time in days, hours and minutes.
NR: mission number.
PR: priority: (1=high, 2=medium, 3=low).
TYPE: mission type, See table 1.
AC: number of aircraft.
AC_TP: aircraft type, See table 2
FLY_T: flying time, mission length, in hours and minutes.
TOT: time over target in days, hours and minutes.
FUEL/WEAP: Fuel configuration : INTErnal, CENTer, WING.
Weapon configuration : CLEAn, FBA1, FBA2, IDF.
MOS: minimum operating strip required. See table 3.
ECM: ECM pod required on this mission indicator.
AUT: Take off authorization needed indicator.

Table 1: Mission Types.

MISSION TYPE	
STAN	: Standard
VDIS	: Vertical Dispersal
PLAN	: accepted Airtask (Planned)
QRAL	: Quick Reaction Alert
BCAP	: Base Cap
XSER	: X-servicing

Table 2: Aircraft Types.

AIRCRAFT TYPE
F15
F16

Table 3: Required Minimum Operating Strip for Take-Off/Landing, in units of 100 feet.

Configuration		Mission type					
FUEL	WEAP	STAN	VDIS	PLAN	QRAL	BCAP	XSER
INTERNAL	CLEAN	10/10	10/10	10/10	10/10	10/10	10/10
INTERNAL	FBA1	25/25	25/25	25/25	25/25	25/25	25/25
INTERNAL	FBA2	25/25	25/25	25/25	25/25	25/25	25/25
INTERNAL	IDF	13/13	13/13	13/13	13/13	13/13	13/13
CENTER	CLEAN	15/15	15/15	15/15	15/15	15/15	15/15
CENTER	FBA1	28/28	28/28	28/28	28/28	28/28	28/28
CENTER	FBA2	28/28	28/28	28/28	28/28	28/28	28/28
CENTER	IDF	18/18	18/18	18/18	18/18	18/18	18/18
WING	CLEAN	15/15	15/15	15/15	15/15	15/15	15/15
WING	FBA1	28/28	28/28	28/28	28/28	28/28	28/28
WING	FBA2	28/28	28/28	28/28	28/28	28/28	28/28
WING	IDF	18/18	18/18	18/18	18/18	18/18	18/18

4.3.4 PERSONNEL GLOBAL TOTE

PERSONNEL-GLOBAL TOTE T(00/00:00)

PERSONNEL	BUSY	FREE	OFF	WOUNDED	KILLED	ANY

HOTKEY: [F7]/[SHIFT]+[F7]

Personnel Global Tote.

T(00/00:00): system time in days, hours and minutes.
PERSONNEL: primary task of personnel. See table 1.
BUSY: number of personnel teams actively performing task.
FREE: number of personnel teams waiting for task.
OFF: number of personnel teams off base.
WOUNDED: number of personnel teams wounded.
KILLED: number of personnel teams killed.
ANY: number of personnel teams available but currently allocated to secondary/ tertiary task.

N.B. [Enter] or (LeftButton): Personnel Specific or Personnel Task Tote will appear depending on your choice in the personnel totes menu.

Table 1: Personnel categories.

PERSONNEL		
ABDR	EOD	NBC_TEAM
AFU	EOR	PERSONNEL_OPS
ARMAMENT	FIRE_BRIGADE	PILOT
ASSEMBLY_TRANSPORT	FOOD_SUPPLY	RRR_TEAM
ATC	FUEL_OPS	SECURITY
BURIAL_SERVICE	GROUND_OPS	SHORAD
COMMUNICATION	LOADING_CREW	SUPPORT_SQUADRON
CREWCHIEF	LOG_OPS	TANK_CREW
DECONTAMINATION	MAINTENANCE	TECHNICAL_SUPPORT
DRIVER	MEDICS	WING_OPS

4.3.5 PERSONNEL SPECIFIC TOTE

PERSONNEL-SPECIFIC TOTE T(00/00:00)

TASK	PRIMARY SKL	#	SH	GR	LOCATION	STATUS	BUSY WITH

HOTKEY: [F7]

Personnel Specific Tote.

T(00/00:00):	system time in days, hours and minutes.
TASK:	current task of personnel. See table 1.
PRIMARY SKL:	primary task and name plus number of personnel. See table 1.
#:	number of people in a team.
SH:	shiftnumber, for use with shift changes.
GR:	groupnumber, free available tag, for use within orders.
LOCATION:	location: building name and number. See table 2.
STATUS:	status. See table 3.
BUSY WITH:	Object working with.

Table 1: Personnel categories.

PERSONNEL		
ABDR	EOD	NBC_TEAM
AFU	EOR	PERSONNEL_OPS
ARMAMENT	FIRE_BRIGADE	PILOT
ASSEMBLY_TRANSPORT	FOOD_SUPPLY	RRR_TEAM
ATC	FUEL_OPS	SECURITY
BURIAL_SERVICE	GROUND_OPS	SHORAD
COMMUNICATION	LOADING_CREW	SUPPORT_SQUADRON
CREWCHIEF	LOG_OPS	TANK_CREW
DECONTAMINATION	MAINTENANCE	TECHNICAL_SUPPORT
DRIVER	MEDICS	WING_OPS

Table 2: Building types.

BUILDING		
AMMO	HOSPITAL	POL_TANKS
AMMO_OFF_BASE	INVENTORY	RADAR
ANY_BUILDING	KITCHEN	RADAR_POS
ATCB	LAUNCH_POS	RRR_GARAGE
CEMETRY	LCB	RSB
COMCON	LOCAL_AIR_SPACE	SCPS
COMM_BUNKER	LOG_BUNKER	SHELTER
DEFENCE_POS	OFF_BASE	SPBF
DISPERSAL	ON_THE_MOVE	STORAGE
FIHO	OTHER_BASE	TARGET_AIR_SPACE
GUNS_POS	POL	WAHALL
HANGAR		

Table 3: Personnel status.

STATUS	
UNAVAILABLE	(not operational)
AVAILABLE	(operational waiting)
BUSY	(operational performing task)
WOUNDED	
KILLED	
BURRIED	
REMOVED	(removed from the simulation)
RESERVED	(not controllable by player)

4.3.6 PERSONNEL TASK TOTE

PERSONNEL-TASK TOTE T(00/00:00)

TASK	1st SKILL	2nd SKL	3rd SKL	#	SH	GR	LOCATION	STATUS

HOTKEY: [SHIFT]+[F7]

Personnel Task Tote.

T(00/00:00): system time in days, hours and minutes.
TASK: current task of personnel. See table 1.
1st SKILL: primary skill of personnel / name and number of team. See table 1.
2nd SKL: secondary skill of personnel. See table 1.
3rd SKL: tertiary skill of personnel. See table 1.
#: number of people in a team.
SH: shiftnumber, for use with shift changes.
GR: groupnumber, free available tag, for use within orders.
LOCATION: location: building name and number. See table 2.
STATUS: status. See table 3.

Table 1: Personnel categories and tasks.

PERSONNEL		
ABDR	EOD	NBC_TEAM
AFU	EOR	PERSONNEL_OPS
ARMAMENT	FIRE_BRIGADE	PILOT
ASSEMBLY_TRANSPORT	FOOD_SUPPLY	RRR_TEAM
ATC	FUEL_OPS	SECURITY
BURIAL_SERVICE	GROUND_OPS	SHORAD
COMMUNICATION	LOADING_CREW	SUPPORT_SQUADRON
CREWCHIEF	LOG_OPS	TANK_CREW
DECONTAMINATION	MAINTENANCE	TECHNICAL_SUPPORT
DRIVER	MEDICS	WING_OPS

Table 2: Building types.

BUILDING		
AMMO	HOSPITAL	POL_TANKS
AMMO_OFF_BASE	INVENTORY	RADAR
ANY_BUILDING	KITCHEN	RADAR_POS
ATCB	LAUNCH_POS	RRR_GARAGE
CEMETRY	LCB	RSB
COMCON	LOCAL_AIR_SPACE	SCPS
COMM_BUNKER	LOG_BUNKER	SHELTER
DEFENCE_POS	OFF_BASE	SPBF
DISPERSAL	ON_THE_MOVE	STORAGE
FIHO	OTHER_BASE	TARGET_AIR_SPACE
GUNS_POS	POL	WAHALL
HANGAR		

Table 3: Personnel status

STATUS	
UNAVAILABLE	(not operational)
AVAILABLE	(operational waiting)
BUSY	(operational performing task)
WOUNDED	
KILLED	
BURRIED	
REMOVED	(removed from the simulation)
RESERVED	(not controllable by player)

4.3.7 PERSONNEL SHIFT TOTE

PERSONNEL-SHIFT TOTE T(00/00:00)

SHIFT-NUMBER	STATUS	SHIFT-START	DURATION	SHIFT-REPEAT-FREQUENCY

HOTKEY: [ALT]+[F7]

Personnel Shift Tote.

T(00/00:00):	system time in days, hours and minutes.
SHIFT-NUMBER:	shift number: 1..10.
STATUS:	status of the shift: ON / OFF.
START-TIME:	last point of time at which the shift started (ON_SHIFT), or next point of time at which the shift will start (OFF_SHIFT).
DURATION:	shift duration (time period).
SHIFT-REPEAT-FREQUENCY:	time period between two successive shift starts.

N.B. Shifts are displayed in tote only if they have been defined by a "schedule_shift" order.

4.3.8 PILOT TOTE

PILOT TOTE T(00/00:00)

PILOT NUMBER	GR	SH	LOCATION	STATUS	MISSION

HOTKEY: [SHIFT]+[F6]

Pilot Tote.

T(00/00:00):	system time in days, hours and minutes.
PILOT NUMBER:	pilot number.
GR:	groupnumber, free available tag, for use within orders.
SH:	shiftnumber, for use with shift changes.
LOCATION:	location: building name and number. See table 1 and 2.
STATUS:	status. See table 1.
MISSION:	missionnumber.

Table 1: Pilot status and locations.

STATUS	LOCATION
UNVAILABLE(Off)	Building name + -number
UNAVAILABLE	Diverted
AVAILABLE	Building name + -number
TASKED	Building name + -number
READY	Building name + -number
TAXI	Taxiway
OUTBOUND	Airborne
INBOUND	Airborne
BUSY	Building name + -number
WOUNDED	Building name + -number
KILLED	Building name + -number
BURRIED	Cemetry
RESERVED	Building name + -number

Table 2: Building types.

BUILDING		
AMMO	HOSPITAL	POL_TANKS
AMMO_OFF_BASE	INVENTORY	RADAR
ANY_BUILDING	KITCHEN	RADAR_POS
ATCB	LAUNCH_POS	RRR_GARAGE
CEMETRY	LCB	RSB
COMCON	LOCAL_AIR_SPACE	SCPS
COMM_BUNKER	LOG_BUNKER	SHELTER
DEFENCE_POS	OFF_BASE	SPBF
DISPERSAL	ON_THE_MOVE	STORAGE
FIHO	OTHER_BASE	TARGET_AIR_SPACE
GUNS_POS	POL	WAHALL
HANGAR		

4.3.9 AIRDEFENCE TOTE

AIRDEFENCE TOTE T(00/00:00)

AIRDEFENCE NAME	GROUP	STATUS	TARGET	LOCATION

HOTKEY: [F8]

Airdefence Tote:

T(00/00:00):	system time in days, hours and minutes.
AIRDEFENCE NAME:	airdefence system name and number. See table 1.
GROUP:	groupnumber, free available tag, for use within orders.
STATUS:	airdefence systeem status. See table 2.
TARGET:	Protection type when attacked: OPEN, SHELTERED, HARDENED.
LOCATION:	location: X, Y with: $1 \leq X,Y \leq 120$.

Table 1: Airdefence system types.

AIRDEFENCE NAME
GUN
LAUNCHER
RADAR

Table 2: Airdefence system status.

STATUS	
AVAILABLE	(operational, waiting)
BUSY	(operational, performing task)
DAMAGED	
KILLED	
REMOVED	(removed from the simulation)
RESERVED	(not controllable by player)

4.3.10 SUPPLY TOTE

SUPPLY TOTE T(00/00:00)

SUPPLY NAME	ASSEMBLED	UNASSEMBLED	STATUS	LOCATION

HOTKEY: [SHIFT]+[F8]

Supply tote.

T(00/00:00):	system time in days, hours and minutes.
SUPPLY NAME:	supply name and number. See table 1.
ASSEMBLED:	amount which is ready to use.
UNASSEMBLED:	amount which requires assembly.
STATUS:	status. (AVAILABLE, RESERVED).
LOCATION:	location: building name and number. See table 2.

Table 1: Supply types.

SUPPLY NAME	
AMMO (AC)	MATTING
AMMO (AD)	MEDICAL
BOMBS	MISSILES (AC)
ECM_POD	MISSILES (AD)
FIREFIGHT	NBC
FOOD	PAVEWAY
FUEL	TANKS
LRU	

Table 2: Building types.

BUILDING		
AMMO	HOSPITAL	POL_TANKS
AMMO_OFF_BASE	INVENTORY	RADAR
ANY_BUILDING	KITCHEN	RADAR_POS
ATCB	LAUNCH_POS	RRR_GARAGE
CEMETRY	LCB	RSB
COMCON	LOCAL_AIR_SPACE	SCPS
COMM_BUNKER	LOG_BUNKER	SHELTER
DEFENCE_POS	OFF_BASE	SPBF
DISPERSAL	ON_THE_MOVE	STORAGE
FIHO	OTHER_BASE	TARGET_AIR_SPACE
GUNS_POS	POL	WAHALL
HANGAR		

4.3.11 TRANSPORT TOTE

TRANSPORT TOTE T(00/00:00)

TRANSPORT NAME	GRP	STATUS	CAPA	SPACE	LOCATION

HOTKEY: [ALT]+[F8]

Transport tote.

T(00/00:00):	system time in days, hours and minutes.
TRANSPORT NAME:	transport name and number. See table 1.
GRP:	groupnumber, free available tag, for use within orders.
STATUS:	status. See table 2.
CAPA:	capacity of transport in units of supply.
SPACE:	floorspace needed if placed in building.
LOCATION:	location: building name and number. See table 3.

Table 1: Transport types.

TRANSPORT NAME
BOWSER
BULLDOZER
CCA
FIREFIGHTING
POWER GENERATOR
RRR
WEAPON TRANSPORT

Table 2: Transport status.

TRANSPORT NAME	
AVAILABLE	(operational, waiting)
AVAILABLE [FX]	(operational, waiting, fixed location, not movable)
BUSY	(operational, performing task)
EMPTY	(bowser without fuel)
DAMAGED	
KILLED	
REMOVED	(removed from the simulation)
RESERVED	(not controllable by player)

Table 3: Building types.

BUILDING		
AMMO	HOSPITAL	POL_TANKS
AMMO_OFF_BASE	INVENTORY	RADAR
ANY_BUILDING	KITCHEN	RADAR_POS
ATCB	LAUNCH_POS	RRR_GARAGE
CEMETRY	LCB	RSB
COMCON	LOCAL_AIR_SPACE	SCPS
COMM_BUNKER	LOG_BUNKER	SHELTER
DEFENCE_POS	OFF_BASE	SPBF
DISPERSAL	ON_THE_MOVE	STORAGE
FIHO	OTHER_BASE	TARGET_AIR_SPACE
GUNS_POS	POL	WAHALL
HANGAR		

4.3.12 WING OPERATIONS TOTE

WING-OPS TOTE T(00/00:00)

MIS	A/C	WEAP	FUEL	F/H/L/E/A	LOCATION	STAT	PI	LOCATION

HOTKEY: [F6]

Wing-Ops tote.

T(00/00:00): system time in days, hours and minutes.
MIS: missionnumber.
AC: aircraft type and number. See table 1.
WEAP: weapon configuration: CLEAn, FBA1, FBA2, IDF.
FUEL: fuel configuration : INTErnal, CENTer, WING.
F/H/L/E/A: Fuelled / Hanged / Loaded / ECM / AWX indicators.
(ECM = ECM-pod required;
AWX = All Weather Capable)
indicator is + or -.
LOCATION: location: building name and number. See table 2/3.
STAT: aircraft status. See table 2.
PI: pilotnumber.
LOCATION: location of pilot: building name and number. See table 2/3.

N.B. [Enter] or (LeftButton): displays the current status of the pilot and the preparation teams if aircraft is tasked to a mission, and if possible including the point of time at which the proces is requested or ended.

Table 1: Aircraft types.

AIRCRAFT TYPE
F16
F15

Table 2: Aircraft status and locations.

STATUS aircraft	LOCATION aircraft	LOCATION pilot
SERV(iceable)	Building name/number	Building name/number
TASKed	Building name/number	Building name/number
in_PREParation	Building name/number	Building name/number
READy	Building name/number	Building name/number
STARt_Up	Building name/number	Building name/number
TAXI	Taxiway	Taxiway
OUTB(ound)	Airborne	Airborne
INBO(und)	Airborne	Airborne
LANDed	Runway	Runway
TAXI	Building name/number	Building name/number
Waiting For ThruFlight	Building name/number	Building name/number
BUSY	Building name/number	Building name/number
RESErved	Building name/number	Building name/number
UNAVailable	Diverted	Diverted

Table 3: Building types.

BUILDING		
AMMO	HOSPITAL	POL_TANKS
AMMO_OFF_BASE	INVENTORY	RADAR
ANY_BUILDING	KITCHEN	RADAR_POS
ATCB	LAUNCH_POS	RRR_GARAGE
CEMETRY	LCB	RSB
COMCON	LOCAL_AIR_SPACE	SCPS
COMM_BUNKER	LOG_BUNKER	SHELTER
DEFENCE_POS	OFF_BASE	SPBF
DISPERSAL	ON_THE_MOVE	STORAGE
FIHO	OTHER_BASE	TARGET_AIR_SPACE
GUNS_POS	POL	WAHALL
HANGAR		

4.3.13 AIRCRAFT BATTLE DAMAGE TOTE

AIRCRAFT BATTLE DAMAGE TOTE T(00/00:00)

STATUS	OBJECT	LOCATION	REP_TIME	REPAIR CREW

HOTKEY: [ALT]+[F9]

Aircraft Battle Damage Tote.

T(00/00:00):	system time in days, hours and minutes.
STATUS:	aircraft status: DAMAGED or KILLED.
OBJECT:	aircraft type and number. See table 1.
LOCATION:	location: building name and number. See table 2.
REP_TIME:	remaining repair time in days, hours and minutes or unknown (?).
REPAIR CREW:	MAINTENANCE- or ABDR-team currently working on aircraft.

N.B. In case of a KILLED aircraft the location, the repair time and the repair crew are redundant.

Table 1: Aircraft types.

AIRCRAFT TYPE
F16
F15

Table 2: Building types.

BUILDING		
AMMO	HOSPITAL	POL_TANKS
AMMO_OFF_BASE	INVENTORY	RADAR
ANY_BUILDING	KITCHEN	RADAR_POS
ATCB	LAUNCH_POS	RRR_GARAGE
CEMETRY	LCB	RSB
COMCON	LOCAL_AIR_SPACE	SCPS
COMM_BUNKER	LOG_BUNKER	SHELTER
DEFENCE_POS	OFF_BASE	SPBF
DISPERSAL	ON_THE_MOVE	STORAGE
FIHO	OTHER_BASE	TARGET_AIR_SPACE
GUNS_POS	POL	WAHALL
HANGAR		

4.3.14 AIRBASE BATTLE DAMAGE TOTE

AIRBASE BATTLE DAMAGE TOTE T(00/00:00)

STATUS	OBJECT	LOCATION	REP TIME	REPAIR CREW

HOTKEY: [CTRL]+[1-9]

Airbase Battle Damage Tote.

