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Allocating Marine Expeditionary Unit Equipment and Personnel to Minimize Shortfalls

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The MESA application is designed so that most of the major components—input screens, missions, mission tasks, equipment inventories, and equipment rankings—can be reconfigured by making changes to the Excel spreadsheet, “configure.xls,” on this CD. In this sense, it is largely data-driven. However, there are some aspects of the functionality that cannot be modified without making changes to the underlying Microsoft Visual Basic® code. These are noted in the text where they occur.

Installation

The steps to install and run the MESA software are as follows:

- 1) Drag and unzip “MESA.zip” onto the computer’s desktop.
- 2) Open the resulting folder and double-click on “mclift” application. The MESA application should start up with the main screen (“Define Scenario”), as shown as in the Figure below.
- 3) From this point, the user can define a scenario, allocate equipment, and save the results as described in the User's Manual.

For Developers

The MESA application is a standard Visual Basic application developed with Microsoft Visual Studio® 10.0. To modify the Visual Basic code underlying the application, drag the “MESADevelopment” folder from the installation CD to the desktop (or any other desired location). Open the folder and double-click on “mclift.vbproj.” This will open the application in the Visual Studio development interface. It is necessary to have Visual Studio 10.0 installed on the local machine.

Main Screen of the MESA Application

The screenshot shows the main interface of the MESA application. The window title is 'MESA'. The main heading is 'MAGTF Equipment Structural Assessment'. Below this is a tabbed interface with the following tabs: 'Define Scenario', 'Select Tasks', 'Equipment', 'Rank Missions', 'Timeline', and 'Score Scenario'. The 'Define Scenario' tab is active and contains three main sections:

- Load or Save a Scenario:** Contains two buttons: 'Load' (with the description 'Load a previously saved scenario') and 'Save' (with the description 'Save the current scenario for future use').
- Threat Level:** Contains a label 'Select Threat Level' and a dropdown menu currently showing 'General/Permissive'.
- Title:** Contains a label 'Enter a title for this scenario (optional)' and an empty text input field.

An 'Exit' button is located in the bottom right corner of the application window.