

CAMPAIGN/SCENARIO EDITORS

CAMPAIGN/SCENARIO EDITORS.....	1
--------------------------------	---

CAMPAIGN/SCENARIO EDITORS.....	3
--------------------------------	---

CAMPAIGN EDITOR.....	3
-----------------------------	----------

STARTING THE CAMPAIGN EDITOR.....	3
---	-------------------

USING THE CAMPAIGN EDITOR.....	3
--	-------------------

 <i>The Campaign Editor Screen.....</i>	3
--	-------------------

 Campaign Name.....	3
--	-------------------

 Civilization Name.....	3
--	-------------------

 New Button.....	3
---	-------------------

 Save Button.....	4
--	-------------------

 Delete Button.....	4
--	-------------------

 Author.....	4
-------------------------------------	-------------------

 Author's E-mail.....	4
--	-------------------

 Background Image.....	4
---	-------------------

 Password.....	4
---------------------------------------	-------------------

 Campaigns List.....	4
---	-------------------

 Description.....	4
--	-------------------

 Available Scenarios.....	4
--	-------------------

 Scenarios in Campaign.....	4
--	-------------------

 Assets in Campaign.....	5
---	-------------------

 Add Button.....	5
---	-------------------

 Remove Button.....	5
--	-------------------

 Up Button.....	5
--	-------------------

 Down Button.....	5
--	-------------------

SCENARIO EDITOR.....	5
-----------------------------	----------

STARTING THE SCENARIO EDITOR.....	5
---	-------------------

LOADING, SAVING, AND TESTING SCENARIOS.....	6
---	-------------------

MOVING THE CAMERA.....	6
--	-------------------

CREATING CINEMATICS.....	6
--	-------------------

MAP CREATION SCREEN.....	7
--	-------------------

 <i>Blank.....</i>	7
---------------------------------------	-------------------

 <i>Random.....</i>	7
--	-------------------

 <i>Seed.....</i>	7
--------------------------------------	-------------------

 <i>Elevation File.....</i>	7
--	-------------------

MAP ELEVATIONS SCREEN.....	8
--	-------------------

 <i>Land Elevation.....</i>	8
--	-------------------

TERRAIN SCREEN.....	9
-------------------------------------	-------------------

 <i>Bulldozer.....</i>	9
---	-------------------

UNIT PLACEMENT SCREEN.....	9
--	-------------------

 <i>Other Unit Controls.....</i>	10
---	--------------------

 <i>Placing Cargo.....</i>	10
---	--------------------

 <i>Placing Camera Markers.....</i>	10
--	--------------------

PLAYER SETUP SCREEN.....	11
--	--------------------

 <i>Player Page 1.....</i>	11
---	--------------------

 <i>Player Page 2.....</i>	11
---	--------------------

 <i>AI Settings.....</i>	12
---	--------------------

 <i>Tech Tree Page.....</i>	12
--	--------------------

 <i>Options Page.....</i>	13
--	--------------------

<u>Other Options.....</u>	<u>13</u>
<u>STORY/INSTRUCTIONS SCREEN.....</u>	<u>13</u>
<u>CIVILIZATION BUILDER.....</u>	<u>14</u>
<u>TRIGGERS SCREEN.....</u>	<u>14</u>
<u>Component Names.....</u>	<u>15</u>
<u>Triggers.....</u>	<u>15</u>
<u>Trigger Order.....</u>	<u>15</u>
<u>Trigger is On.....</u>	<u>16</u>
<u>Condition True For.....</u>	<u>16</u>
<u>Looping.....</u>	<u>16</u>
<u>Include in Cinematic.....</u>	<u>16</u>
<u>Trigger Statement.....</u>	<u>16</u>
<u>Conditions.....</u>	<u>17</u>
<u>Object Exists.....</u>	<u>17</u>
<u>Player Conditions.....</u>	<u>18</u>
<u>Trigger Has Attribute.....</u>	<u>19</u>
<u>Game Has Attribute.....</u>	<u>19</u>
<u>Chat Message Contains.....</u>	<u>19</u>
<u>Effects.....</u>	<u>20</u>
<u>Object.....</u>	<u>20</u>
<u>Player.....</u>	<u>22</u>
<u>Trigger.....</u>	<u>24</u>
<u>Media.....</u>	<u>24</u>
<u>Game.....</u>	<u>25</u>
<u>AI.....</u>	<u>26</u>
<u>Objects.....</u>	<u>28</u>
<u>Object Autonames.....</u>	<u>28</u>
<u>Select On Map.....</u>	<u>28</u>
<u>Object Specification.....</u>	<u>28</u>
<u>Object States.....</u>	<u>29</u>
<u>Areas.....</u>	<u>31</u>
<u>Select Rectangular Area.....</u>	<u>31</u>
<u>Select Continent Tile.....</u>	<u>31</u>
<u>Select Town Tile.....</u>	<u>31</u>
<u>Center Camera On Area.....</u>	<u>32</u>
<u>Trigger Examples.....</u>	<u>32</u>