T(00/00:00):	system time in days, hours and minutes.
STATUS:	object status: DAMAGED.
OBJECT:	object type and number. See table 1.
LOCATION:	location: building name and number.
	See buildings in table 1 or coordinates: X, Y with: $1 \leq X,Y \leq 120$.
REP_TIME:	remaining repair time in days, hours and minutes, or unknown: (?).
REPAIR CREW:	team currently working on aircraft.

Table 1: Object types.

BUILDING		TRANSPORT	AIRDEFENCE
AMMO	LOG_BUNKER	BOWSER	GUN
AMMO_OFF_BASE	OFF_BASE	BULLDOZER	LAUNCHER
ANY_BUILDING	ON_THE_MOVE	CCA	RADAR
ATCB	OTHER_BASE	FIREFIGHTING	
CEMETRY	POL	POWER_GENERATOR	
COMCON	POL_TANKS	RRR	
COMM_BUNKER	RADAR	WEAPON_TRANSPORT	
DEFENCE_POS	RADAR_POS		
DISPERSAL	RRR_GARAGE		
FIHO	RSB		
GUNS_POS	SCPS		
HANGAR	SHELTER		
HOSPITAL	SPBF		
INVENTORY	STORAGE		
KITCHEN	TARGET_AIR_SPACE		
LAUNCH_POS	TAXIWAY		
LCB	WAHALL		
LOCAL_AIR_SPACE			

4.3.15 AIRBASE STATUS TOTE

AIRBASE-STATUS TOTE T(00/00:00)

GLOBAL DATA		METEO DATA	
Power indicator	: %	SunRise	:
Communications	: %	SunSet	:
X-Servicing status	:	Weather [LOCAL]	:
Fallout	:	[TARGET]	:
Decontaminate	:	Wind Direction/Force	:
DEFENCE DATA		**GRID DATA**	
Alert Status	:	Power 0 1 2 3 4 5 6 7 8 9	
Air Attack Warning	:	A	
Ground Raid Alarm	:	B	
Air Defence Active	:	C	
Border X-Authority	:	D	
Base C.A.P	:	E	
Q.R.A.	:	F	
		G	
		H	
		I	
		J	

Press [Spacebar] to see other grid-information, [Esc] to quit !

HOTKEY: [SHIFT]+[F9]

Airbase Status Tote:

T(00/00:00): system time in days, hours and minutes.

Global Data

Power Indicator: % of grids with power available.

Communications: % of grids with communications available.

X-servicing status: required cross-service stage ß capacity.

Fall-out: fall-out level: NONE, LIGHT, MEDIUM, HEAVY.

Decontaminate: indicates decontamination activities while moving from contaminated to toxic free areas.

Meteo Data

Sunrise: hours and minutes.

Sunset: hours and minutes.

Weather [Local]: weather in LOCAL AIRSPACE : BAD, AVERAGE, GOOD.

Weather [Target]: weather in TARGET AIRSPACE: BAD, AVERAGE, GOOD.

Wind Direction/Force: direction from where the wind blows.
windforce in Beaufort.

Defence Data

Alert Status:	See table 1.
Air Attack Warning:	available if radar is operational: WHITE, RED.
Ground Raid Alarm:	optional: WHITE, YELLOW, RED.
Airdefence active:	'Weapons Free' order given indicator. Enemy engagable but own aircraft at small risk.
Border X-Authority:	authority given indicator. (FBA will not fly without).
Base C.A.P.:	number of aircraft flying BaseCAP.
Q.R.A.:	number of aircraft flying Quick Reaction ALert or waiting for take-off authorization.

Grid Data

Power:	grid indicator:	. indicates: power * indicates: no power E indicates: emergency power
Communication:	grid indicator:	. indicates: communications * indicates: no communications
NBC-Operations:	grid indicator:	. indicates: MOPP1 protection * indicates: MOPP4 protection
NBC-Detection:	grid indicator:	. indicates: No Contamination * indicates: Contamination
Self Defence:	grid indicator:	. indicates: PS_Security only * indicates: All Personnel

Table 1: Alarm status.

Alert Status
NO-ALERT
COUNTER AGRESSION

4.3.16 DISTURBANCE TOTE

DISTURBANCE TOTE T(00/00:00)

DISTURBANCE	TYPE	LOCATION	BUILDING	REP-TIME	REP-CREW

HOTKEY: [F9]

Disturbance Tote:

T(00/00:00): system time in days, hours and minutes.
DISTURBANCE: disturbance name and number. See table 1.
TYPE: disturbance class: NONE, LIGHT, MEDIUM, HEAVY.
LOCATION: location: (X, Y): ($1 \leq X,Y \leq 120$), or area: set of grid names (See table 2).
BUILDING: building type of disturbance location.
REP-TIME: remaining repair time in days, hours and minutes, or unknown: (?).
REP-CREW: personnel name and number currently repairing. See table 3.

N.B. Disturbance tote is sorted based upon discovery time.

Table 1: Disturbance types.

DISTURBANCE	
BOMBLETS	FIRE
CHEM(LIQ)	INTRUDER
CHEM(VAP)	POWER_FAIL
COMM_FAIL	ROADBLOCK
CRATER	UXO
FALL_OUT	

Table 2: Grid names.

A0,	A1,	A2,	A3,	A4,	A5,	A6,	A7,	A8,	A9
B0,	B1,	B2,	B3,	B4,	B5,	B6,	B7,	B8,	B9
C0,	C1,	C2,	C3,	C4,	C5,	C6,	C7,	C8,	C9
D0,	D1,	D2,	D3,	D4,	D5,	D6,	D7,	D8,	D9
E0,	E1,	E2,	E3,	E4,	E5,	E6,	E7,	E8,	E9
F0,	F1,	F2,	F3,	F4,	F5,	F6,	F7,	F8,	F9
G0,	G1.	G2,	G3,	G4,	G5,	G6,	G7,	G8,	G9
H0,	H1,	H2,	H3,	H4,	H5,	H6,	H7,	H8,	H9
I0,	I1,	I2,	I3,	I4,	I5,	I6,	I7,	I8,	I9
J0,	J1,	J2,	J3,	J4,	J5,	J6,	J7,	J8,	J9

Table 3: Personnel types.

PERSONNEL		
ABDR	EOD	NBC_TEAM
AFU	EOR	PERSONNEL_OPS
ARMAMENT	FIRE_BRIGADE	PILOT
ASSEMBLY_TRANSPORT	FOOD_SUPPLY	RRR_TEAM
ATC	FUEL_OPS	SECURITY
BURIAL_SERVICE	GROUND_OPS	SHORAD
COMMUNICATION	LOADING_CREW	SUPPORT_SQUADRON
CREWCHIEF	LOG_OPS	TANK_CREW
DECONTAMINATION	MAINTENANCE	TECHNICAL_SUPPORT
DRIVER	MEDICS	WING_OPS

5 MAPS

5.1 Graphical Map Menu

Graphical display possibilities are included in the "Maps" item of the Main Menu.
The Graphical Map Menu contains the following menu items (hotkeys in brackets):

1. **Return to Main Menu:** Exit and return to main menu.
2. **(*) Set Graphic Defaults:** This item allows customization of the layout of the maps.
3. **Building Map:** [CTRL]+[F10]; Map with infrastructure, without personnel, equipment.
4. **D.C.C. Map:** [F10]; Disaster Control Centre map: same as building map with disaster control centre data;
5. **Defence Map:** [SHIFT]+[F10]; All infrastructure, personnel and equipment that is important for active defence. Intruders.
6. **Runway Map:** [ALT]+[F10]; Runway divided in airstrips with all known craters, uxos, roadblocks or other runwayblocking items.

N.B. The (*) marked items are secured with a password, you won't need these items for a regular playing session.

5.2 Notation

The following notation is used when describing the maps:

Select: selection, with following keys:

- keyboard:
  - [Home]: first item;
  - [End]: last item;
  - [UpArrow]: 1 item up;
  - [DownArrow]: 1 item down;
  - [PgUp]: 10 items up;
  - [PgDn]: 10 items down;
- mouse:
  - (Upmouse): items up;
  - (DownMouse): items down.

Select_location: selection of a location, with following keys:

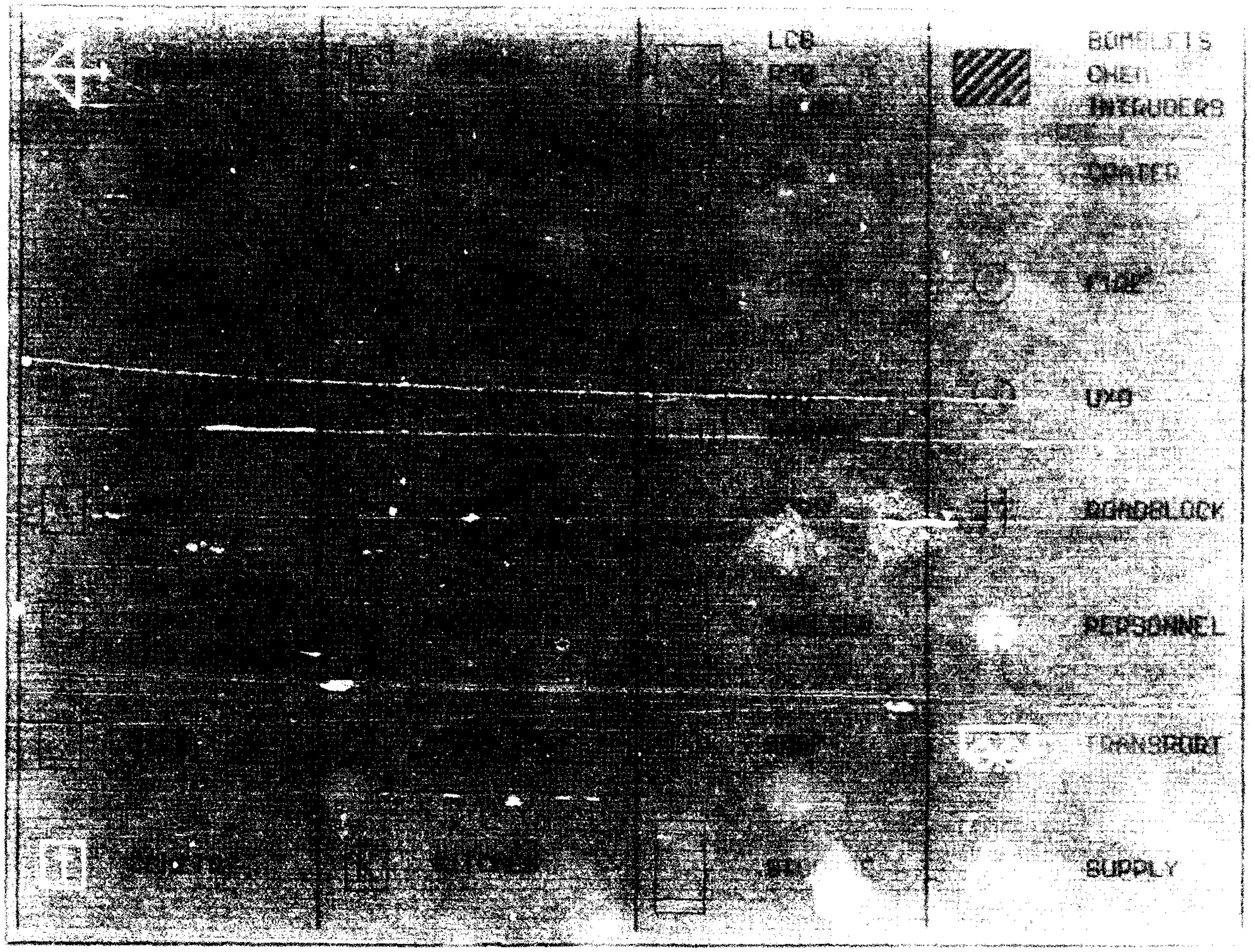
-	keyboard:	[UpArrow]:	move crosshair on map;
		[DownArrow]:	idem;
		[LeftArrow]:	idem;
		[RightArrow]:	idem;
		[+], [-]:	change step length;
		[Return]:	select current crosshair;
		[ESC]:	cancels selection;
-	mouse:	(Upmouse):	move crosshair on map;
		(DownMouse):	idem;
		(LeftMouse):	idem;
		(RightMouse):	idem;
		(LeftButton):	select current crosshair;
		(RightButton):	cancels selection.

5.3 Legend

The legend of the maps is presented in figure 5.1. For the sake of clearness, if two or more objects are displayed on the same location, then a dotted box is drawn around the objects. Table 5.1 gives a list of abbreviation definitions used in the legend.

Table 5.1: List of abbreviation definitions used in the legend of figure 5.1.

AMMO	Ammunition	POL	Petrol, eOil, Lubricants
ATCB	Air Traffic Control Bunker	RRR Garage	Rapid Runway Repair Garage
		RSB	Ready Storage Bunker
COMCON	Communication Control	SCPS	Survivable Collective Protection Shelter
COMM_BUNKER	Communications Bunker		
FIHO	Fire House	SPBF	Squadron Pilot Briefing Facility
LCB	Local Control Bunker	WAHALL	Weapon Assembly Hall
LOG_BUNKER	Logistics Bunker	UXO	Unexploded Object


CHEM
INTRUDERS
CRATER
UXO
ROADBLOCK
PERSONNEL
TRANSPORT
SUPPLY

5.4 Description of maps

Within a building map, a DCC map or a defence map the following menu items are available:

Map Menu:

Return to Map Menu: leave the map and go back to the map menu.

Select list: display all objects of the same type.

Example: **Select PS_CREWCHIEF**:
display all crewchiefs on map.
The "Select List" menuitem selects only the available objects, not the damaged and killed objects.

Select object: display one specific object on map.

Example: **Select PS_CREWCHIEF 1**:
display crewchief number one on map.

Select cluster: display which buildings belong to a given cluster.

Example: **Select_cluster CL_POL1**:
highlight all buildings belonging to cluster CL_POL1.

Information: display additional information on an object chosen by a select_location action.

Example: **Information (select_location)**:
show data on the location, building, and possible equipment and personnel in the building.

Zoom: zoom part of the map. Select upperleft and lowerright-corner by placing crosshair and select_location.

View all: redraw all of the map without any previous zoom.

Redraw: redraw map and keeps previous zoom. Remove previous selected objects and lists.

GridModes: Shows the submenu with possible grids. One grid is 12 * 12 coordinates. A coordinate is approximately 100 feet.

The "Grid Modes" submenu gives you the following menu items:

Blank:	clears the map of grids;
References:	displays the grids;
Self_Defence:	displays all grids where Self_Defence is active;
Comms_Failure:	displays all grids where communication is possible;
Power_Failure:	displays all grids without power;
NBC_Conditions:	displays all grids where NBC contamination is detected;
NBC_Operations:	displays all grids where NBC operations are being taken;
Patrol_Activity:	displays for all grids the number of personnel deployed for patrol.
Runway_Grid:	Displays a grid on the runways of 1 * 1 coordinates.

The damaged buildings or taxiways will be displayed lightgray and dashed on the maps.

The killed buildings or taxiways will be displayed darkblack and dashed on the maps.

