
SIG GAME VISUALIZER

DOCUMENTATION

DOCUMENTATION FOR THE SIG GAME VISUALIZER:
MEGAMINERAI 12: MARS

MISSOURI UNIVERSITY OF SCIENCE AND TECHNOLOGY, 2013

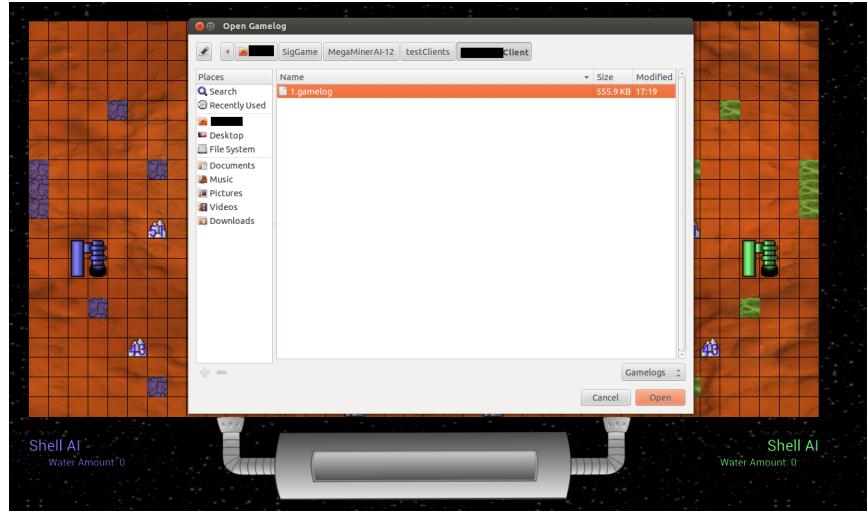
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SIG GAME

Loading the Game Logs:

Upon launching the visualizer, the user is prompted to load a game log. When clicked on, the "Open GameLog" action box appears through which the player can select .glog files to visualize.



The Map:

The main GUI for visualizing the game logs consists of two major components. The most obvious is the 40x20 grid which overlays the playing field. This grid is represented by a coordinate system, (X, Y) where X is the width and Y is the height, beginning in the top left hand corner which spans from (0, 0) to (40, 20). Each square can be occupied by one unit as well as a tile type. The tiles included in MARS are glaciers, pumps, spawn points, and trenches.



Glaciers have the current amount of water labeled over them to indicate how much more water each player can draw into their trenches. Pumps and spawn points are colored to identify which player each station is owned by, but pumps, unlike spawn points, are capturable and are liable to change color throughout the game. Trenches can be filled with water or be empty. Once filled, water will be shown flowing through it.

The Gauges:

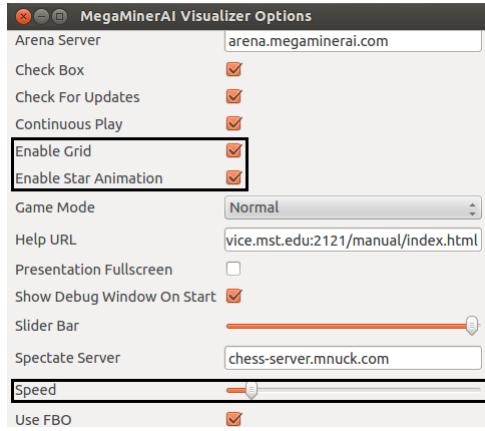
Beneath the playing field is the score bar. When points have been scored by collecting water, the bar below displays each players' water proportional to the total amount of water scored. The players' names and point totals can be found on either side of the score bar. They oxygen bars are also displayed near the players' names. Toward the center of the screen from the oxygen meter is each player's respective timer. When this reaches 0, the game ends with a victory for the opposing player due to timeout. In the bottom left corner of the window is the turn counter. This displays the current turn being visualized. To its right is the turn bar. By sliding the bar, one can easily traverse the game log in the visualizer. In the bottom right corner of the window are the reverse, play/pause, and forward buttons. By clicking the reverse button, the turns play in opposite order. Animations may be finicky during this mode. The forward button similarly changes the turn interval to be the default direction and speed. By repeatedly clicking either the reverse or forward buttons, the time each turn takes to pass is reduced. Switching modes resets the turn duration to the default. The slider above the turn button allows for frames between turns to be iterated over manually.



The Menus:

The top panel contains three menus labeled "File," "Edit," "View," and "Help." The File menu contains the options "Open," "Spectate," and "Quit." Selecting the "Open" option loads the "Open Gamelog" action box, the "Spectate" option currently is unavailable to users, and the quit option closes the visualizer.

The Edit menu contains only one item: "Options." When "Options" is selected, the options action box is created. Users are encouraged not to change the settings in order to preserve program functionality. If desired, the user may modify the "Enable Grid" and "Enable Star Animation" boxes in order to change the specified feature. In addition, the player has an option of changing the speed slider to adjust turn duration even if the aforementioned methods are generally more accessible.



Under the View menu, the user can select to toggle the Debug Window (Ctrl+D) and fullscreen mode (F11). Users are encouraged not to use the Help menu as it is not yet functional.

The Debug Table:

The Debug Window, located on the right hand side of the screen contains three sub-menus: "Console," "Debug Table," and "Playlist." Currently "Console" and "Playlist" are not functional. The "Options" table in the "Debug Table" contains three check-boxes each of which modifies their respective functionality of the visualizer. The "Selections" list contains the ID's of the tiles and units the user has selected. Selection is only available when the specified boxes from the "Options" table is checked. The information for selected tiles and units is shown below the "Selections" table.

Options	
<input checked="" type="checkbox"/>	Units Selectable
<input checked="" type="checkbox"/>	Tiles Selectable
<input checked="" type="checkbox"/>	Pumps Selectable
<input type="checkbox"/>	Draen Glacier Water Amount

Selections	
867	
633	

Parameter	Value
1 X	31
2 Y	11
3 attackPower	15
4 defensePower	5
5 digPower	5
6 fillPower	5
7 hasAttacked	0
8 hasDug	1
9 hasFilled	0
10 healthLeft	50
11 id	867
12 maxHealth	50
13 maxMovement	3
14 movementLeft	0
15 offensePower	5
16 owner	1
17 range	3
18 type	0