CAMPAIGN/SCENARIO EDITORS

The Empire Earth Campaign and Scenario Editors are versatile and robust tools for creating original maps, scenarios, and campaigns. Both give you maximum control over your creations without sacrificing ease of use. The Scenario Editor allows you to create Empire Earth maps and specify explicit goals which the player(s) must accomplish to win. The Campaign Editor lets you tie scenarios together into an integrated campaign. This document provides more detail about these editors than the chapter in the printed manual.

Campaign Editor

The Campaign Editor is used to “assemble” scenarios created with Empire Earth’s Scenario Editor into complete campaigns. A campaign is a collection of scenarios presented in an order determined by the scenario designer, therefore you must first create the scenarios before you can put them into a campaign (see the Scenario Editor section later in this chapter). Campaigns also include associated files such as JPEGs and sound files.

Starting the Campaign Editor

To open the Campaign Editor, click the Game Tools button on Empire Earth’s Main Menu and then click the Campaign Editor button.

Using the Campaign Editor

Creating a campaign is a very simple task. The only prerequisite is that you have working scenarios to put into the campaign. Then all you need to do is give your campaign a name, select the scenarios and put them in the order you want, and then save the campaign. That’s all there is to it. Once created, a campaign contains all the files needed to play each of the scenarios in it. Associated files (such as JPEGs, MP3s, etc.) are automatically saved as part of the campaign when you click the save button.

The Campaign Editor Screen

This section describes all the controls on the Campaign Editor screen and how to use them. You can exit the Campaign Editor by clicking the Back button, or click the Scenario Editor button to launch EE’s Scenario Editor.

Campaign Name

In this field you can type the name for your campaign. If you select a campaign from the Campaigns list, its name appears here. If you edit the selected campaign’s name, the Campaign Editor assumes you are creating a new campaign based on the settings of the selected campaign.

Civilization Name

In this field you can enter a name for the civilization that players will use for the entire campaign. Players cannot change this name. If you do not specify a name here or in the scenario, players can make up a name themselves when they enter the Civ Builder.

New Button

This button resets the Campaign Editor screen so you can create a new campaign starting from scratch. Default text, including a default campaign name, is added to some of the text fields for you.

Save Button

Click Save to save the current campaign under the name in the Campaign Name text box. Saving a campaign also packages together any files associated with the campaign's scenarios (such as JPEGs or MP3s).

Delete Button

Use the Delete button to delete the campaign currently selected in the Campaigns list. Note that there is no undo for this action.

Author

This is an optional field where you can include your name, if you want to. If you are looking at someone else's campaign, his or her name will be displayed here if it was included.

Author's E-mail

Like the Author field, this is an optional field that lets you include your email address. If the campaign was created by someone else, his or her email address will appear here, if it was provided.

Background Image

Select a graphic (JPEG) to use as a background for this campaign. This is optional. The image you select will appear behind the UI when players choose your campaign, otherwise a generic background is used. The .jpg file must be in scenario directory under the Empire Earth folder.

Password

The Password field allows you to password protect your campaign so that others cannot edit it. To protect your campaign with a password, type a password into this field. When you click the Save button, the password you entered is saved along with the campaign. To access your campaign again you must select the campaign in the Campaigns list, type the password in the password field, and click the OK button. Be careful not to forget or lose your password!

When you view a campaign that is password protected all the controls in the Campaign Editor are disabled (except for the Password controls) and some fields are left blank. This prevents users other than the author from making changes to the campaign.