5.4.1 Building Map

This map contains the complete airbase infrastructure

Figure 5.2 gives an example of a building map

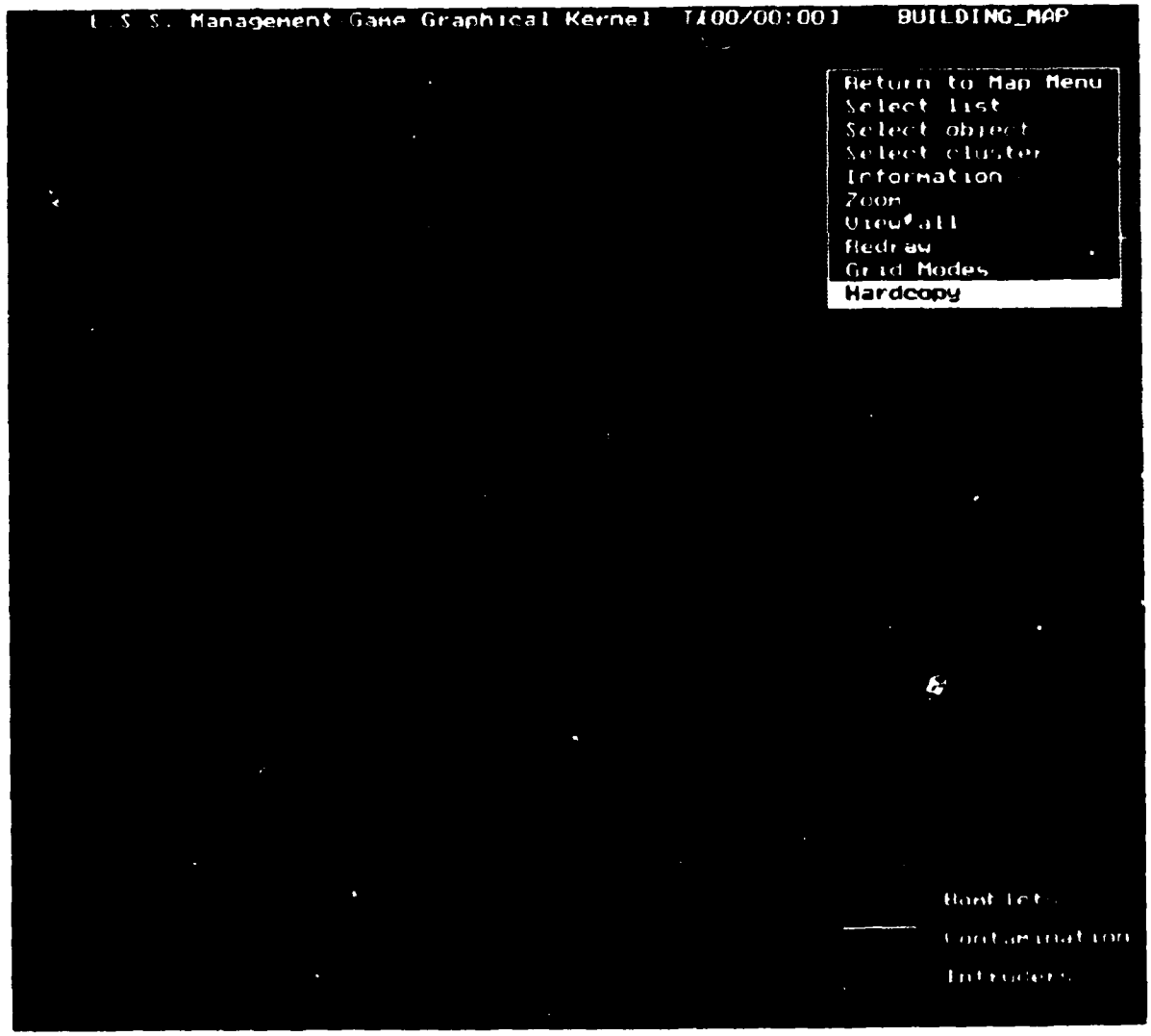
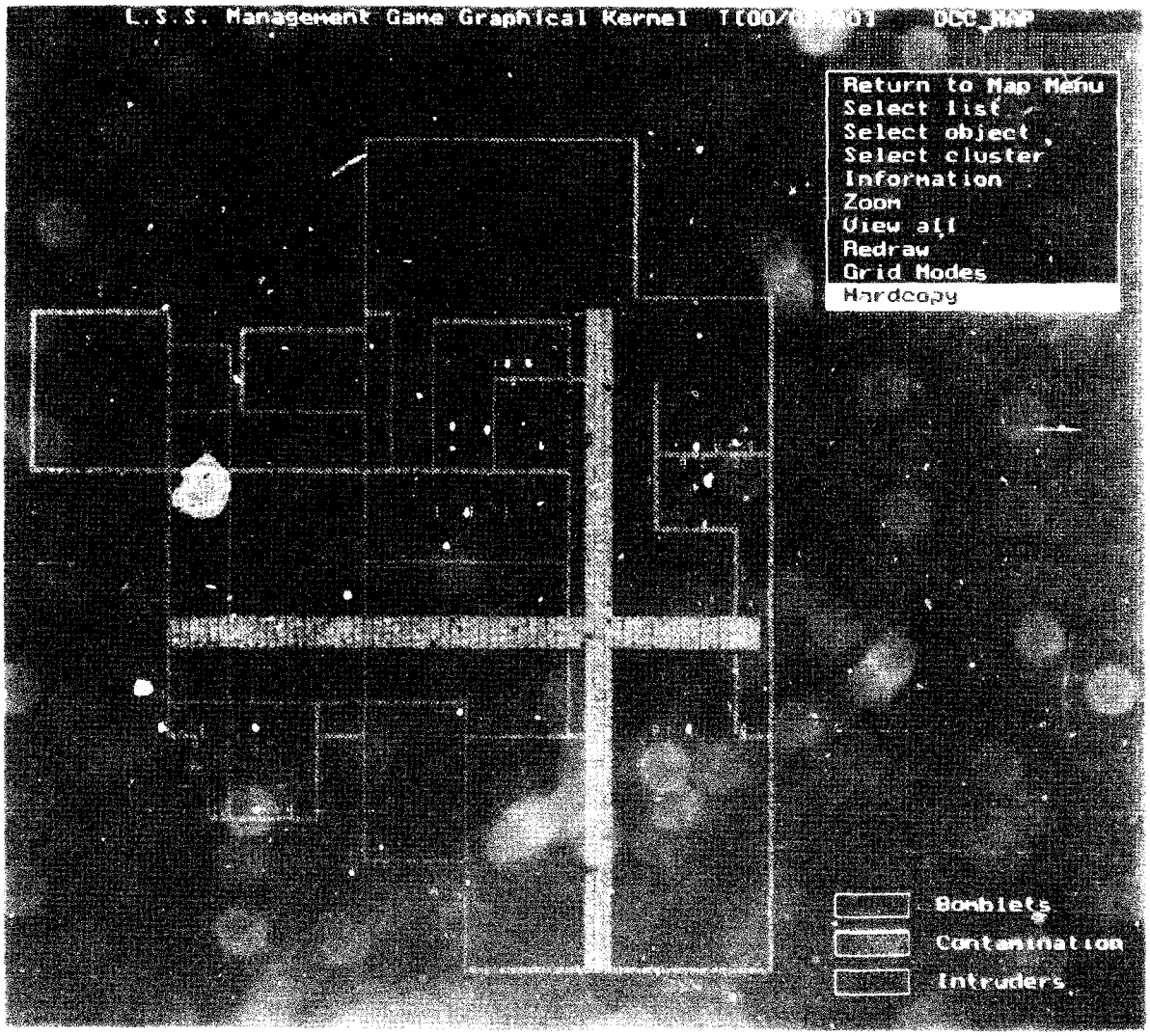
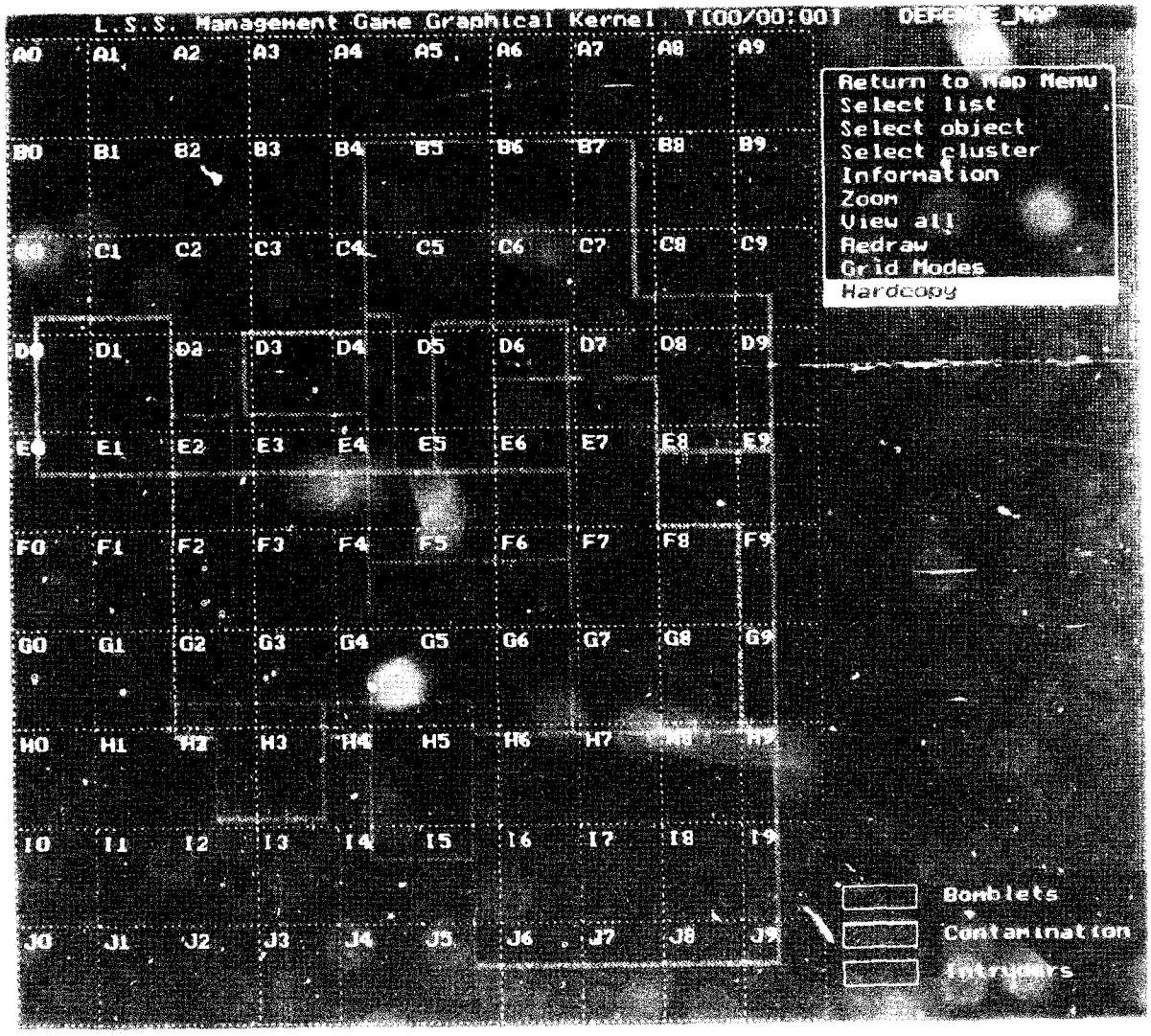


Fig. 5.2 Building map example

HOTKEY [CTRL]+[F10]


L.S.S. Management Game Graphical Kernel
DCC_MAP
Return to Map Menu
Select list
Select object
Select cluster
Information
Zoom
View all
Redraw
Grid Modes
Hardcopy
Bomblets
Contamination
Intruders


L.S.S. Management Game Graphical Kernel T[00/00:00]
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9
B0 B1 B2 B3 B4 B5 B6 B7 B8 B9
C0 C1 C2 C3 C4 C5 C6 C7 C8 C9
D0 D1 D2 D3 D4 D5 D6 D7 D8 D9
E0 E1 E2 E3 E4 E5 E6 E7 E8 E9
F0 F1 F2 F3 F4 F5 F6 F7 F8 F9
G0 G1 G2 G3 G4 G5 G6 G7 G8 G9
H0 H1 H2 H3 H4 H5 H6 H7 H8 H9
I0 I1 I2 I3 I4 I5 I6 I7 I8 I9
J0 J1 J2 J3 J4 J5 J6 J7 J8 J9
Return to Map Menu
Select list
Select object
Select cluster
Information
Zoom
View all
Redraw
Grid Modes
Hardcopy
Bomblets
Contamination
Intruders

5.4.4 Runway Map

On the runway map all runways are presented divided in parallel airstrips. Each airstrip is marked with blocking objects if these objects are known to the player.
Blocking objects can consist of craters, uxos, roadblocks (all shown in red), aircraft, transport and personnel (all shown in green). For each airstrip the longest operating strip in units of 100 feet is shown. Airstrip availability shown is not dependent on taxiway access.

Runway map menu:

Return To Map Menu:	exit and return to the Graphical Map Menu.
Edit disturbances:	select a blocking object on an airstrip and the system will recalculate the available striplength as if the blocking object was not there (the object is shown in blue). This is useful in planning crater repair or uxo removal.
Restore runway:	redraws all actual objects on the airstrips. Cancel all edit selections.
Information:	select part of an airstrip or a blocking object by placing the crosshair. Any information that is available on the object will be shown.

Figure 5.5 gives an example of a Runway map.

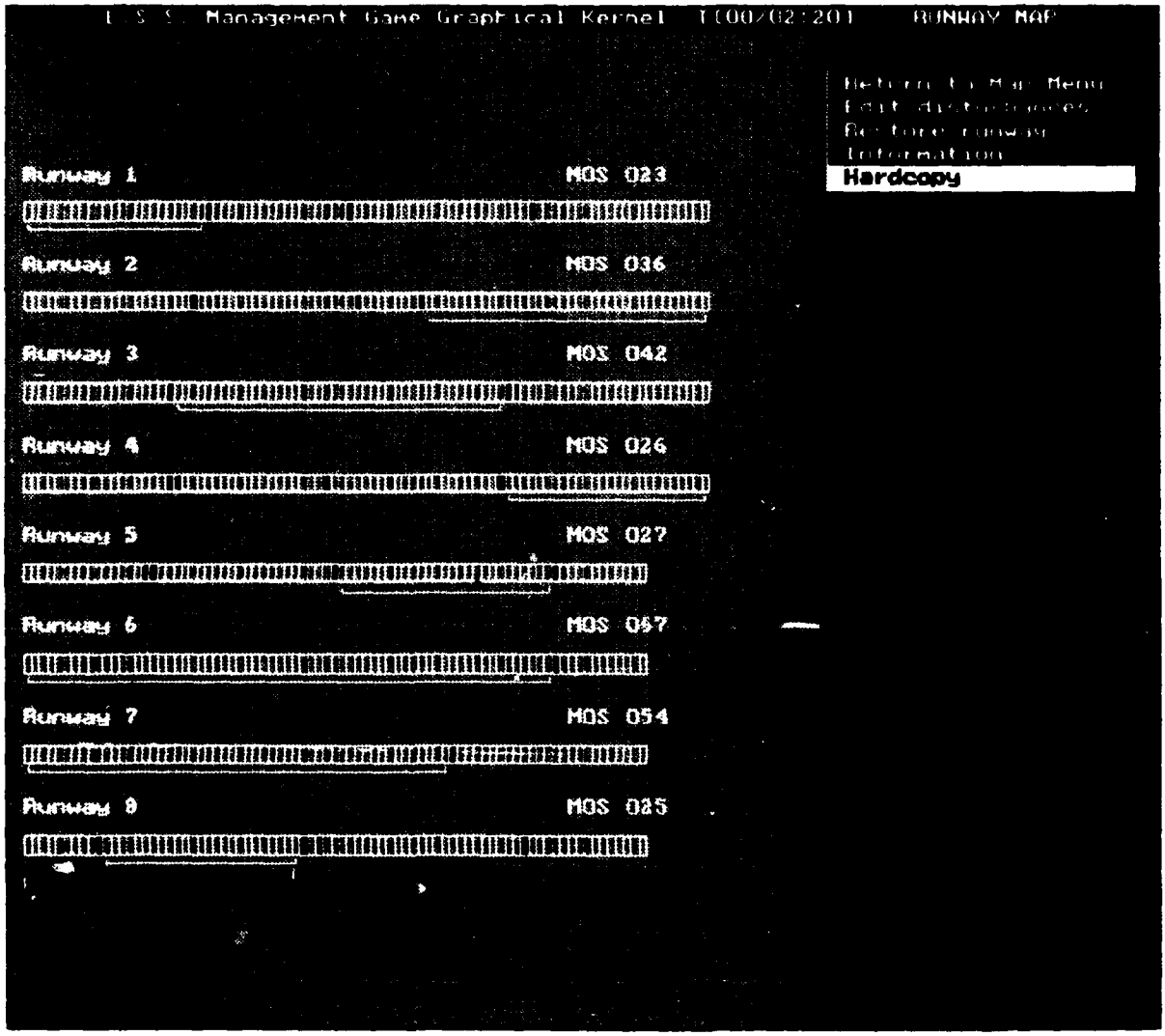
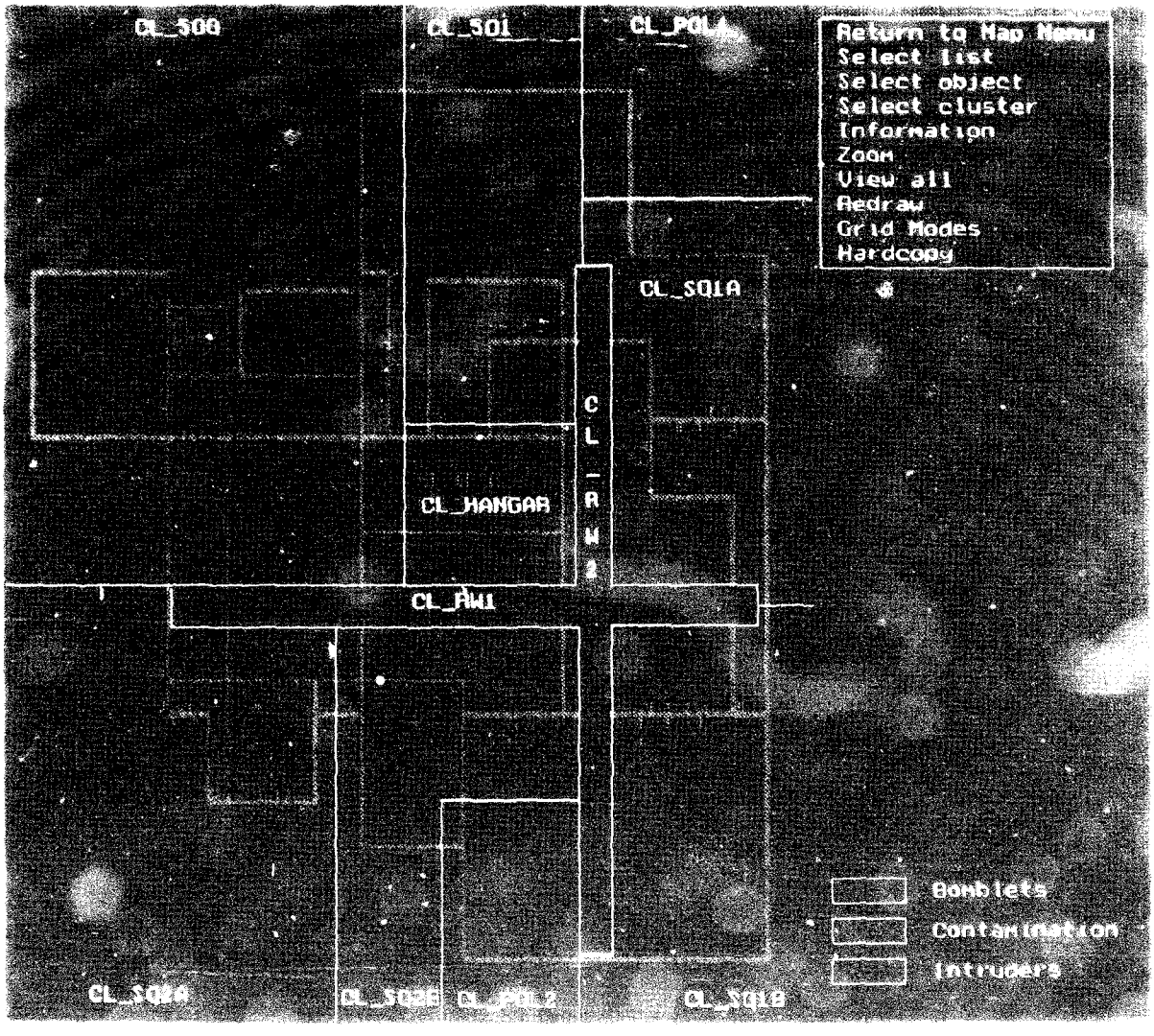


Fig. 5.5: Runway map example. HOTKEY: [ALT]+[F10]


CL_SQ0
CL_SQ1
CL_POL1
Return to Map Menu
Select list
Select object
Select cluster
Information
Zoom
View all
Redraw
Grid Modes
Hardcopy
CL_SQ1A
CL_HANGAR
CL_RW1
CL_AW1
Bomblets
Contamination
Intruders
CL_SQ2A
CL_SQ2B
CL_POL2
CL_SQ1B

6 ORDERS

6.1 Order menu

The item "Orders" of the Main Menu contains the possibilities the player has to give commands to the system (airbase organisation).
The Order Menu contains the following menu items:

1. **Return to Main Menu**: return to main menu with confirmation. If you do not save the order file your orders will not be carried out. This is a last possibility to cancel changes in the orderfile.
2. **Insert Order**: select an order from the table by using [UpArrow], [DownArrow], (Upmouse), (DownMouse) or a first letter. Activate with [Enter] or (LeftButton). Cancel with [ESC] or (RightButton). The order is inserted in the orderlist sequentially on time and priority.
3. **Edit Order**: select an order from the orderlist. (LeftButton) or [Enter] selects the highlighted order. Change order and order will be replaced in the orderlist.
4. **Delete Order**: select order from orderlist. (LeftButton) or [Enter] deletes the highlighted order.
5. **(*) Change Player**: change current player_ID. This item is secured with a password.
6. **(*) Change Authorization**: change the orderlist a player is allowed to use. This item is secured by a password.

Everytime you enter the Order Menu a backup of the current gaming situation is saved on harddisk.
Orders you are not allowed to give won't be in your ordermenu.

N.B. The (*) marked items are secured with a password, you won't need these items for a regular playing session.

6.2 Order Use

An order is defined by a parameterset. Two types of parameters can be distinguished: numeric and alphanumeric.

Numeric parametervalues:
For every parameter the minimum and maximum value is given. The default value is the minimum value. Changing the actual value can be done in two ways:

1. by typing another value ([Backspace] to correct a wrong keystroke);
2. by increasing or decreasing the default value with [UpArrow], [DownArrow], (UpMouse), (DownMouse).

A special numeric parameter is the date/time indicator. The indicator has the following syntax: days/hours:minutes (Example 00/00:00). A date/time indicator can be given a value by changing the default value using [UpArrow], [DownArrow], (UpMouse), (DownMouse) or by typing a new value as a six figure value (without / and :).
Example:

20	means	20	minutes,	denoted by	00/00:20.
200	means	2	hours,	denoted by	00/02:00.
2000	means	20	hours,	denoted by	00/20:00.
20000	means	2	days,	denoted by	02/00:00.

Alphanumeric parameter values:
A scrolling table with all applicable values is given in alphabetic order. The default value is highlighted, and can be changed by [UpArrow], [DownArrow], (Upmouse), (DownMouse). A value can be selected by mouse: (LeftButton) or keyboard: [Enter].
Pushing [F2] repeats the latest input.
A special alphanumeric parameter is an area selection: an area, containing a set of grid names, can be given by selecting the grids with cursorkeys or mouse and pushing [INS] to toggle inclusion or exclusion.

An order is inserted in a list of activations which will be performed by the system. The activations are executed by the system in strict order of activation time, secondly in order of priority, and finally in order of sequence of insertion.

The orders are focused on objects, which can be defined by means of groupnumber or individual objectnumber. In case of the use of a groupnumber, all objects defined by that specific groupnumber are adressed by the order.

6.3 Order overview

The following tables contain an overview of the orders.

Table 1: An alphabetical order overview.

ACTIVATE_OBJECT
ALLOCATE_OBJECT
ASSEMBLE
AUTHORIZE_RESOURCE
BASE_CAP_MISSION
CANCEL_AIRCRAFT
CANCEL_MISSION
CANCEL_PILOT
CHANGE_SHIFT
DAMAGE_ASSESSMENT
DEFEND_GROUND_AREA
DISPOSE_BOMBLETS
DISPOSE_UXO
DIVERT
EVACUATE
FIGHT_FIRE
FLY_MISSION
GLOBAL_RECCE
MODIFY_MISSION
MOVE_OBJECT
MOVE_SUPPLY
NBC_RECCE
PASSIVATE_OBJECT
PATROL_AREA
PLAN_MISSION
REDUCE_MISSION
REFUSE_AIRTASK
REINFORCEMENT
REMOVE_ROADBLOCK
REPAIR_AIRCRAFT
REPAIR_AIRDEFENCE
REPAIR_BUILDING
REPAIR_COMMUNICATION
REPAIR_RUNWAY
REPAIR_TAXIWAY
REPAIR_TRANSPORT
REROLE
RETURN_DIVERT
SCHEDULE_SHIFT
SET_AIR_ATTACK_WARNING
SET_GROUND_RAID_ALARM
SET_GROUPNR
SET_SHIFTNR
START_AIR_DEFENCE
START_DECONTAMINATION
START_NBC_OPS
START_SELF_DEFENCE
STOP_AIR_DEFENCE
STOP_DECONTAMINATION
STOP_NBC_OPS
STOP_SELF_DEFENCE
UNAUTHORIZE_RESOURCE
UNBLOCK_BUILDING
UXO_RECCE
VERTICAL_DISPERSAL

Table 2: An overview of orders, divided into categories.

Category	Orders
Aircraft preparation:	None (automatically simulated after execution of plan_mission_order).
Sortie Generation*:	Refuse_Airtask Plan_Mission Fly_Mission Cancel_Aircraft Cancel_Mission Cancel_Pilot Reduce_Mission Modify_Mission Base_Cap_Mission Divert Return_Divert Vertical_Dispersal
Support*:	*Assemble* Rerole
Active Defence*:	
- Ground Defence*:	Defend_Ground_Area Patrol_Area Start / Stop Self_Defence Set_Ground_Raid_Alarm
- Air defence*:	Start / Stop Air_Defence Set_Air_Attack_Warning
Passive Defence*:	
- Damage Avoidance*:	Start / Stop NBC_Ops Global_Recce NBC_Recce UXO_Recce Evacuate
- Damage Repair*:	Fight_fire Damage_Assessment Repair_Aircraft Repair_Airdefence Repair_Building Repair_Communication Dispose_Bomblets Dispose_Uxo Remove_Roadblock Repair_Runway (craters, roadblocks) Repair_Taxiway (craters) Repair_Transport Unblock_Building Start / Stop Decontamination

Table 2: An overview of orders, divided into categories. (continued)

Category	Orders
Passive Defence*	
- Reconstitution*:	Reinforcement
Management (Allocation of personnel/equipment):	Activate_Object Passivate_Object Change_Shift Schedule_Shift Allocate_Object Authorize_Object Unauthorize_Object Move_Object Move_Supply Set_Groupnr Set_Shiftnr

* Before orders in these categories can be executed it is sometimes necessary, to first execute an order from the "Management" category, to take care that personnel and supplies that are required by these orders, are available.

6.4 Tables

The following tables contain an overview of all possible parameter values:

Table 3a: Object overview.

AIRCRAFT
AC_F16
AC_F15

Table 3b: Object overview.

AIRDEFENCE
AD_GUN
AD_LAUNCHER
AD_RADAR

Table 3c: Object overview.

AIRSTRIP
BD_RUNWAY

Table 3d: Object overview.

BUILDING		
BD_AMMO	BD_HOSPITAL	BD_POL_TANKS
BD_AMMO_OFFBASE	BD_INVENTORY	BD_RADAR
BD_ANY_BUILDING	BD_KITCHEN	BD_RADAR_POS
BD_ATCB	BD_LAUNCH_POS	BD_RRR_GARAGE
BD_CEMETRY	BD_LCB	BD_RSB
BD_COMCON	BD_LOCAL_AIR_SPACE	BD_SCPS
BD_COMM_BUNKER	BD_LOG_BUNKER	BD_SHELTER
BD_DEFENCE_POS	BD_OFF_BASE	BD_SPBF
BD_DISPERSAL	BD_ON_THE_MOVE	BD_STORAGE
BD_FIHO	BD_OTHER_BASE	BD_TARGET_AIR_SPACE
BD_GUNS_POS	BD_POL	BD_WAHALL
BD_HANGAR		

Table 3e: Object overview.

DISTURBANCE	
DB_BOMBLETS	DB_FIRE
DB_CHEM(LIQ)	DB_INTRUDER
DB_CHEM(VAP)	DB_POWER_FAIL
DB_COMM_FAIL	DB_ROADBLOCK
DB_CRATER	DB_UXO
DB_FALL_OUT	

Table 3f: Object overview.

PERSONNEL	
PS_ABDR	PS_GROUND_OPS
PS_AFU	PS_LOADING_CREW
PS_ARMAMENT	PS_LOG_OPS
PS_ASSEMBLY_TRANSPORT	PS_MAINTENANCE
PS_ATC	PS_MEDICS
PS_BURIAL_SERVICE	PS_NBC_TEAM
PS_COMMUNICATION	PS_PERSONNEL_OPS
PS_CREWCHIEF	PS_PILOT
PS_DECONTAMINATION	PS_RRR_TEAM
PS_DRIVER	PS_SECURITY
PS_EOD	PS_SHORAD
PS_EOR	PS_SUPPORT_SQUADRON
PS_FIRE_BRIGADE	PS_TANK_CREW
PS_FOOD_SUPPLY	PS_TECHNICAL_SUPPORT
PS_FUEL_OPS	PS_WING_OPS

Table 3g: Object overview.

SUPPLY	
SU_AMMO (AC)	SU_MATTING
SU_AMMO (AD)	SU_MEDICAL
SU_BOMBS	SU_MISSILES (AC)
SU_ECM_POD	SU_MISSILES (AD)
SU_FIREFIGHT	SU_NBC
SU_FOOD	SU_PAVEWAY
SU_FUEL	SU_TANKS
SU_LRU	

Table 3h: Object overview.

TAXIWAY
BD_TAXIWAY

Table 3i: Object overview.

TRANSPORT	
TR_BOWSER	TR_POWER_GENERATOR
TR_BULLDOZER	TR_RRR
TR_CCA	TR_WEAPON_TRANSPORT
TR_FIREFIGHTING	

Table 4: Resource type overview.

AIRCRAFT
AIRDEFENCE
PERSONNEL
SUPPLY
TRANSPORT

Table 5: Alert status overview.

NONE
COUNTER AGRESSION

Table 6. Cluster overview.

CLUSTERS	
CL_500	CL_SQ2B
CL_501	CL_POL1
CL_HANG	CL_POL2
CL_SQ1A	CL_RW1
CL_SQ1B	CL_RW2
CL_SQ2A	CL_ENVI

Table 7: Grid names overview.

A0,	A1,	A2,	A3,	A4,	A5,	A6,	A7,	A8,	A9
B0,	B1,	B2,	B3,	B4,	B5,	B6,	B7,	B8,	B9
C0,	C1,	C2,	C3,	C4,	C5,	C6,	C7,	C8,	C9
D0,	D1,	D2,	D3,	D4,	D5,	D6,	D7,	D8,	D9
E0,	E1,	E2,	E3,	E4,	E5,	E6,	E7,	E8,	E9
F0,	F1,	F2,	F3,	F4,	F5,	F6,	F7,	F8,	F9
G0,	G1,	G2,	G3,	G4,	G5,	G6,	G7,	G8,	G9
H0,	H1,	H2,	H3,	H4,	H5,	H6,	H7,	H8,	H9
I0,	I1,	I2,	I3,	I4,	I5,	I6,	I7,	I8,	I9
J0,	J1,	J2,	J3,	J4,	J5,	J6,	J7,	J8,	J9

Table 8: Personnel Categories overview.

TASK	CATEGORY
PS_ABDR	REPLACABLE
PS_AFU	SPECIAL
PS_ARMAMENT	SPECIAL
PS_ASSEMBLY_TRANSPORT	SIMPLE
PS_ATC	SPECIAL
PS_BURIAL_SERVICE	SIMPLE
PS_COMMUNICATION	SPECIAL
PS_CREWCHIEF	SPECIAL
PS_DECONTAMINATION	SIMPLE
PS_DRIVER	REPLACABLE
PS_EOD	SPECIAL
PS_EOR	REPLACABLE
PS_FIRE_BRIGADE	SPECIAL
PS_FOOD_SUPPLY	SIMPLE
PS_FUEL_OPS	REPLACABLE
PS_GROUND_OPS	SPECIAL
PS_LOADING_CREW	REPLACABLE
PS_LOG_OPS	SPECIAL
PS_MAINTENANCE	SIMPLE
PS_MEDICS	SPECIAL
PS_NBC_TEAM	SPECIAL
PS_PERSONNEL_OPS	SPECIAL
PS_PILOT	SPECIAL
PS_RRR_TEAM	SPECIAL
PS_SECURITY	SIMPLE
PS_SHORAD	REPLACABLE
PS_SUPPORT_SQUADRON	SIMPLE
PS_TANK_CREW	REPLACABLE
PS_TECHNICAL_SUPPORT	SPECIAL
PS_WING_OPS	SPECIAL

Definition:

SIMPLE: this task can be performed by any personnel.

REPLACABLE: this task can be performed by personnel with the skills needed (means they have this task as primary, secondary or tertiary skill). Otherwise it will take twice as long.

SPECIAL: this task can be performed by personnel that either have this task as primary task, or personnel having this task as secondary or tertiary task, but taking twice as long.

6.5 Description of orders

ACTIVATE_OBJECT

Description		: *makes objects taskable (on duty).*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority (1=high, 30=low).*
Order type		: *order type:* GROUP_BASED: *refers to groupnumber* OBJECT_BASED: *selects individual.*
Group number		: *idem.*
Object name		: *idem, see table 3a-3i.*
Object number		: *idem.*
Requirements		: *none.*

ALLOCATE_OBJECT

Description		: *allocates an object to a task.* *If more teams are available for a task, the teams are selected for performing the task according their skills.*
Activation time	**[DD/HH:MM]**	: activation time in days, hours and minutes.
Priority	**[1..30]**	: priority: (1=high, 30=low).
Order type		: order type: GROUP_BASED: refers to groupnumber OBJECT_BASED: selects individual.
Group number		: idem.
Object name		: *idem, see table 3a-3i.*
Object number		: *idem.*
New task		: *task to which the object is allocated, see table 8.*
Requirements		: *none.*

ASSEMBLE

Description		: *assembles unassembled supplies to assembled supplies.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Supply to assemble		: **(SU)**_supply *to be assembled, see table 3a-3i.*
Amount		: *amount of supply to be assembled.*
Building		: **(BD)**_name, *building to store assembled units, see table 3a-3i.*
Number		: *number of storage building.*
Requirements		: *PS_Assembly_Transport*, BD_Wahall.

AUTHORIZE_RESOURCE

Description		: *makes an unauthorized (reserved) object available for tasking.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Order type		: *order type:* GROUP_BASED: *refers to groupnumber* OBJECT_BASED: *selects individual.*
Group number		: *idem.*
Object		: *idem, see table 3a-3i.*
Number		: *idem.*
Requirements		: *none.*

BASE_CAP_MISSION

Description		: *plans a base combat air patrol, that contributes to airdefence.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Mission number		: *idem (starting at nr. 300).*
Aircraft type		: (AC)_aircraft type, *see table 3a-3i*
Number of aircraft	**[1..16]**	: *number of aircraft in mission.*
Requirements		: *none.*

CANCEL_AIRCRAFT

Description		: *cancels one aircraft from a mission.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Aircraft		: (AC)_aircraft type, see table 3a-3i
Number		: *idem.*
Replace		: *Should the aircraft be replaced by another aircraft?*
Requirements		: *Mission in planning or in preparation.*

CANCEL_MISSION

Description		: *cancels a mission in planning or in preparation. An airborne mission, that is outbound, will return to base immediately.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Mission nr		: *idem.*
Requirements		: *Mission in planning, in preparation, ready or outbound.*

CANCEL_PILOT

Description		: *cancels one pilot from a mission.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Pilot nr		: *idem.*
Replace		: *Should the pilot be replaced by another pilot?*
Requirements		: *Mission in planning or in preparation.*

CHANGE_SHIFT

Description		: *initiates shift change.* *Personnel whose shift number equals start work shift number becomes on duty and personnel whose shift number equals stop work shift number becomes off duty.* *Most of the personnel first finish their tasks before they become off duty.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Start work Shift nr	**[1..10]**	: *shift number of shift to start.*
Stop work Shift nr	**[1..10]**	: *shift number of shift to stop.*
Requirements		: see schedule shift

DAMAGE_ASSESSMENT

Description		: *assessment of the time, required to repair a damaged aircraft.* *If repair time is less then 4 hours the ABDR team will repair the aircraft, else a Maintenance team has to be sent to the aircraft by order Repair_Aircraft.*
Activation time	**[DD/HH:MM]**	. *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Aircraft		: **(AC)**_*aircraft type, see table 3a-3i.*
Nr		: *idem.*
Requirements		: *PS_ABDR.*

DEFEND_GROUND_AREA

Description		: *defends base area with* PS_*Security. Only PS_Security available in the selected area will be used. By replacing personnel to that area the ground defence effectiveness will increase.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Area		: *area to defend by gridnames, see table 7.*
Requirements		: *PS_Security.*

DISPOSE_BOMBLETS

Description		: *clears area of bomblets.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Area		: *area to clear by gridnames: see table 7.*
Requirements		: *PS_EOD (more experienced) or PS_EOR.*

DISPOSE_UXO

Description		: *removes UXO.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Location X	**[1..120]**	: *x coordinate of UXO location*
Y	**[1..120]**	: *y coordinate of UXO location.*
Requirements		: *PS_EOD (more experienced) or PS_EOR.*

DIVERT

Description		: *diverts a mission to another base.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Mission number	**[0..999]**	: *idem.*
Requirements		: *Inbound_Mission.*

EVACUATE

Description		: *evacuates all personnel from a building and/or area to another building.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
From evacuated building		: **(BD)**_building name,*see table 3a-3i*
From evacuated area		: grid_name *to evacuate,see table 7.*
To building		: **(BD)**_building name *to evacuate to, see table 3a-3i.*
Requirements		: *A Building (space available). If there is no area to evacuate personnel from then the personnel from the building will be evacuated. Else only the personnel from the area will be evacuated.*

FIGHT_FIRE

Description		: *fights fires in buildings.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
X coordinate	**[1..120]**	: *x coordinate of fire location.*
Y coordinate	**[1..120]**	: *y coordinate of fire location.*
Requirements		: *PS_Driver, PS_Firefight, SU_Firefight, TR_Firefight.*

FLY_MISSION

Description		: *authorizes start up of a mission, that requires take-off authority, (see airtask overview tote).*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Mission Nr	**[0..999]**	: *idem.*
Requirements		: *Prepared_Mission.*

GLOBAL_RECCE

Description		: *performs a global recce by all personnel available in the selected area.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Area		: *area for which Global recce is initiated.* *See table 7.*
Requirements		: *Any_Personnel.*

MODIFY-MISSION

Description		: *changes the time over target of the selected mission.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Mission nr	**[0...999]**	: *idem.*
New tot	**[DD/HH:MM]**	: *time over target (T.O.T.) in days, hours and minutes.*
Requirements		: *mission status is start-up.*

MOVE_OBJECT

Description		: *moves an object to another building.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Order type		: *order type:* GROUP_BASED: *refers to groupnumber* OBJECT_BASED: *selects individual*
Group number		: *idem.*
Object		: *idem, see table 3a-3i.*
Number		: *idem.*
New building		: **(BD)**_building *to which the object is moved, see table 3a-3i.*
Number		: *idem.*
Requirements		: *none.*

MOVE_SUPPLY

Description		: *moves an amount of supply from one building to another.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Supply		: **(SU)**_supply type, *see table 3a-3i.*
Available		: *amount available supply to replace*
Unavailable		: *amount unavailable supply to replace.*
From	**building**	: **(BD)**_building, *old building type, see table 3a-3i*
	number	: *old building number.*
To	**building**	: **(BD)**_building, *new building type, see table 3a-3i.*
	number	: *new building number.*
Requirements		: *none.*

NBC_RECCE

Description		: *initiates NBC recce.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Area		: *area for which NBC recce is initiated. See table 7.*
Requirements		: *PS_NBC.*

PASSIVATE_OBJECT

Description		: *makes an object off-duty.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Order type		: *order type:* GROUP_BASED: *refers to groupnumber* OBJECT_BASED: *selects individual*
Group number		: *idem.*
Object name		: *idem, see table 3a-3i.*
Requirements		: *none.*

PATROL_AREA

Description		: *initiates security patrol for a specific area. This increases the probability of detecting intruders*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Nr of rounds		: *number of repeated rounds.*
Area		: *patrol area in grids, see table 7.*
Requirements		: *PS_Security.*

PLAN_MISSION

Description : *plans a mission, by turning a given airtask into a mission.*

Activation time **[DD/HH:MM]** : *activation time in days, hours and minutes.*

Priority **[1..30]** : *priority: (1=high, 30=low).*

Mission number **[1..999]** : *idem.*

Aircraft : *aircraft of the mission*.*

Pilot : *pilots of the mission*.*

Requirements : *airtask.*

(Aircraft requirements:

Role	*Ammunition*	*Bombs*	*Paveway*	*Missiles*	*Tanks*
IDF:	*1*	*-*	*-*	*4*	*1*
FBA1:	*1*	*2*	*-*	*2*	*2*
FBA2:	*1*	*-*	*2*	*2*	*2*

**The numbers can be selected from a list or with [Esc] they will be generated automatically. The system will take into account the configuration and capabilities of the available aircraft and those required by the mission.)*

REDUCE_MISSION

Description : *reduces the number of AC in a mission. The mission will be flown immediately with the ready AC/PI. The AC/PI which are still in preparation will be cancelled.*

Activation time **[DD/HH:MM]** : *activation time in days, hours and minutes.*

Priority **[1..30]** : *priority: (1=high, 30=low).*

Mission number **[1...999]** : *idem.*

Requirements : *2 or more A/C should be ready, else the entire mission is cancelled.*