Campaigns List

The Campaigns list displays all the campaigns saved in EE's campaigns folder. You can select campaigns in this list to edit them. If the campaign is password protected, you must enter the password in order to edit the campaign.

Description

You can type a description for your campaign in this field. Descriptions are optional, but they are useful for introducing the campaign to players.

Available Scenarios

This list displays the scenarios available for you to add to your campaign.

Scenarios in Campaign

This list displays all the scenarios in the currently selected campaign. If the selected campaign is password protected, nothing is shown in this list until the password is entered. The scenarios that appear in this list

are shown in the order in which they are to be played, from the first scenario at the top to the last scenario at the bottom.

Assets in Campaign

This is simply a list of all the non-scenario files currently in the campaign. These are any files that are associated with the individual scenarios, such as sound files and JPEGs. Note that movie files are not included in the assets and must be included as separate files when a campaign is distributed. Movies should be put into the ..\data\movies folder by the user. Only Bink Video (.bik) is supported.

Add Button

Click the Add button to move the selected scenario in the Available Scenarios list over to the Scenarios in Campaign list. This adds the scenario to the campaign.

NOTE: If you try to add a scenario but do not have all the media associated with that scenario (e.g., sound files), you will be notified that files are missing. You cannot save your campaign until all the media for all the scenarios are in place.

Remove Button

Click the Remove button to remove a selected scenario from the Scenarios in Campaign list and put it back in the Available Scenarios list.

Up Button

Use the Up button to reorder your scenarios in the campaign. Click Up to move up a selected scenario in the Scenarios in Campaign list up in the list.

Down Button

Use the Down button to move a selected scenario down in the Scenarios in Campaign list.

Scenario Editor

The Empire Earth Scenario Editor provides all the tools you need to create original game scenarios that are as simple or as complex as you wish to make them. You can build your own Empire Earth maps, add event triggers such as victory conditions, set game and player starting conditions, and include instructions and other messages.

TIP: Though the options available to you in the Scenario Editor are vast, learning the basics is really quite simple. For some hands-on examples, take a look at the Trigger Examples at the end of the Triggers section. With a little practice, you'll be ready to create just about any game situation you can imagine.

The Scenario Editor is divided into seven main parts or "screens." Icon buttons along the bottom-left of the editor take you to each screen. The buttons just to the left of the Mini-map provide save, load, and testing options. In the Scenario Editor, the Mini-map functions as it does during a game.

NOTE: Player 1 is always considered to be a human player, but does not have to be the only human player in the scenario.

Starting the Scenario Editor

To start the Scenario Editor, click on the Game Tools button in Empire Earth's Main Menu. Then click the Scenario Editor button to launch the Scenario Editor.

Loading, Saving, and Testing Scenarios

The buttons to the left of the Mini-map provide access to the Scenario Editor's many save and load options. From left to right, these buttons are:

- **Quick Load** – Loads the scenario last saved with Quick Save – if there is one – into the Scenario Editor. **Hot Key:** / (forward slash)
- **Quick Save** – Saves the scenario on which you are currently working to the file EEQuickSave.scn in Empire Earth's root directory (i.e., where the .exe file is). Please note that each time you do a Quick Save, it overwrites the previous Quick Save file, so you can have no more than one Quick Save at a time. **Hot Key:** ; (comma)
- **Save** – Saves the scenario on which you are currently working via the Save screen. The Save screen lets you enter a name for the scenario or choose a previously saved scenario to overwrite..
- **Load** – Opens a window that allows you to pick a previously-saved scenario to open in the Scenario Editor.
- **Test** – Launches Empire Earth and loads the scenario on which you are currently working. As the button name implies, this allows you to test your scenario so you can make sure that it is working the way you intended. When testing, pressing the F1 key allows you to re-enter the Scenario Editor, or you can click the Return to Editor button on the Game Options menu.
- **Exit** – Returns you to Empire Earth's Main Menu.