REFUSE_AIRTASK

Description		: *refuses an airtaks, by returning it to CAOC. The mission will be placed in the mission compieted tote with the status refused.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Mission number	**[1...999]**	: *idem.*
Requirements		: *none.*

REINFORCEMENT

Description		: *requests for reinforcement.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Object type		: *idem, see table 3a-3i.*
Number of objects		: *idem.*
Requirements		: *none.*

REMOVE_ROADBLOCK

Description		: *removes a roadblock from the runway.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Location X	**[1..120]**	: *x coordinate of location*
Y	**[1..120]**	: *y coordinate of location*
Requirements		: *PS-maintenance* *PS-driver* *TR-bulldozer*

REPAIR_AIRCRAFT

Description		: *repairs an aircraft.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Aircraft		: (AC)_aircraft type, *see table 3a-3i.*
Number		: *idem.*
Requirements		: *PS_ABDR (Rep. time < 240),* *PS_Maintenance (Rep. time > 240),* *BD_Hangar, SU_LRU, (Power).*

REPAIR_AIRDEFENCE

Description		: *repairs a damaged airdefence system.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Airdefence system		: **(AD)**_airdefence system, *see table 3a-3i.*
Number		: *idem.*
Requirements		: *PS_SHORAD (Gun),* *PS_AFU (Launcher, Radar).*

REPAIR_BUILDING

Description		: *repairs a building*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Building		: *(BD) Building name, see tables 3a-3i.*
Number		: *idem*
Requirements		: *PS_Tech_Support.*

REPAIR_COMMUNICATION

Description		: *repairs communication failures in an area.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Area		: *repair area, see table 7.*
Requirements		: *PS_Communication.*

REPAIR_RUNWAY

Description		: *repairs a runway (repair of craters).*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Location X	**[1..120]**	: *x coordinate of location.*
Y	**[1..120]**	: *y coordinate of location.*
Requirements		: *PS_RRR_Team, PS_Driver, SU_Matting, TR_Bulldozer, TR_RRR.*

REPAIR_TAXIWAY

Description		: *repairs a taxiway (repair of craters)*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Location X	**[1..120]**	: *x coordinate of location.*
Y	**[1..120]**	: *y coordinate of location.*
Requirements		: *PS_RRR_Team, PS_Driver, SU_Matting, TR_Bulldozer, TR_RRR.*

REPAIR_TRANSPORT

Description		: *repairs a transport resource.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Transport		: **(TR)**_transport type, *see table 3a-3i.*
Number		: *idem.*
Requirements		: *BD_Logistic_Bunker (space available, unblocked), a Building, PS_Maintenance.*

REROLE

Description		: *reconfigures an aircraft (changes the weapon configuration).*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Aircraft type		: **(AC)**_aircraft type, *see table 3a-3i.*
Number		: *idem.*
New weapon configuration		: *idem:* CLEAN, FBA1, FBA2, IDF.
Requirements		: *PS_Armament, SU_Ammunition, SU_Bombs, SU_Missiles, SU_Paveway, SU_ECM_Pod, A Building (Not Blocked).*

RETURN_DIVERT

Description		: *orders a diverted mission to return to base.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Diverted mission Nr		: *idem.*
Requirements		: *Diverted_Mission.*

SCHEDULE_SHIFT

Description		: *defines a shift.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Shift number	**[1..10]**	: *number of the shift to be defined.*
Start	**[DD/HH:MM]**	: *first start time of the shift in days, hours and minutes.*
Duration	**[DD/HH:MM]**	: *duration of the shift in days, hours and minutes.*
Frequency	**[DD/HH:MM]**	: *time interval (in days, hours and minutes) between the start of the shift and the next start of the shift.*
Requirements		: *none.*

SET_AIR_ATTACK_WARNING

Description		: *sets an air attack warning.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Alarm status		: *idem,* WHITE, RED.
Requirements		: *none.*

If the warning is red:
- the airdefence is active,
- no flying operations are permitted.
If the warning is white:
- the airdefence is not active,
- flying operations can continue.

SET_GROUND_RAID_ALARM

Description		: *sets a ground raid alarm warning.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Alarm status		: *idem,* WHITE, YELLOW, RED.
Requirements		: *none.*

SET_GROUPNR

Description		: *assigns a groupnumber to an object or group of objects.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
New GroupNr		: *idem.*
Order type		: *order type:* GROUP_BASED: *refers to groupnumber* OBJECT_BASED: *selects individual*
Old GroupNr		: *idem.*
Object name		: *idem, see table 3a-3i.*
Object number		: *idem.*
Requirements		: *none.*

SET_SHIFTNR

Description		: *assigns a shiftnumber to an object or group of objects.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Shift number	**[1..10]**	: *shiftnumber to be assigned.*
Order type		: *order type:* GROUP_BASED: *refers to groupnumber* OBJECT_BASED: *selects individual*
Group number		: *idem.*
Object name		: *idem, see table 3a-3i.*
Object number		: *idem.*
Requirements		: *none.*

START_AIR_DEFENCE

Description		: *activates air defence.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Requirements		: *PS_Ground_Ops.*

START_DECONTAMINATION

Description		: *activates decontamination while travelling from a contaminated area to a toxic free area. Decontamination will only be performed when evacuating a contaminated area.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Requirements		: *PS_Decontamination, PS_Ground_Ops, TR_CCA.*

START_NBC_OPS

Description		: *activates MOPP-4 IPE use. In the selected area the processes will be delayed.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Area		: *MOPP-4 area, see table 7.*
Requirements		: *PS_Ground_Ops.*

START_SELF_DEFENCE

Description		: *activates defence of working area. Self defence increases the probability of detecting intruders, but delays the processes in that area.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Area		: *self defence area, see table 7.*
Requirements		: *PS_Ground_Ops.*

STOP_AIR_DEFENCE

Description		: *de-activates air defence.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Requirements		: *PS_Ground_Ops.*

STOP_DECONTAMINATION

Description		: *de-activates decontamination operations.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Requirements		: *PS_Ground_Ops, PS_Decontamination.*

STOP_NBC_OPS

Description		: *de-activates MOPP-4 to MOPP-0.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Area		: *MOPP-0 area, see table 7.*
Requirements		: *PS_Ground_Ops.*

STOP_SELF_DEFENCE

Description		: *de-activates defence of working* area.
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Area		: *de-activation area, see table 7.*
Requirements		: *PS_Ground_Ops.*

UNAUTHORIZE_RESOURCE

Description		: *reserves resources till later use.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Order type		: *order type:* GROUP_BASED: *refers to groupnumber* OBJECT_BASED: *selects individual*
Group number		: *idem.*
Object		: *idem, see table 3a-3i.*
Number		: *idem.*
Requirements		: *none.*

UNBLOCK_BUILDING

Description		: *allows access to a damaged building.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Building		: **(BD)**_Building type,*see table 3a-3i*
Number		: *idem.*
Requirements		: *PS_Technical_Support.*

UXO_RECCE

Description		: *initiates UXO recce.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Area		: *recce area, see table 7.*
		Special keys in grid selection: *[I]: selects the complement of the already selected grids.* *[A]: selects the grids of the runway.*
Requirements		: *PS_EOR.*

VERTICAL_DISPERSAL

Description		: *tasks all available aircraft to be airborne as soon as possible.*
Activation time	**[DD/HH:MM]**	: *activation time in days, hours and minutes.*
Priority	**[1..30]**	: *priority: (1=high, 30=low).*
Starting Mission number		: *idem.*
Requirements		: *none.*

7 OBJECTS

7.1 Introduction

The following objects are described:

- Aircraft;
- Airdefence;
- Airstrip;
- Building;
- Personnel;
- Supply;
- Taxiway;
- Transport.

Each object description contains two parts:

1. a parameterlist with an overview of possible values:
2. the initially chosen values of the most important parameters of every object type.

7.2 Descriptions

7.2.1 Aircraft

Aircraft_ID:	**AC**_*aircraft type. See table 1.*	[ ] *aircraft number.*	**ID_code:**	*serialnumber of aircraft_ID within general list.*
List_ID:	**AC**_*task of aircraft. See table 1.*	[ ] *list type. Table 2.*	**List_code:**	*serialnumber of list_ID within general list.*

Target_type:	*Protection type when attacked:* OPEN, SHELTERED, HARDENED	**Group_number:**	*groupnumber, free available tag, for use within orders.*
Condition:	$0 \leq$ *condition* $\leq 100\%$	**Status:**	*Status of the aircraft.*
Fuel_conf.:	*fuel configuration:* INTERNAL, CENTER, WING.	**Hanged:**	*wingtanks present indicator.*
Weap_conf.:	*weapon configuration* CLEAN, FBA1, FBA2, IDF.	**Fuelled:**	*fuelling ready indicator.*
Task:	*mission reference.*	**Loaded:**	*weapons loaded indicator.*
Space_needed:	*space needed in buildings.*	**ECM:**	*ECM_pod present indicator.*
Location_at:	*location of aircraft, building_ID and number.*	**AWX:**	*All Weather Capable indicator.*
Used_by:	*process where aircraft is used.*		
Comments:	*any comments.*		

Table 1: Overview of aircraft types.

AC_F16

Table 2: Overview of list types.

ON
OFF
DAMAGED
KILLED
RESERVED
REMOVED

Table 3: Overview of the parameter values.

Aircraft_ID:	Target_type:	Space_needed:	Location_at:	Used_by:
AC_F16	SHELTERED	500	BD_SHELTER or BD_HANGAR	TASKING

Table 4: Overview of aircraft status.

SERVICEABLE
TASKED
IN_PREPARATION
READY
START_UP
TAXI
OUTBOUND
INBOUND
LANDED
TAXI
WAITING FOR THRUFLIGHT
BUSY
DAMAGED
KILLED
RESERVED
UNAVAILABLE

7.2.2 Airdefence

Airdefence_ID:	**AD**_*type of airdefence system. See table 1*	[ ] *number.*	**ID_code:**	*serialnumber of airdefence_ID in general list.*
List_ID:	**AD**_*task of airdefence* system. *See table 1.*	[ ] *list type. Table 2.*	**List_code:**	*serialnumber of list_ID in general list.*
Group_number:	*groupnumber, free available tag, for use within orders.*		**Space_needed:**	*space needed in buildings.*
Target_type:	*Protection type when attacked:* OPEN, SHELTERED, HARDENED.		**Condition:**	$0 \leq$ *condition* $\leq 100\%$
Location_at:	*location of airdefence system, building_ID and number.*		**Status:**	*Status of the airdefence system.*
Used_by:	*process where system is used.*			
Comments:	*any comments.*			

Table 1: Overview of airdefence types.

AD_GUN
AD_LAUNCHER
AD_RADAR

Table 2: Overview of list types.

ON
OFF
DAMAGED
KILLED
RESERVED
REMOVED

Table 3: Overview of the parameter values.

Aircraft_ID:	Target_ type:	Space_ needed:	Location_at:	Used_by:
AD_GUN	OPEN	300	BD_GUNS_POS	DEFEND_AIR_SPACE
AD_LAUNCHER	OPEN	300	BD_LAUNCHER_POS	DEFEND_AIR_SPACE
AD_RADAR	OPEN	300	BD_RADAR_POS	DEFEND_AIR_SPACE

Table 4: Overview of airdefence system status.

AVAILABLE
BUSY
DAMAGED
KILLED
RESERVED
UNAVAILABLE

7.2.3 Airstrip

Airstrip_ID:	**RD_RUNWAY**	[ ] *airstrip-number.*	**ID_code:**	*serialnumber of airstrip_ID in general list.*
List_ID:	**RD_RUNWAY**	[ ] *list type. Table 1.*	**List_code:**	*serialnumber of list_ID in general list.*

Target_type:	*Protection type when attacked:* OPEN, SHELTERED, HARDENED.	**Damage:**	*references to blocks on airstrip for each airstrip unit of 100 feet.*
Strip_length:	*length of airstrip in units of 100 feet.*	**MOS:**	*length of maximum operating strip of airstrip in units of 100 feet.*
Cluster_ID:	**CL**_*name of cluster that includes airstrip:* CL_RW1, CL_RW2.		
Start_location:	*(x, y) Start location of airstrip in coor-dinates* $1 \leq x, y \leq 120$.	**End_location**	*(x, y) End location of airstrip in coor-dinates.* $1 \leq x, y \leq 120$.
Used_by:	*process where airstrip is used.*		
Comments:	*any comments.*		

Table 1: Overview of list types.

ON
OFF
DAMAGED
KILLED
RESERVED
REMOVED

Table 2: Overview of the parameter values.

Airstrip_ID	Target_type	Used_by:
BD_RUNWAY	HARDENED	LAND, START_UP

7.2.4 Building

Building_ID:	**BD**_*name, building type. See table 1.*	[ ] *building number.*	**ID_code:**	*serialnumber of building_ID in general list.*
List_ID:	**RD**-*task of building Table 1.*	[ ] *list type. Table 3.*	**List_code:**	*serialnumber of list_ID in general list.*
Target_type:	*Protection type when attacked:* OPEN, SHELTERED, HARDENED, FILTERED.		**Location:**	*(x, y) Location of building in coordinates. 1 ≤ x, y ≤ 120.*
Free_space:	*free storage space in building.*		**Contents:**	*Used storage space in building.*
Status:	*status ofbuiding.*		**Condition:**	0 ≤ *condition* ≤ 100%
Cluster:	*cluster name of cluster that includes building. Every building belongs to 1 cluster. See table 3.*		**Grid:**	*grid_ID of building. This global coordinate system measures: 1200 * 1200 feet/unit. Grid_ID are: A-J vertical, and 0-9 horizontal.*
Used_by:	*process where building is used.*			
Comments:	*any comments.*			

Table 1: Overview of building types.

BD_AMMO
BD_ANY_BUILDING
BD_ATCB
BD_CEMETRY
BD_COMCON
BD_COMMAND_BUNKER
BD_DEFENCE_POS
BD_DISPERSAL
BD_FIHO
BD_GUNS_POS
BD_HANGAR
BD_HOSPITAL
BD_INVENTORY
BD_KITCHEN
BD_LAUNCH_POS
BD_LCB
BD_LOCAL_AIR_SPACE
BD_LOGISTIC_BUNKER
BD_OFF_BASE
BD_OTHER_BASE
BD_ON_THE_MOVE
BD_POL
BD_RADAR
BD_RADAR_POS
BD_RRR_GARAGE
BD_RSB
BD_SCPS
BD_SHELTER
BD_SPBF
BD_STORAGE
BD_TARGET_AIR_SPACE
BD_WAHALL

Table 2: Overview of building status.

Condition (%)	Status
0- 29	KILLED
30- 49	DAMAGED, BLOCKED
50-100	AVAILABLE

Table 3: Overview of list types.

BLOCKED
DAMAGED
KILLED
RESERVED
REMOVED
ON
OFF

Table 4: Overview of cluster_IDs.

CL-500
CL-501
CL-HANG
CL-SQ1A
CL-SQ1B
CL-SQ2A
CL-SQ2B
CL-POL1
CL-POL2
CL-RW1
CL-RW2
CL-ENVI

Table 5: Overview of the parameter values.

Building_ ID:	Target_ type:	Free_ Space:	Used_by:
BD_AMMO	HARDENED	3500	ASSEMBLE
	(AMMO means AMMunitiOn Bunker)		
BD_ANY_BUILDING	OPEN	500	
BD_ATCB	OPEN	30	START UP, LANDING
	(ATCB menas Air traffic Control Building).		
BD_CEMETRY	SHELTERED	2000	BURY
BD_COMCON	SHELTERED	500	REPAIR_COMMUNICATIONS
	(COMCON means COMmunication CONtrol Bunker).		
BD_COMMAND_BUNKER	FILTERED	1000	PLANNING, TASKING
BD_DEFENCE_POS	SHELTERED	20	DEFEND_GROUND_AREA
BD_DISPERSAL	OPEN	1000	TAXI
BD_FIHO	SHELTERED	1500	FIGHT-FIRE
	(FIHO means FIre HOuse).		
BD_GUNS_POS	SHELTERED	400	DEFEND_AIR_SPACE
	(Gives protection to AD_GUN).		
BD_HANGAR	SHELTERED	3600	REPAIR_AIRCRAFT
BD_HOSPITAL	SHELTERED	1500	MEDICAL_SERVICE

Table 5: Overview of the parameter values. (continued)

Building_ ID:	Target_ type:	Free_ Space:	Used_by:
BD_INVENTORY	OPEN	-	ALL
	(Definition hall for each object on base. No real building).		
BD_KITCHEN	SHELTERED	1000	FEED
BD_LAUNCH_POS	SHELTERED	400	DEFEND_AIR_SPACE
	(Gives protection to AD_LAUNCHER).		
BD_LCB	HARDENED	50	START UP, LANDING
	(LCB means Local Control Bunker, the wartime Air Traffic Control).		
BD_LOCAL_AIR_SPACE	OPEN	-	START UP, LANDING
	(Dummy location).		
BD_LOGISTIC_BUNKER	FILTERED	1000	REPAIR
BD_OFF_BASE	OPEN	-	ALL
	(One big OFF_BASE location, dummy location).		
BD_ON_THE_MOVE	OPEN	-	
BD_OTHER_BASE	OPEN	-	DIVERT
	(Any other airbase, dummy location).		
BD_POL	SHELTERED	2000	BOWSER_TANKING
	(POL means Petrol, Oil, Lubricants).		

Table 5: Overview of the parameter values. (continued)

Building_ ID:	Target_ type:	Free_ Space:	Used_by:
BD_RADAR	SHELTERED	10	START UP, LANDING
	(Approach radar).		
BD_RADAR_POS	SHELTERED	400	DEFEND_AIR_SPACE
	(Gives protection to AD_RADAR).		
BD_RRR_GARAGE	SHELTERED	2000	RAPAIR_RUNWAY REPAIR_TAXIWAY
	(RRR means Rapid Runway Repair).		
BD_RSB	HARDENED	5000	ASSEMBLE
	(RSB means Ready Storage Bunker).		
BD_SCPS	SHELTERED	1000	ALL
	(SCPS means Survivable Collective Protection Shelter. Future personnel bunker if target_type is filtered).		
BD_SHELTER	HARDENED	1000	TAXI
BD_SPBF	FILTERED	1000	TAXI, BRIEFING, DEBRIEFING
	(SPBF means Squadron Pilot Briefing Facility).		
BD_STORAGE	SHELTERED	1500	ALL

Table 5: Overview of the parameter values. (continued)

Building_ ID:	Target_ type:	Free_ Space:	Used_by:
BD_TARGET_AIR_SPACE	OPEN	-	ENGAGE_TARGET
	(Dummy location).		
BD_WAHALL	SHELTERED	5000	ASSEMBLE
	(WAHALL means Weapon Assembly HALL).		

7.2.5 Personnel

Personnel_ID:	**PS**_*name, primary task of personnel. See table 1.*	[ ] *team number*	**ID_code:**	*serialnumber of personnel_ID within general list.*
List_ID:	**PS**_*present task of personnel. See table 1.*	[ ] *list-type. Table 2.*	**List_code:**	*serial number list_ID within general list.*

Group_number:	*groupnumber, free available tag, for use within orders.*	**Shift_number:**	*shiftnumber, for use while changing shifts.*
People/team:	*number of people in a team.*	**Space_needed**	*space needed in buildings. Equals number of people per team.*
Target_type:	*Protection; type when attacked. Equals* OPEN.	**Movement_rate:**	*Number of minutes to move through one grid. (Equals 2 for personnel).*
Second_Task:	**PS-***second task of personnel.*	**Start_rest:**	*time team started rest.*
Third_Task:	**PS-***third task of personnel.*	**Start_work:**	*time team started work.*
Job:	*object tream is currently working on.*	**Comtaminated:**	*team not-nuclear contamination indicator.*
Location:	*location of personnel, building_ID and number.*	**Phys._condit.:**	*physical condition of team. Between* 0 *and* 100%
		Rem Dose:	*team nuclear contamination indicator.*
Used_by:	*process where personnel is used.*		
Comments:	*any comments.*		

Table 1: Overview of personnel types.

PS_ABDR
PS_AFU
PS_ARMAMENT
PS_ASSEMBLY_TRANSPORT
PS_ATC
PS_BURIAL_SERVICE
PS_COMMUNICATION
PS_CREWCHIEF
PS_DECONTAMINATION
PS_DRIVER
PS_EOD
PS_EOR
PS_FIRE_BRIGADE
PS_FOOD_SUPPLY
PS_FUEL_OPS
PS_GROUND_OPS
PS_LOADING_CREW
PS_LOG_OPS
PS_MAINTENANCE
PS_MEDICS
PS_NBC_TEAM
PS_PERSONNEL_OPS
PS_PILOT
PS_RRR_TEAM
PS_SECURITY
PS_SHORAD
PS_SUPPORT_SQUADRON
PS_TANK_CREW
PS_TECHNICAL_SUPPORT
PS_WING_OPS

Table 2: Overview of list types.

ON
OFF
DAMAGED
KILLED
RESERVED
REMOVED

Table 3: Overview of the parameter values.

Personnel_ID:	People/ Team	Location:	Used_by:
PS_RADAR	5	BD_LOG_BUNKER	DAMAGE_ASSESSMENT
(ABDR means Assault Fire Unit)			
PS_AFU	5	BD_LAUNCHER_POS	DEFEND_AIR_SPACE
(AFU means Assault Fire Unit)			
PS_ARMAMENT	5	BD_LOG_BUNKER	REROLE LOGISTIC_ACTIONS
PS_ASSEMBLY_TRANSPORT			ASSEMBLE
(SECONDARY / TERTIARY SKILL)			
PS_ATC	5	BD_ATCB	LANDING
(ATC means Air Traffic Control)			
PS_BURIAL-SERVICE			BURY
(SECONDARY / TERTIARY SKILL)			
PS_COMMUNICATION	5	BD_COMM_BUNKER	REPAIR_COMM.
PS_CREWCHIEF	2	BD_SHELTER	THRU_FLIGHT, FUELLING, START_UP
PS_DECONTAMINATION		DECONTAMINATE	
(SECONDARY / TERTIARY SKILL)			

Table 3: Overview of the parameter values. (continued)

Personnel_ID:	People/ Team	Location:	Used_by:
PS_DRIVER	1	BD_SHELTER	BOWSER_TANKING REPAIR_RUNWAY REPAIR_TAXIWAY FIGHT_FIRE FUELLING
PS_EOD	2	BD_LOG_BUNKER	DISPOSE_UXO
	(EOD means Explosive Ordnance Disposal)		
PS_EOR			UXO-RECCE
	(SECONDARY / TERTIARY SKILL)		
	(EOR means Explosive Ordnance Recce)		
PS-FIRE_BRIGADE	5	BD_FIHO	FIGHT_FIRE
PS_FOOD_SUPPLY	5	BD_KITCHEN	FEED
PS_FUEL_OPS	5	BD_POL	BOWSER_TANKING
PS_GROUND_OPS	5	BD_COMM_BUNKER	START,STOP AIR_DEF START,STOP DECONT. START,STOP NBC_OPS START,STOP SELF_DEF
PS_LOADING_CREW	2	BD_SHELTER	LOAD
PS_LOG_OPS	5	BD_LOG_BUNKER	
	(LOG_OPS means LOGistic OPerationS)		

Table 3: Overview of the parameter values. (continued)

Personnel_ID:	People/ Team	Location:	Used_by:
PS_MAINTENANCE	5	BD_HANGAR	REPAIR_AIRCRAFT REPAIR_TRANSPORT
PS_MEDICS	5	BD_HOSPITAL	MEDICAL_SERVICE
PS_NBC_TEAM			NBC_RECCE (SECONDARY / TERTIARY SKILL) (NBC means Nuclear, Biological Chemical)
PS_PERSONNEL_OPS	5	BD_SCPS	REINFORCE
PS_PILOT	1	BD_SPBF	DEBRIEFING, TASKING BRIEFING, START_UP
PS_RRR_TEAM	5	BD_RRR_GARAGE	REPAIR_RUNWAY REPAIR_TAXIWAY (RRR means Rapid Runway Repair).
PS_SECURITY	5	BD_DEFENSE_POS	DEFEND_GROUND_AREA PATROL_AREA
PS_SHORAD	5	BD_GUNS_POS	DEFEND_AIR_SPACE
PS_SUPPORT_SQUADRON	5	BD_SPBF	BRIEFING DEBRIEFING
PS_TANK_CREW	2	BD_SHELTER	HANG
PS_TECHNICAL_SUPPORT	5	BD_HANGAR	REPAIR_BUILDING

Table 3: Overview of the parameter values. (continued)

Personnel_ID:	People/ Team	Location:	Used_by:
PS_WING_OPS	5	BD_COMM_BUNKER	PLANNING, TASKING

7.2.6 Supply

Supply_ID:	**SU**_*name, supply See table 1.*	[ ] *supply number*	**ID_code:**	*serialnumber of supply_ID within general list.*
List_ID:	**SU**_*task See table 1.*	[ ] *list-type. Table 2.*	**List_code:**	*serial number list_ID within general list.*
Group_number:	*groupnumber, free available tag, for use within orders.*		**Space_needed:**	*space needed in buildings. Equals units for 1 unit supply.*
Target_type:	*protection type when attacked:* OPEN, SHELTERED, HARDENED.		**Available:**	*available supply amount.*
Location at:	*location of supply, building-ID and number.*		**Unavailable:**	*unavailable supply amount Assembly required.*
Used_by:	*process where supply is used.*			
Comments:	*any comments.*			

Table 1: Overview of supplies.

SU_AMMO (AC)
SU_AMMO (AD)
SU_BOMBS
SU_ECM_POD
SU_FIREFIGHT
SU_FOOD
SU_FUEL
SU_LRU
SU_MATTING
SU_MEDICAL
SU_MISSILES (AC)
SU_MISSILES (AD)
SU_NBC
SU_PAVEWAY
SU_TANKS

Table 2: Overview of list types

ON
OFF
DAMAGED
KILLED
RESERVED
REMOVED

Table 3: Overview of the parameter values.

Supply_ID	Target_ type:	Space_ needed:	Location_at:	Used_by:
SU_AMMO (AC)	SHELTERED	1	BD_AMMO	LOAD, ASSEMBLE
SU_AMMO (AD)	SHELTERED	10	BD_AMMO	DEFEND_AIR-SPACE ASSEMBLE
SU_BOMBS	SHELTERED	10	BD_WAHALL	LOAD, ASSEMBLE
SU_EMC_POD	SHELTERED	1	BD_HANGAR	LOAD, ASSEMBLE
	(ECM means Electronic Counter Measures).			
SU_FIREFIGHT	SHELTERED	1	BD_FIHO	FIGHT-FIRE, ASSEMBLE
SU_FOOD	OPEN	1	BD_KITCHEN	FEED, ASSEMBLE
SU_FUEL	OPEN	1	BD_POL	BOWSER_TANKING, ASSEMBLE
SU_LRU	OPEN	1	BD_HANGAR	REPAIR_AIRCRAFT ASSEMBLE
	(LRU means Line Replaceable Unit).			
SU_MATTING	SHELTERED	50	BD_RRR_GARAGE	REPAIR_RUNWAY, REPAIR_TAXIWAY, ASSEMBLE
SU_MEDICAL	OPEN	1	BD-HOSPITAL	MEDICAL_SERVICE, ASSEMBLE
SU_MISSILES (AC)	SHELTERED	5	BD_WAHALL	LOAD, ASSEMBLE
SU_MISSILES (AD)	SHELTERED	1	BD_LAUNCH_POS	DEFEND_AIR_SPACE ASSEMBLE
SU_NBC	OPEN	1	BD_STORAGE	START_NBC_OPS, ASSEMBLE
	(NBC means Nuclear Biological Chemical).			
SU_PAVEWAY	SHELTERED	1	BD_HANGAR	LOAD, ASSEMBLE

Table 3: Overview of the parameter values. (continued)

Supply_ID	Target_ type:	Space_ needed:	Location_at:	Used_by:
SU_TANKS	SHELTERED	1	BD_HANGAR	HANG, ASSEMBLE

7.2.7 Taxiway

Taxiway_ID:	**BD_TAXIWAY**	[ ] *taxiway number.*	**ID_code:**	*serialnumber of taxiway_ID in general list.*
List_ID:	**BD_TAXIWAY**	[ ] *list type. Table 1.*	**List_code:**	*serialnumber of list_ID in general list.*

Target_type:	*Protection type when attacked:* OPEN, SHELTERED, HARDENED.	**Status:**	*Status of the taxiway.*
		Condition:	$0 \leq$ *condition* $\leq 100\%$
From_Cluster:	**CL**_*name of taxiway start. See table 2.*	**To_Cluster:**	**CL**_*name of taxiway end. See table 2.*
Start_location:	*(x, y) Start loction of taxiway in coordinates* $1 \leq x,y \leq 120$.	**End_location:**	*(x, y) End location of taxiway in coordinates* $1 \leq x,y \leq 120$.
Used_by:	*process where taxiway is used.*		
Comments:	*any comments*		

Table 1: Overview of list types.

ON
OFF
DAMAGED
KILLED
RESERVED
REMOVED

Table 2: Overview of cluster names.

CL_500
CL_501
CL_HANG
CL_SQ1A
CL_SQ1B
CL_SQ2A
CL_SQ2B
CL_POL1
CL_POL2
CL_RW1
CL_RW2
CL_ENVI

Table 3: Overview of the parameter values.

Taxiway_ID	Target_type	Used_by:
BD_TAXIWAY	SHELTERED	REPAIR_TAXIWAY, ACCESS CONTROL FUNCTIONS

Table 4: Overview of taxiway status.

AVAILABLE
DAMAGED
KILLED

7.2.8 Transport

Transport_ID:	**TR**_*name, transport type. See table 1.*	[ ] *transport number.*	**ID_code:**	*serialnumber of transport_ID in general list.*
List_ID:	**TR**_*task of transport. See table 1.*	[ ] *list type. Table 2.*	**List_code:**	*serialnumber of list_ID in general list.*

Group_number:	*Groupnumber free available tag, for use with orders.*	**Space_needed**	*Space needed in buildings, in units.*
Target_type:	*Protection type when attacked:* OPEN, SHELTERED, HARDENED.	**Movement_rate:**	*number of minutes to move through one grid.*
Job:	*object where transport is currently in use.*	**Capacity:**	*transport capacity in units.*
Status:	*Status of transport system.*	**Condition:**	$0 \leq$ *condition* $\leq 100\%$
Location_at:	*location of transport, building_ID and number.*	**Contents:**	*amount of supplies in transport.*
Used_by:	*process where transport is used.*		
Comments:	*any comments*		

Table 1: Overview of transport.

TR_BOWSER
TR_BULLDOZER
TR_CCA
TR_FIREFIGHTING
TR_POWER_GENERATOR
TR_RRR
TR_WEAPON_TRANSPORT

Table 2: Overview of list types.

ON
OFF
DAMAGED
KILLED
RESERVED
REMOVED

Table 3: Overview of transport system status.

AVAILABLE
BUSY
RESERVED
DAMAGED
KILLED
UNAVAILABLE

Table 4: Overview of the parameter values.

Transport_ ID:	Target_ type:	Space:	Move- ment_ rate:	Cap.	Location_ at:	Used_by:
TR_BOWSER	SHELT.	250	30	2	BD_SHELTER	FUELLING, BOWSER_TANKING REPAIR_TRANSPORT
TR_BULL-DOZER	SHELT.	250	15	0	BD_RRR_GARAGE	REPAIR_RUNWAY REPAIR_TAXIWAY REPAIR_TRANSPORT
TR_CCA	SHELT.	50	15	0	BD_STORAGE	DECONTAMINATE, REPAIR_TRANSPORT
		(CCA means Contamination Control Areas).				
TR_FIRE-FIGHTING	SHELT.	250	30	1	BD_FIHO	FIGHT-FIRE REPAIR_TRANSPORT
TR_POWER_ GENERATOR	SHELT.	50	15	0	BD_COMM_BUNKER	REPAIR_TRANSPORT
TR_RRR	SHELT.	250	15	5	BD_RRR_GARAGE	REPAIR_RUNWAY REPAIR_TAXIWAY REPAIR_TRANSPORT
		(RRR means Rapid Runway Repair).				
TR_WEAPON_ TRANSPORT	SHELT.	50	15	0	BD_WAHALL	REPAIR_TRANSPORT

8 UTILITIES

8.1 Shift Scheduler

WILL BE PUBLISHED IN A LATER PHASE

8.2 Group Scheduler

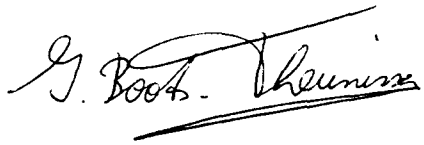
WILL BE PUBLISHED IN A LATER PHASE

8.3 Personnel Task Allocator

WILL BE PUBLISHED IN A LATER PHASE

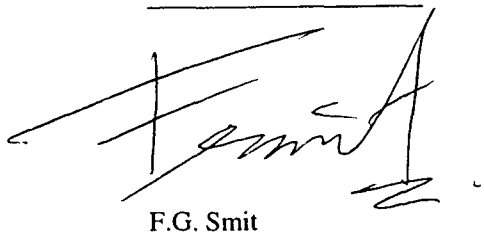
AOW-SIGNATURE

P. Schulein
(group leader)



E.A.M. Boots - Theunissen
(author)

D. Kloet
(author)



F.G. Smit
(author)

F.J. Takkenberg
(project leader)

MESSAGE OVERVIEW

This appendix describes all the messages that can be generated by AOW. For your convenience, they are arranged alphabetically on the name of the sender. For equal senders they are arranged alphabetically on the name of the receiver. Finally, when the sender and receiver are equal they are arranged alphabetically on the contents of the message. Here is a sample layout so you can easily understand the format.

Note to:	RECEIVER
From:	SENDER
Message:	CONTENTS OF THE MESSAGE
Type:	Type of the message (notify, ready, can not perform).
Comments:	This is a more detailed description of the situation at the airbase. It can give you an indication of a useful action you can perform.

Some messages contain text in italics. This text denotes a variable field.

Note to:	GROUND-OPS
From:	AFU & SHORAD
Message:	AIRDEFENCE ACTIVE !
Type:	Notify.
Comments:	Air-defence systems will fire automatically.

Note to:	GROUND-OPS
From:	AFU, SHORAD
Message:	HOSTILE AIRCRAFT SHOT DOWN !
Type:	Notify.
Comments:	The number of supplies available for air-defence systems decreases.

Note to:	WING-OPS
From:	AIR TRAFFIC CONTROL
Message:	AIRCRAFT CRASHED ON RUNWAY *number* !
Type:	Notify.
Comments:	Fire Brigade will be activated automatically. A roadblock is placed on the runway. The maximum operating strip available on the runway will be recalculated. (Remove the roadblock.)

Note to:	WING-OPS
From:	AIR TRAFFIC CONTROL
Message:	AIRCRAFT *number* RETURNED DAMAGED FROM MISSION !
Type:	Notify.
Comments:	None. (Perform damage assessment or repair the aircraft.)

Note to:	WING-OPS
From:	AIR TRAFFIC CONTROL
Message:	BAD WEATHER. RUNWAY CLOSED !
Type:	Notify.
Comments:	None.

Note to:	WING-OPS
From:	AIR TRAFFIC CONTROL
Message:	DIVERTED MISSION *number* RETURNING TO BASE !
Type:	Notify.
Comments:	None.

Note to:	WING-OPS
From:	AIR TRAFFIC CONTROL
Message:	GOOD WEATHER. RUNWAY OPEN !
Type:	Notify.
Comments:	None.

Note to:	WING-OPS
From:	AIR TRAFFIC CONTROL
Message:	HOSTILE AIRCRAFT DETECTED ON RADAR !
Type:	Notify.
Comments:	Air-defence is started automatically.

Note to:	WING-OPS & GROUND-OPS
From:	AIR TRAFFIC CONTROL
Message:	HOSTILE AIRCRAFT LANDED !
Type:	Notify.
Comments:	A defector has landed. A roadblock is placed on the runway. The maximum operating strip available on the runway will be recalculated. (Remove the roadblock.)

Note to:	WING-OPS
From:	AIR TRAFFIC CONTROL
Message:	MISSION *number* CANNOT LAND, RETRY IN 15 MINUTES !
Type:	Notify.
Comments:	There is not enough operating strip on the runway available (Repair the runway or divert the mission!).

Note to: WING-OPS
From: AIR TRAFFIC CONTROL
Message: MISSION *number* CANNOT TAKE-OFF, NO AWX AVAILABLE IN AC!
Type: Notify.
Comments: After sunset AWX capability is required for aircraft. Wait until sunrise the next day, or cancel aircraft from mission and replace them with aircraft that have AWX capability.

Note to: WING-OPS
From: AIR TRAFFIC CONTROL
Message: MISSION *number* CANNOT TAKE-OFF, NO BORDER-CROSSING AUTHORITY !
Type: Notify.
Comments: Border-Crossing authority is dependent on scenario.

Note to: WING-OPS
From: AIR TRAFFIC CONTROL
Message: MISSION *number* CANNOT TAKE-OFF, NO *runway/taxiway* AVAILABLE !
Type: Notify.
Comments: Possible actions: Repair_Runway, Repair_Taxiway.

Note to: WING-OPS
From: AIR TRAFFIC CONTROL
Message: MISSION *number* DIVERTED !
Type: Notify.
Comments: This mission will not return to the airbase until the order Return_Divert has been given.

Note to: WING-OPS
From: AIR TRAFFIC CONTROL
Message: MISSION *number* READY FOR TAKE-OFF, TOO LATE FOR T.O.T. REQUEST FOR TAKE-OFF AUTHORIZATION (FLY-\CANCEL-MISSION) !
Type: Notify.
Comments: Take-Off authorization can be given with order Fly-Mission or cancel the mission.

Note to: WING-OPS
From: AIR TRAFFIC CONTROL
Message: MISSION *number* READY FOR TAKE-OFF, WAITING FOR ACCEPTABLE WEATHER CONDITIONS!
Type: Notify.
Comments: None.

Note to: WING-OPS
From: AIR TRAFFIC CONTROL
Message: MISSION *number* READY FOR TAKE-OFF, WAITING FOR TAKE-OFF AUTHORIZATION !
Type: Notify.
Comments: Take-Off authorization can be given with order Fly-Mission.

Note to: WING-OPS
From: AIR TRAFFIC CONTROL
Message: MISSION *number* READY FOR TAKE-OFF, WAITING FOR WHITE AIR-ATTACK-WARNING !
Type: Notify.
Comments: Set air attack warning: white if allowed.