Moving the Camera

In the Scenario Editor, you have full control over Empire Earth's 3D camera. You have a larger zoom range and you can point the camera in any direction you wish. To rotate and pitch the camera, simply hold down the tilde "~" key while you move the mouse (you do not have to hold down the Shift key). Moving the mouse left and right rotates the camera, while moving the mouse forward and backward pitches the camera down and up. The mouse wheel zooms the camera in and out. It may take a little practice to get used to moving the camera in three dimensions, but you'll soon learn to point it at exactly what you want. To return the camera to the normal game view, press the Home key on your keyboard.

Creating Cinematics

The Scenario Editor allows you to create your own movies or cinematics using triggers. Triggers allow you to control the actions and events in your scenario and are explained later. This section gives a basic overview of creating cinematics and describes where in this chapter you can find information about how to create cinematics. Don't worry, creating cinematics sounds more complicated than it actually is. With a little practice, you'll soon be able to setup and "film" just about any scene you can imagine.

The cinematics you create are saved as part of your scenario – you can even make the entire scenario just a cinematic if you want to. Once you have set up all the elements that you want to appear in your cinematic (e.g., the landscape, buildings, units, etc.) creating the cinematic is largely accomplished by creating triggers that utilize the Script Camera Effect. These Effects tell the camera what to do and when to do it. When the camera Effects are all strung together, when the scenario is played, they make up the cinematic. See the Player section under the Effects section, later in this chapter, for more information about the Script Camera Effect.

You can use triggers to move the camera at any time during the scenario, if you wish, but if you want the player to watch the cinematic without interacting with the game, you should trigger the scenario to go into "Cinematic Mode." During Cinematic Mode, the screen shrinks to a letterbox format and players cannot control what is happening on the screen (but they can press the Esc key to return to the game whenever they want). You, as the scenario designer, have control over when Cinematic Mode starts and ends by using the Start Cinematic Mode and the End Cinematic Mode Game Effects, which are explained in the Game section under Effects, later in this chapter.

There are a number of ways to control the camera during a cinematic. Most involve using the Script Camera Effect, but you also have some control over the camera when you use the Send Dialogue Effect (see the Media section under Effects). You can also have the camera Fade In or Out, but only while in Cinematic Mode (see the Player section under Effects). Additionally, you can place Camera Markers to define points for the camera to move to. Placing these markers is described in the Unit Placement Screen section.

Map Creation Screen

When creating a scenario, before you do anything else, you'll need a starting map so you'll have something to work with. The default map is a Blank map covered with a grass texture. If you wish, you can generate a different base map. There are three different base maps from which to choose: Blank, Random, and Seed. Each is described below.

To create a new base map:

1. Select a base map type: Blank, Random, or Seed.
2. Set the Map Size for the map. For Blank maps you can set a Map Width and Height, as measured in tiles – for example, 50 x 50 or 40 x 20. The Width and Height of your map do not have to be the same.
3. For Blank base maps, select a Default Terrain. For Random and Seed Maps, choose a Map Type.
4. For Seed Maps only, enter a seed number.
5. Click "Create Map" to generate the new map.

Blank

The Blank base map selection creates a flat map using the Default Terrain setting – for example, grass. The land elevation is set to zero (0).

Random

The Random base map generates a random map (based on a seed number) with a Capitol and Citizens for each player. You can choose the Size and Type of random map to create. The seed used to create the map is displayed once the map is generated.

Seed

Creates a map based on the entered seed number. Maps based on the same seed are identical assuming the number of players remains the same.

Elevation File

The Elevation File allows advanced users to specify a file containing elevation data. This file is used in conjunction with generating a Blank map. To use this feature, you must first download the elevation data from a web site such as the National Geophysical Data Center (NGDC) of the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce (<http://www.ngdc.noaa.gov/cgi-bin/seg/ff/nph-newform.pl/seg/topo/subset> or <http://www.ngdc.noaa.gov/mgg/global/seltopo.html>).

Make sure the data you download is in a binary 16-bit integer format compatible with an Intel machine. Also take note of the height and width (or rows and columns) of your data, as you will need them later. Save the downloaded file in your ..\Data\Scenarios\Elevation Maps folder as <filename>.dat. Note that you may need to change the extension to .dat. You must also add a text file in that same directory called <filename>.txt. Note that both <filename>s must be the same. In the txt file, put the width (columns) and then the height (rows) of your downloaded data separated by only a space and no return at the end of the line, for example:

240 240

With the two files in place, you can choose the Elevation File from the drop down list on the Map Creation screen. When you do, some of the controls will disappear and new ones will appear. You can now choose only a width for your map. The height will be automatically scaled to the same ratio as the width and height of the elevation data you downloaded.