Note to: WING-OPS
From: CAOC
Message: AIRTASK *number* ARRIVED !
Type: Notify.
Comments: Standard missions are planned automatically. For missions of other types you have to give an order Plan-Mission to start preparation or Refuse_ Airtask to give the mission back to CAOC.

Note to:	ALL-PERSONNEL
From:	CDT-VLB
Message:	ALERT STATUS: *alert_status* BORDER X-AUTH : (YES/NO)
Type:	Notify.
Comments:	When the alert status is changed to a higher level an air attack is being expected. Also is indicated whether the airbase receives border X-authority (required for FBA missions).

Note to:	HEADQUARTERS
From:	CDT-VLB
Message:	*number objects* ASKED FOR REINFORCEMENTS
Type:	Notify.
Comments:	None.

Note to:	WING-OPS
From:	CREWCHIEF
Message:	AC_*name number* FROM *mission number* DAMAGED,BLOCKED DURING PREPARATION. WILL PREPARE ANOTHER !
Type:	Notify.
Comments:	None.

Note to:	GROUND-OPS
From:	FIRE-BRIGADE
Message:	FIRE UNDER CONTROL !
Type:	Ready.
Comments:	The fire is extinguished. The fire fight personnel is available for the next task.

Note to:	GROUND-OPS
From:	GRID *grid name*
Message:	NO PERSONNEL FOR GLOBAL-RECCE AVAILABLE !
Type:	Can not perform.
Comments:	Allocate or activate personnel.

Note to:	ALL-PERSONNEL
From:	GROUND-OPS
Message:	AIR-ATTACK-WARNING-STATUS CHANGED TO *alarm_status*!
Type:	Notify.
Comments:	While the air attack warning is red no missions are authorized to depart.

Note to:	ALL-PERSONNEL
From:	GROUND-OPS
Message:	GROUND-RAID-ALARM-STATUS CHANGED TO *alarm_status*!
Type:	Notify.
Comments:	This has no effect on operations at the airbase.

Note to:	CDT-VLB
From:	HEADQUARTERS
Message:	*Number objects* ASSIGNED FOR REINFORCEMENTS ! AVAILABLE AT T[*time*]
Type:	Notify.
Comments:	Reinforcements arrive with status "Reserved" and no location, so you have to use an order authorize_object and move_object before the objects can be used.

Note to:	CDT-VLB
From:	HEADQUARTERS
Message:	REQUEST FOR REINFORCEMENTS DENIED !
Type:	Notify.
Comments:	None.

Note to:	WING-OPS & GROUND-OPS
From:	HEADQUARTERS
Message:	X-SERVICING REQUIRED (MISSION *number*) !
Type:	Notify.
Comments:	Planning of X-Servicing missions is done automatically. You have less personnel and means for the preparation of your own missions.

Note to: GROUND-OPS

From: NBC RECCE-TEAM

Message: *Disturbance number* FOUND AT POSITION *x,y*

Type: Notify.

Comments: The disturbance will be displayed at the disturbance totes and maps. Available orders for removal of the disturbance are:

- Crater: Repair_Runway or Repair_Taxiway
- Fire: Fight_Fire
- Roadblock: Remove_Roadblock
- UXO: Dispose_UXO

Note to: GROUND-OPS

From: NBC RECCE-TEAM

Message: *Disturbance number* FOUND IN GRID(S) *grid name(s)*

Type: Notify.

Comments: The disturbance will be displayed at the disturbance tote and maps. Available orders for removal of the disturbance:

- Bomblets: Dispose_Bomblets
- Chem(Liq): Start/Stop_Decontamination, (For damage avoidance: Start/Stop_NBC_ops, Evacuate)
- Chem(Vap): Start/Stop_Decontamination, (For damage avoidance: Start/Stop_NBC_ops, Evacuate)
- Comm-Fail: Repair_Communication
- Intruders: Defend_Ground_Area
- Power_Fail: Move_Object (TR_Emergency_Power).

Note to: GROUND-OPS
From: NBC RECCE-TEAM
Message: NUCLEAR FALLOUT DETECTED *disturbance kind*
Type: Notify.
Comments: The fall-out will be displayed at the disturbance tote and maps. Available orders for:

- Damage_Avoidance:
  Start/Stop_NBC_ops, Evacuate.
- Damage repair:
  Start/Stop_Decontamination,

Note to: NBC-OPS
From: NBC-TEAMS
Message: NBC-RECCE COMPLETED !
Type: Ready.
Comments: None.

Note to: GROUND-OPS
From: PERSONNEL-TEAM
Message: *Disturbance number* FOUND AT POSITION *x,y*
Type: Notify.
Comments: The disturbance will be displayed at the disturbance totes and maps. Available orders for removal of the disturbance are:

- Crater: Repair_Runway or Repair_Taxiway
- Fire: Fight_Fire
- Roadblock: Remove_Roadblock
- UXO: Dispose_UXO

Note to: GROUND-OPS

From: PERSONNEL-TEAM

Message: *Disturbance number* FOUND IN GRID(S) *grid name(s)*
disturbance type

Type: Notify.

Comments: The disturbance will be displayed at the disturbance tote and maps. Available orders for removal of the disturbance:

- Bomblets: Dispose_Bomblets
- Chem(Liq): Start/Stop_Decontamination,
  (For damage avoidance:
  Start/Stop_NBC_ops, Evacuate)
- Chem(Vap): Start/Stop_Decontamination
  (For damage avoidance:
  Start/Stop_NBC_ops, Evacuate)
- Comm-Fail: Repair_Communication
- Intruders: Defend_Ground_Area
- Power_Fail: Move_Object (TR_Emergency_Power).

Note to: GROUND-OPS

From: PERSONNEL-TEAM

Message: NUCLEAR FALLOUT DETECTED *disturbance type*

Type: Notify.

Comments: The fall-out will be displayed at the disturbance tote and maps. Available orders for:

- Damage_Avoidance
  Start/Stop_NBC_ops, Evacuate.
- Damage repair:
  Start/Stop_Decontamination.

Note to: CLD
From: PS_*name*
Message: AD_*name number* REPAIRED !
Type: Ready.
Comments: After repairing an air-defence system its condition is 80 %.

Note to: CLD
From: PS_*name*
Message: BD_*name number* UNBLOCKED !
Type: Ready.
Comments: The building has now condition 80 %. It is possible to replace every object from the building.

Note to: CLD
From: PS_*name*
Message: TR_*name number* REPAIRED !
Type: Ready.
Comments: None.

Note to: GROUND-OPS
From: PS_*name*
Message: BOMBLETS IN *grid name* REMOVED !
Type: Ready.
Comments: None.

Note to: GROUND-OPS
From: PS_*name*
Message: COMMUNICATIONS REPAIRED IN GRID *grid name* !
Type: Ready.
Comments: None.

Note to: GROUND-OPS
From: PS_*name*
Message: NO UXO FOUND AT *x, y*
Type: Notify.
Comments: There is a slight possibility that there is a UXO present but not found.

Note to: GROUND-OPS
From: PS_*name*
Message: UXO AT *x,y* EXPLODED DURING DISPOSAL !
Type: Notify.
Comments: Decide whether you have to repair the crater or not.

Note to: GROUND-OPS
From: PS_*name*
Message: UXO AT *x,y* SUCCESSFULLY DISPOSED !
Type: Ready.
Comments: None.

Note to: GROUND-OPS
From: RADAR
Message: ALL HOSTILE AIRCRAFT GONE !
Type: Notify.
Comments: Flying operations will be resumed after you have changed the air attack warning to white.

Note to: WING-OPS & GROUND-OPS
From: RADAR
Message: HOSTILE AIRCRAFT DETECTED. AIRBASE UNDER AIR-ATTACK !
Type: Notify.
Comments: A hostile aircraft can be:

- A pre-strike recce.
- An attack wave.
- A post-strike recce.

Air-defence will be automatically activated and Air_Attack_Warning will be changed automatically to RED.

Note to: GROUND-OPS
From: RECCE_TEAMS
Message: GLOBAL-RECCE COMPLETED !
Type: Ready.
Comments: None.

Note to: GROUND-OPS
From: RRR-TEAM
Message: DISTURBANCE *name* REMOVED FROM RUNWAY,TAXIWAY AT POSITION *x,y* !
Type: Ready.
Comments: The maximum operating strip available on the runway will be recalculated.

Note to: GROUND-OPS
From: RRR-TEAM
Message: NO DISTURBANCE FOUND AT *x,y* !
Type: Notify.
Comments: The RRR-team has been sent to a position where the disturbance was not found. They will return to base.

Note to: GROUND-OPS
From: RRR-TEAM
Message: UNEXPECTED DISTURBANCE *disturbance name* FOUND AT *x,y* !
Type: Notify.
Comments: The RRR_team was sent to repair a crater. Instead of these disturbances they have found another disturbance.

Note to: GROUND-OPS
From: SECURITY
Message: AIRBASE INFILTRATED (INTRUDERS DETECTED) !
Type: Notify.
Comments: The probability of detecting intruders depends on the patrol activity in a grid (patrol activity = number of personnel busy with patrol-area, NBC-recce and UXO-recce). If there is self-defence the detection probability will increase.
The probability of removing intruders depends on the ground defence effectiveness. More personnel in a grid means a greater effectiveness. The security personnel is most effective.

Note to:	GROUND-OPS
From:	SECURITY
Message:	INTRUDER LOCALIZED AND ENGAGED IN *grid name* ! LOSS DEFENCE : *number* LOSS INTRUDER : *number*
Type:	Notify.
Comments:	If intruders can not be neutralized fast enough, send more security personnel to that area (Move_Object).

Note to:	GROUND-OPS
From:	SECURITY
Message:	INTRUDER(S) NEUTRALIZED IN GRID *grid name* !
Type:	Ready.
Comments:	None.

Note to:	GROUND-OPS
From:	SECURITY
Message:	PATROL-AREA COMPLETED !
Type:	Ready.
Comments:	None.

Note to:	GROUND-OPS
From:	SECURITY
Message:	POSSIBLE SABOTAGE ENCOUNTERED AT GRID [*grid name*] !
Type:	Notify.
Comments:	None.

Note to:	GROUND-OPS
From:	SYSTEM
Message:	RELOCATION OF *object number* FROM BD_*name number* TO BD_*name number* IMPOSSIBLE. *Reason*
Type:	Notify.
Comments:	The *Reason* can be - 'DESTINATION BLOCKED !'; - 'CURRENT LOCATION BLOCKED !'; - 'NEW CLUSTER LOCATION CANNOT BE REACHED !'; - 'NOT ENOUGH SPACE AVAILABLE ON DESTINATION !';

Note to: PERSONNEL-OPS, GROUND-OPS
From: SYSTEM
Message: NO AVAILABLE UNBLOCKED OBJECT FOUND !
Type: Notify.
Comments: It is necessary to unblock a building.

Note to: PERSONNEL-OPS
From: SYSTEM
Message: CANNOT PERFORM *task*. NO PS_*name* AVAILABLE !
Type: Can not perform.
Comments: Check whether personnel is available with a secondary or tertiary skill to execute the task and allocate that personnel.

Note to: GROUND-OPS
From: UXO RECCE-TEAM
Message: DISTURBANCE *number* FOUND AT POSITION *x,y*
Type: Notify.
Comments: The disturbance will be displayed at the disturbance totes and maps. Available orders for removal of the disturbance are:

- Crater: Repair_Runway or Repair_Taxiway
- Fire: Fight_Fire
- Roadblock: Remove Roadblock
- UXO: Dispose_UXO

Note to: GROUND-OPS

From: UXO RECCE-TEAM

Message: DISTURBANCE *number* FOUND IN GRID(S) *grid name(s)*
disturbance type

Type: Notify.

Comments: The disturbance will be displayed at the disturbance tote and maps. Available orders for removal of the disturbance:

- Bomblets: Dispose_Bomblets
- Chem(Liq): Start/Stop_Decontamination
  (For damage avoidance:
  Start/Stop_NBC_ops, Evacuate)
- Chem(Vap): Start/Stop_Decontamination,
  (For damage avoidance:
  Start/Stop_NBC_ops, Evacuate)
- Comm-Fail: Repair_Communication
- Intruders: Defend_Ground_Area
- Power_Fail: Move_Object (TR_Emergency_Power).

Note to: GROUND-OPS

From: UXO RECCE-TEAM

Message: NUCLEAR FALLOUT DETECTED *disturbance type*

Type: Notify.

Comments: The fall-out will be displayed at the disturbance tote and maps. Available orders for:

- Damage_Avoidance
  Start/Stop_NBC_ops, Evacuate.
- Damage repair:
  Start/Stop_Decontamination.

Note to: GROUND-OPS

From: UXO-TEAMS

Message: UXO-RECCE COMPLETED !

Type: Ready.

Comments: None.

Note to:	ALL-PERSONNEL
From:	WING-OPS
Message:	HOSTILE AIRCRAFT ABOVE AIRBASE !
Type:	Notify.
Comments:	The air attack warning is changed automatically to Red. While the status is red no missions are authorized to depart.

Note to:	AIR TRAFFIC CONTROL
From:	WING-OPS
Message:	VERTICAL DISPERSAL PLANNED FOR *number* AIRCRAFT !
Type:	Notify.
Comments:	All aircraft on-base that are not being prepared for a mission will fly the vertical dispersal without any armament. Those aircraft are prepared with high priority.

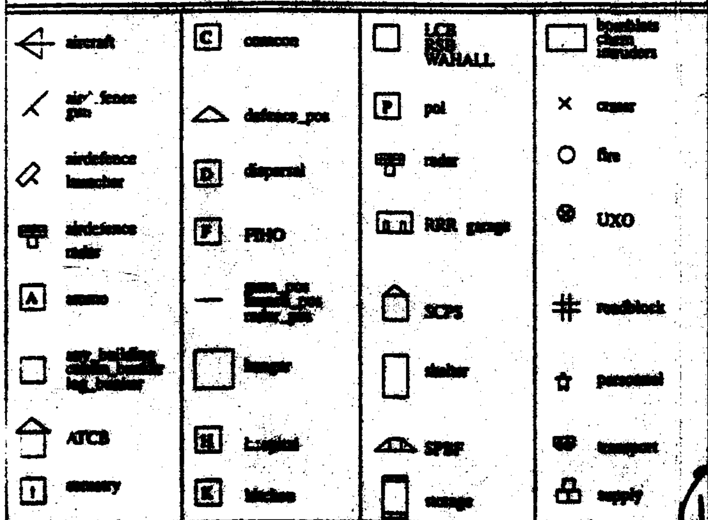
Appendix B: Quick reference guide

Map Information

BUILDING MAP	[illegible]
D.C.C. MAP	[illegible]
DEFENCE MAP	[illegible]
RUNWAY MAP	[illegible]

MAP MENU	
Return to Main Menu	Leave the map and go back to the Main Map Menu.
Select List	Display all objects of the same type, selected by name.
Select Object	Display one specific object on the map, selected by name and number.
Select Cluster	Display the buildings which belong to the selected cluster.
Information	Display additional information on an object selected on the map.
Zoom	Zoom part of the map.
View all	Redraw the entire map.
Redraw	Redraw map keeping previous zoom state.
GridModes	Selection of possible grids.
Hardcopy	Print current map.

Map symbols



Object Overview

[illegible]	[illegible]	[illegible]
[illegible]	AD_[illegible]	BD_[illegible]
AC_[illegible]	AD_LAUNCHER	
	AD_RADAR	

BD_[illegible]	BD_[illegible]	BD_[illegible]
BD_[illegible]	BD_[illegible]	BD_[illegible]
BD_[illegible]	BD_[illegible]	BD_RADAR_POS
BD_[illegible]	BD_LAUNCH_POS	BD_RRR_GARAGE
BD_[illegible]	BD_LCB	BD_RSB
BD_[illegible]	BD_LOCAL_AIR_SPACE	BD_SCPS
BD_[illegible]	BD_LOG_BUNKER	BD_SHELTER
BD_[illegible]	BD_OFF_BASE	BD_SPBF
BD_[illegible]	BD_ON_THE_MOVE	BD_STORAGE
BD_[illegible]	BD_OTHER_BASE	BD_TARGET_AIR_SPACE
BD_[illegible]	BD_POL	BD_WAHALL
BD_[illegible]		

DISTURBANCE		
DB_[illegible]	DB_CRATER	DB_POWER_FAIL
DB_CHEM(LIQ)	DB_FALL_OUT	DB_ROADBLOCK
DB_CHEM(VAP)	DB_FIRE	DB_UXO
DB_COMM_FAIL	DB_INTRUDER	

ALERT STATI	CLUSTERS	
None	CL_500	CL_SQ2B
Counter_Agression	CL_501	CL_POL1
	CL_HANG	CL_POL2
	CL_SQ1A	CL_RW1
	CL_SQ1B	CL_RW2
	CL_SQ2A	CL_ENVI

GRIDS

A0,	A1,	A2,	A3,	A4,	A5,	A6,	A7,	A8,	A9,
B0,	B1,	B2,	B3,	B4,	B5,	B6,	B7,	B8,	B9,
C0,	C1,	C2,	C3,	C4,	C5,	C6,	C7,	C8,	C9,
D0,	D1,	D2,	D3,	D4,	D5,	D6,	D7,	D8,	D9,
E0,	E1,	E2,	E3,	E4,	E5,	E6,	E7,	E8,	E9,
F0,	F1,	F2,	F3,	F4,	F5,	F6,	F7,	F8,	F9,
G0,	G1,	G2,	G3,	G4,	G5,	G6,	G7,	G8,	G9,
H0,	H1,	H2,	H3,	H4,	H5,	H6,	H7,	H8,	H9,
I0,	I1,	I2,	I3,	I4,	I5,	I6,	I7,	I8,	I9,
J0,	J1,	J2,	J3,	J4,	J5,	J6,	J7,	J8,	J9,

Information

M.J. van de Scheur — Division Operational Research
P. Schmlein — Force Structure Studies Land Air Group
E.A.M. Boots — Airbase Operations & Modelling Section
D. Kliet

Object Overview

PERSONNEL

PE_ARMR	PE_FOD	PE_NBC_TEAM
PE_AFU	PE_FOL	PE_PERSONNEL_OPS
PE_ARMAMENT	PE_FIRE_BRIGADE	PE_PILOT
PE_ASSEMBLY_TRANSPORT	PE_FOOD_SUPPLY	PE_RRR_TEAM
PE_ATC	PE_FUEL_OPS	PE_SECURITY
PE_BURIAL_SERVICE	PE_GROUND_OPS	PE_SHORAD
PE_COMMUNICATION	PE_LOADING_CREW	PE_SUPPORT_SQUADRON
PE_CREWCHIEF	PE_LOG_OPS	PE_TANK_CREW
PE_DECONTAMINATION	PE_MAINTENANCE	PE_TECHNICAL_SUPPORT
PE_DRIVER	PE_MEDICS	PE_WING_OPS

SUPPLY

SU_ARMED (AC)	SU_FOOD	SU_MISSILES (AC)
SU_ARMED (AD)	SU_FUEL	SU_MISSILES (AD)
SU_BOMBS	SU_LRU	SU_NBC
SU_BOM_POD	SU_MATTING	SU_PAVEWAY
SU_PERFRONT	SU_MEDICAL	SU_TANKS

TAXIWAY

BD_TAXIWAY	

TRANSPORT

TR_BOWSER	TR_POWER_GENERATOR
TR_BULLDOZER	TR_RRR
TR_CCA	TR_WEAPON_TRANSPORT

TASK	CATEGORY		CATEGORY
PE_ARMR	REPLACABLE	PE_PERSONNEL_OPS	SPECIAL
PE_AFU	SPECIAL	PE_PILOT	SPECIAL
PE_ARMAMENT	SPECIAL	PE_RRR_TEAM	SPECIAL
PE_ASSEMBLY_TRANSPORT	SIMPLE	PE_SECURITY	SIMPLE
PE_ATC	SPECIAL	PE_SHORAD	REPLACABLE
PE_BURIAL_SERVICE	SIMPLE	PE_SUPPORT_SQUADRON	SIMPLE
PE_COMMUNICATION	SPECIAL	PE_TANK_CREW	REPLACABLE
PE_CREWCHIEF	SPECIAL	PE_TECHNICAL_SUPPORT	SPECIAL
PE_DECONTAMINATION	SIMPLE	PE_WING_OPS	SPECIAL
PE_DRIVER	REPLACABLE		
PE_FOD	SPECIAL	Definition	
PE_FOL	REPLACABLE		
PE_FIRE_BRIGADE	SPECIAL	SIMPLE: this task can be performed by any personnel.	
PE_FOOD_SUPPLY	SIMPLE		
PE_FUEL_OPS	REPLACABLE	REPLACABLE: this task can be performed by personnel with the skills needed (means they have this task as primary, secondary or tertiary skill). Otherwise it will take twice as long.	
PE_GROUND_OPS	SPECIAL		
PE_LOADING_CREW	REPLACABLE		
PE_LOG_OPS	SPECIAL		
PE_MAINTENANCE	SIMPLE		
PE_MEDICS	SPECIAL	SPECIAL: this task can be performed by personnel that either have this task as primary task, or personnel having this task as secondary or tertiary task, but taking twice as long.	
PE_NBC_TEAM	SPECIAL		

(2)

Airbase Operations Wargame

Quick Reference Guide

1994

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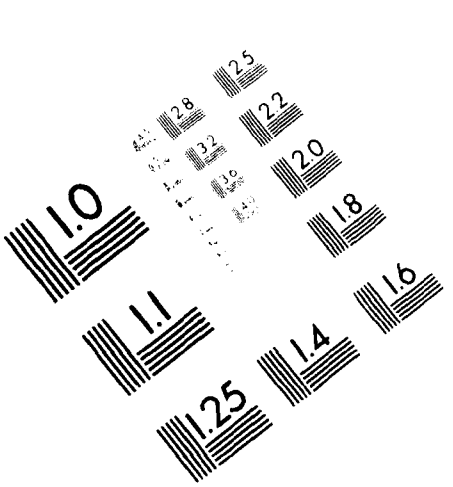
F A BOOIJ-THEUNISSEN ET AL. JAN 94 FEL-93-A286

UNCLASSIFIED TDCK-93-3091 NL



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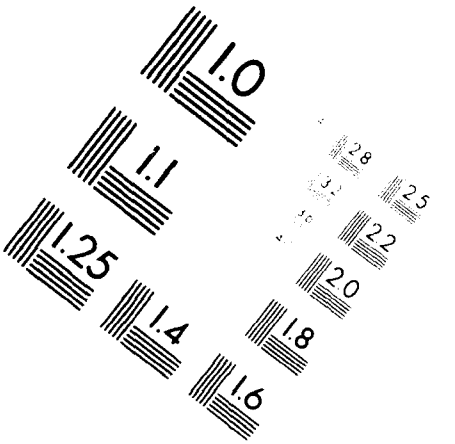

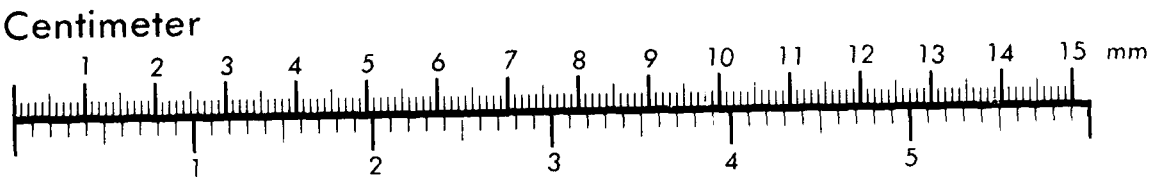

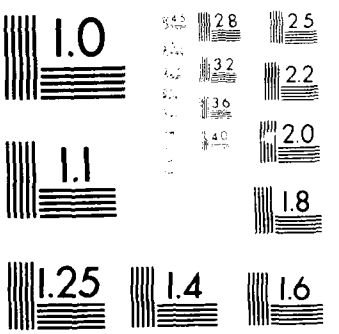

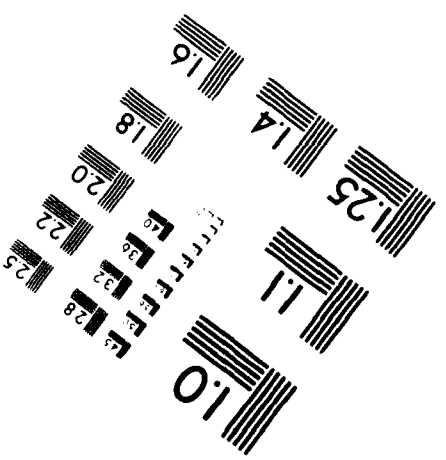

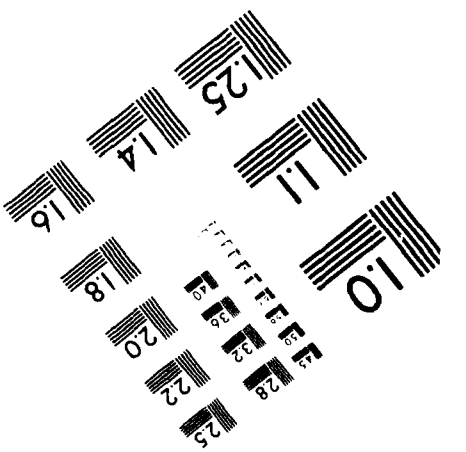

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view

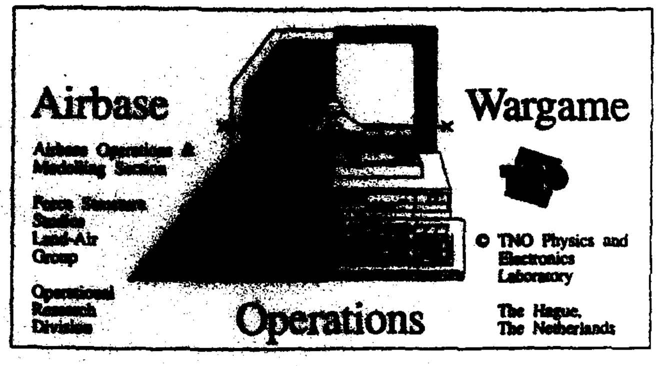
	PS_EOD	PS_NBC_TEAM
	PS_EOR	PS_PERSONNEL_OPS
	PS_FIRE_BRIGADE	PS_PILOT
ISPORT	PS_FOOD_SUPPLY	PS_RRR_TEAM
	PS_FUEL_OPS	PS_SECURITY
	PS_GROUND_OPS	PS_SHORAD
N	PS_LOADING_CREW	PS_SUPPORT_SQUADRON
	PS_LOG_OPS	PS_TANK_CREW
ON	PS_MAINTENANCE	PS_TECHNICAL_SUPPORT
	PS_MEDICS	PS_WING_OPS

SU_FOOD	SU_MISSILES (AC)
SU_FUEL	SU_MISSILES (AD)
SU_LRU	SU_NBC
SU_MATTING	SU_PAVEWAY
SU_MEDICAL	SU_TANKS

TRANSPORT	
TR_BOWSER	TR_POWER_GENERATOR
TR_BULLDOZER	TR_RRR
TR_CCA	TR_WEAPON_TRANSPORT

	CATEGORY		CATEGORY
	REPLACABLE	PS_PERSONNEL_OPS	SPECIAL
	SPECIAL	PS_PILOT	SPECIAL
	SPECIAL	PS_RRR_TEAM	SPECIAL
SPORT	SIMPLE	PS_SECURITY	SIMPLE
	SPECIAL	PS_SHORAD	REPLACABLE
	SIMPLE	PS_SUPPORT_SQUADRON	SIMPLE
	SPECIAL	PS_TANK_CREW	REPLACABLE
	SPECIAL	PS_TECHNICAL_SUPPORT	SPECIAL
N	SIMPLE	PS_WING_OPS	SPECIAL
	REPLACABLE	Definition	
	SPECIAL	SIMPLE: this task can be performed by any personnel.	
	REPLACABLE		
	SPECIAL		
	SIMPLE	REPLACABLE: [illegible]	
	REPLACABLE		
	SPECIAL		
	REPLACABLE		
	SPECIAL	SPECIAL: [illegible]	
	SIMPLE		
	SPECIAL		
	SPECIAL		

Airbase Operations Wargame



Quick Reference Guide AOW
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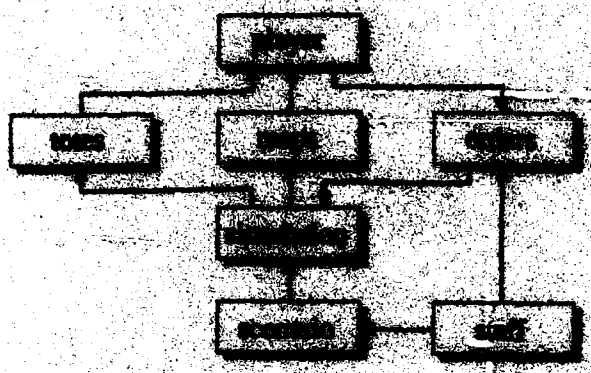
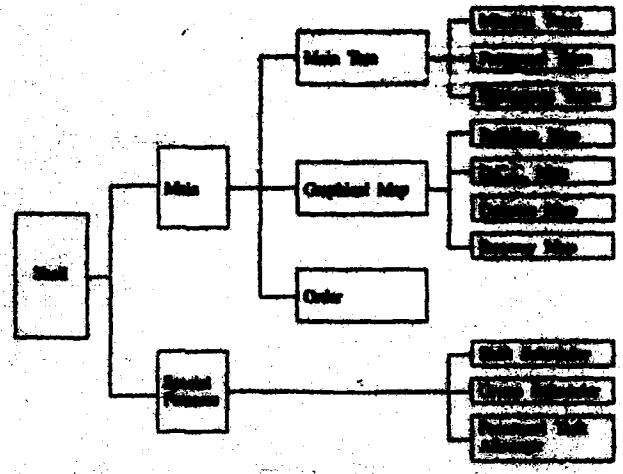
AOW system overview

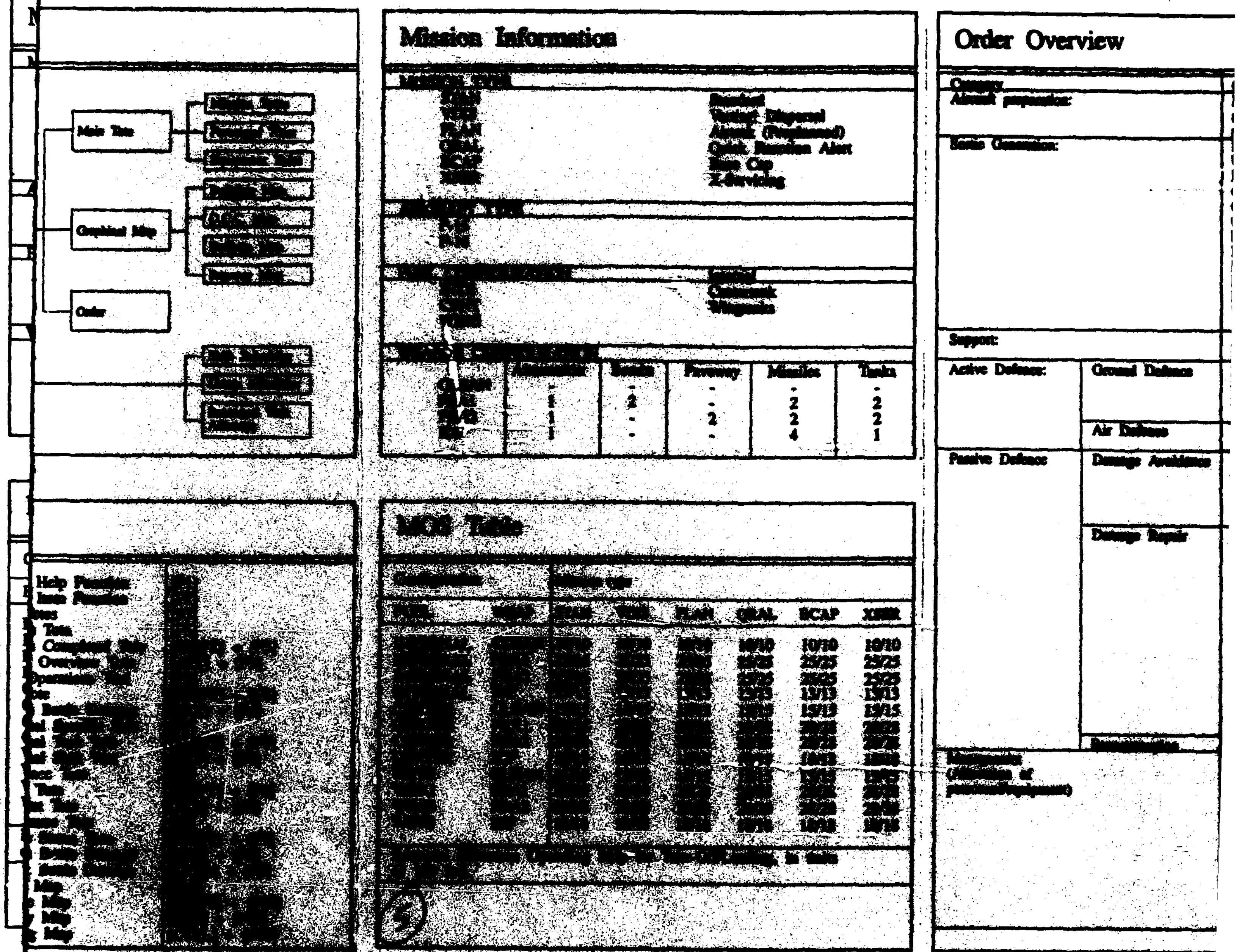


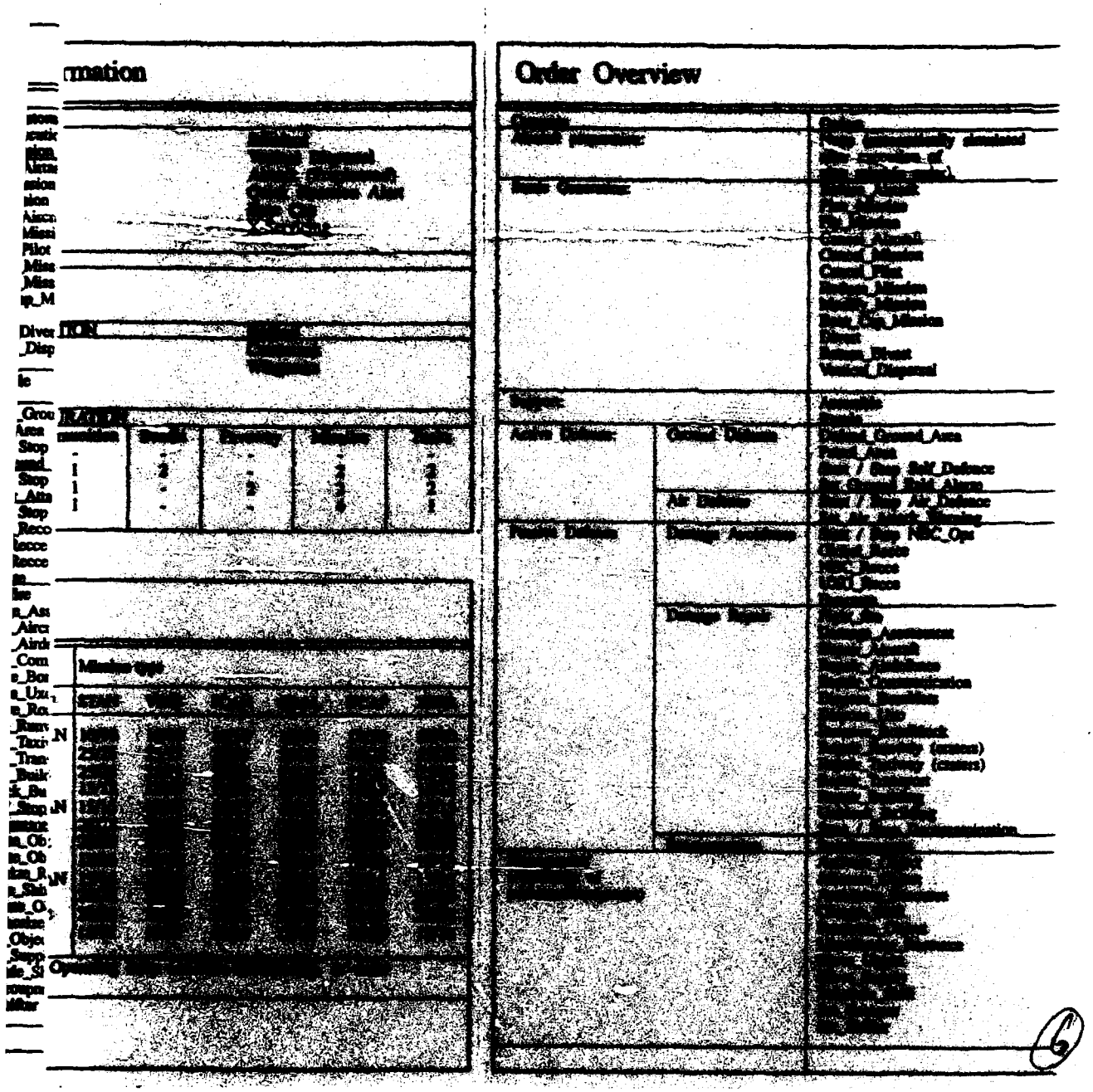
Menu structure



AOW

HOTKEYS


Main Tree
Graphical Map
Order
Help Function
Mission Information
Standard
Vertical Dispersal
Alert (Preplanned)
Quick Reaction Alert
Base Cap
Z-Servicing
Missiles
Tanks
MOS Table
QRAL
BCAP
XSER
Order Overview
Aircraft preparation:
Sortie Generation:
Support:
Active Defence:
Ground Defence
Air Defence
Passive Defence
Damage Avoidance
Damage Repair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Order Overview

Appendix C: Functionkey Template

Appendix C: Functionkey Template

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THE CLASSIFICATION DESIGNATION ONGERUBRICEERD IS EQUIVALENT TO UNCLASSIFIED.

15. ABSTRACT (MAXIMUM 200 WORDS, 1044 POSITIONS)
THIS REPORT CONTAINS THE USER MANUAL OF THE STAND-ALONE AND NETWORK VERSION OF THE AIRBASE OPERATIONS WARGAME (AOW). IT CONTAINS ALL INFORMATION YOU NEED TO PLAY AN AOW SESSION. (HEREBY ALL PREVIOUS MANUALS OF THE AIRBASE OPERATIONS WARGAME ARE WITHDRAWN).

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AIRBASE
COMPUTERIZED SIMULATION
MANUALS

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