The new controls that appear are as follows:

- **Water Depth** – This is the maximum depth that the water will reach in Empire Earth elevation.
- **Water Cutoff** – This is the depth, in meters, that is set to be equal to the Water Depth value. Any depths greater than this in the data will be cut off at the maximum water depth.
- **Land Height** – This is the maximum height that the land will reach in Empire Earth elevation.
- **Land Cutoff** – This is the height, in meters, that is set to be equal to the Land Height value. Any heights greater than this value in the data will be cut off at the maximum land height.

For example, you might set:

Water Depth = 10 (this is the maximum depth)

Water Cutoff = 5000 (meters)

Land Height = 20 (this the maximum altitude)

Land Cutoff = 2000

To create your new map, hit the create map button. You may need to fine tune the map by adjusting the Land and Water values.

Map Elevations Screen

To add variety to your map's topography, you can create hills and valleys. There are 65 discrete elevations (levels) for the land, from -24 to +40. The default is zero (0), which is just above sea level. Land set to an elevation of less than zero is under water. An elevation of -1 is considered "shallows" and is passable by land units.

Land Elevation

To raise or lower the land:

1. Be sure the Elevation button is selected.
2. Select a Brush Size.
3. Set the Terrain Elevation slider to the elevation you want. Negative elevations are under water.
4. Select whether you want to Paint Hills, Paint Cliffs, or Paint Cliff Paths:
 - Paint Hills – Paints smooth slopes that land units can climb.
 - Paint Cliffs – Paints steep slopes that land units cannot climb.
 - Paint Cliff Paths – Paints a smooth slope onto a cliff so that land units can climb up the path.
5. Left-click (and drag, if desired) to raise or lower the elevation of the land under the Brush. All the tiles under the Brush move up (or down) to the altitude specified by the Terrain Elevation slider.

TIP: If you press and hold the space bar when you left click, the elevation slider is ignored. Instead, the elevation under the center tile of the Brush is set as the current elevation and you can paint using that elevation while dragging the mouse pointer.

You can also drag land up or down by clicking and holding the right mouse button and dragging the pointer up or down. Tiles under the brush raise or lower as you drag (note that your choice of Paint Hills, Cliffs, or Paths is still active). This is useful for dynamically adding elevations to the landscape. If you hold in the left button at the same time, you can drag the current elevation to the adjacent tiles.

NOTE: Adding hills near cliffs can "replace" the cliffs with smoother slopes. A little practice will show how this works.

Terrain Screen

There are many types of terrain available in Empire Earth, which allow you to create practically any type of look for your map that you can think of. To paint terrain:

1. Click the Terrain button.
2. Select the Brush Size you want.
3. Choose the Terrain Type you want from the list.
4. Choose the Terrain Color you want. If you don't choose a color, the default color for that Terrain Type is used. Just to the left of the Mini-Map, a preview shows the selected Terrain Type and Color.
5. Left-click and drag to paint with the selected Terrain Type and Color.

Bear in mind that terrain paints the vertices of tiles (i.e., where the tiles meet) and not the tiles themselves. This is to ensure the different terrains blend together smoothly. Some Terrain Types, however, actually "paint" units (e.g., the various Ambient and Forest types) on to the map. These units get placed on the tiles, not the vertices.

TIP: To paint using just color (i.e., without a particular type of terrain), select White as the Terrain Type and then choose the Terrain Color you want to use.

Bulldozer

The Bulldozer control on the Terrain Screen is used to delete objects on the map (e.g., player units, trees, etc.). Select Bulldozer and the Brush Size you want, then left-click on the map to delete all objects under the brush. Hold down the left mouse button and drag to "erase" swaths of objects. The terrain under the objects is not affected.

Unit Placement Screen

Using the Unit Placement Screen you can place all kinds of objects on the map – including units, buildings, heroes, and world units – so that they are available to players at the beginning of the scenario. Just like in the game, certain units cannot be placed in certain locations. For example, ships must be placed in water, not on land.

NOTE: If you are planning to use computer players in your scenario, you must define where each computer player's starting position is located. For each computer player, the first land unit you place on the map that is not a building (i.e., a unit that can move) defines that computer player's "home base." Do not use a ship as that will put the home base in the water. You can, if you want, set up a trigger to kill that first unit as soon as the scenario starts. The computer player will defend its home base and perform most of its initial activity there (assuming it is an active player).

To place objects on the map:

1. Select World Player to place objects that belong to the world (and not to a player), such as trees or other resources. Or, select Player and choose the player for whom you want to place objects.
2. Select the category of objects you want to place using the buttons at the top left of the screen. You can choose: land units, air units (aircraft), water units (ships), structures (buildings), heroes, and ambient objects (including resources). The items belonging to the selected category will appear in the list on the left side of the screen. Note that all resources (except animals) must belong to the World Player.
3. Select the particular type of object you want from the pick list by clicking on it (e.g., click on "Knight"). The Sort buttons determine how the list of objects is sorted: Alphabetically ("Alpha"), by Epoch, or by Family.
4. Place the object you selected by left-clicking on the map – you can place as many of that type of object as you like. Red means you cannot place the object there – try a different location. Right-click to stop placing that object. (Thereafter, right-clicking on a placed object will delete it from the map.) Note that units that do not move (e.g., resources, buildings) "snap" to the map tiles while units that can move (e.g., Citizens, ships, animals) can be placed just about anywhere.

NOTE: You can change to a different player at any time by selecting a different player from the drop-down list.

Other Unit Controls

- **Select** – You can select units already placed on the map using any of the normal selection methods (e.g., click on or lasso units).
- **Delete** – Right-click on a placed unit to delete it. The Delete key on the keyboard also deletes the selected unit. To delete multiple units at once, select the units and press Shift-Delete or use the Bulldozer tool on the Terrain screen.
- **Moving Units** – Double-click on a placed object to “pick it up.” You can then move it to a new location on the map (click to re-place it). You can move only one unit at a time.
- **Rotate** – Left-click the Rotate button (the arrow) to turn a selected unit clockwise or right-click to turn it counter-clockwise. The arrow shows the direction the unit faces. You can also use the Rotate button for objects you are about to place on the map. For finer control of the unit’s facing, you can select a unit or units on the map and then right-click and drag to change the direction they are facing, just like you can during a game (except that the units don’t move, they just rotate in place).

Placing Cargo

Transports that you place on the map can be given cargo. This way, the transport will be carrying cargo when the scenario begins. This includes not only moveable transports (e.g., transport ships and helicopters) but any object that can hold units (e.g., Airports and Fortresses).

- **To put a unit in a transport**, click on the transport when placing the unit. (You can also put units into an air transport such as the Chinook or in a Fortress.)
- **To see the cargo in a transport**, select the transport. The units in the transport appear in the cargo list. The units’ health bars appear above the transport’s health bar.
- **To remove (delete) a unit from the transport**, select the transport, select the unit in the transport’s cargo list, and then click the Remove button.

NOTE: Be sure to use a unit (e.g., Citizen, Knight) in all your trigger definitions BEFORE placing it on a transport because you cannot add that unit to or remove it from Objects after it becomes part of a transport’s cargo. You can, however, change the qualifiers of the Objects of which that unit is a part.

Placing Camera Markers

The Scenario Editor allows you to create your own movies or cinematics using triggers (see the Triggers section of this chapter). Placing Camera Markers is one way to plan out your shots. A Camera Marker defines a place for the camera to move to during the cinematic. Thus, Camera Markers allow you to set up a camera shot without using another Object (e.g., a tree or building) or Area as a reference point. To place a Camera Marker:

1. On the Unit Placement screen, select the World Player and the Buildings list. Then select Camera Marker from the list.
2. Move the camera until you are looking at the part of the map at the camera angle you want.
3. Left click to place the Camera Marker anywhere on the map. What you see on the map is exactly what the camera will see when it moves to that marker (though you can alter the zoom level when you create the Effect). The marker is placed in 3D space – if you zoom out a little, you can see the marker – but it is only visible when you are in the Scenario Editor.
4. You can use the Camera Marker in your Object definitions like any other unit you place. Then, those Objects can be used when you create a Script Camera Effect – see the Player section of Effects, later in this chapter, for more information.

If there is just one Camera Marker in an Object that you use in a Script Camera Effect, the scroll speed for the camera dictates how quickly the camera will move to that marker. When you have multiple Camera Markers in an Object, the order in which you select the markers for the Object is important. The order dictates how the camera will move, from the first marker to the second, to the third, and so on. You can, in this way, create a sequenced camera flyby that smoothly moves the camera between the multiple camera markers. To create a flyby sequence, create a Script Camera Effect that uses the Object for the Move Camera and Face Camera selections. Set the zoom level to None so the exact camera marker position is used. During the cinematic, the camera will snap to the first Camera Marker in the Object and use the “scroll speed” to determine the speed at which the camera moves through the sequence of markers.

TIP: When you use a Camera Marker in an Object Definition (see the section on Triggers), you can click on the Camera Marker in the Unit Selected List to display what the camera is looking at.

Player Setup Screen

On the Player Setup Screen, you can configure the starting conditions for each player in the scenario. This includes the number of players in the scenario, starting resources, available technologies, alliances, and other settings.

NOTE: Player 1 is always considered to be a human player, but does not have to be the only human player in the scenario.

The following controls are available on Player Page 1, Player Page 2, and the AI Settings pages:

- **Max Players** – Set the maximum number of players in the scenario using the Max Players drop-down list.
- **All Players** – You can quickly set all players to use the same settings by selecting the values you want in the All Players row and then clicking the Set All Players button. Note that clicking the Set All Players button copies exactly what appears in the All Players row to all the individual player’s rows.
- **Player Color** – Set the player color for each player. Click (or right-click) on the color button to change the player’s color.

Player Page 1

With the controls on Player Page 1, you can set resource levels and the Epochs for each player.

- **Resources** - Set the starting resources for each individual player (or all players). Type the amount in the appropriate text box in the row for the player you want.
- **Epochs** – Set the Start Epoch and End Epoch for each player using the appropriate drop-down list. (This can also be set with the Set All Players button.)

Player Page 2

You can set more player options with the Player Page 2 controls. Note that the All Players row and Set All Players button can be used to set conditions for all players at once, just as on Page 1. The Page 2 options are:

- **Player** – Lets you enter a name for each player, such as who the player is supposed to be in the scenario.
- **Civilization** – Select each player’s civilization from the drop-down list. The list shows all the available civilizations, Predefined as well as User Defined.
- **CPU Only** – This is used for Multiplayer games. If CPU Only is checked, the player must be controlled by the computer and cannot be removed from the game. If unchecked, the player can be controlled either by the computer or a human; the choice is up to the host.
- **Shared LOS** – If checked, this player shares Line Of Sight (LOS) with all allied players in the scenario, human and computer.

AI Settings

The controls on the AI Settings page allow you to modify the behavior of each computer player globally, that is, for the entire scenario. The behaviors are very general, allowing you to do a quick setup for each computer player. You can modify the behavior of computer players more explicitly using AI Effects Triggers (explained later, in the Triggers section). The controls available on this page are:

- **Active** – When off (unchecked), the associated computer player is totally deactivated. Units belonging to an inactive computer player still respond when attacked or when enemies become visible, but no decisions above the unit level are made. Generally, this control should be left on unless you have specific reasons for deactivating the specified computer player. Note that the rest of the settings on this page are ignored for a computer player if its Active box is unchecked.
- **Cheat** – When checked, the computer player gets a discounted cost in resources to produce or research anything. In other words, everything is cheaper for this computer player.
- **Attack** – Turning this on (checked) causes the computer player to produce units to attack enemy players, as normal. If turned off, the computer player does not produce units to attack enemies (but it may produce units for defensive reasons if Defend is on).
- **Defend** – This control, when on, tells the computer player to produce units to defend areas it deems important, such as its buildings or resources. If the control is turned off, the computer player does not produce defensive units (but it may produce offensive units if Attack is on). Note that a defensive group may appear to be offensive if it is created and sent to an area where there are hostile units.
- **Build/Repair** – The computer player is allowed to produce new buildings and repair existing ones if this control is turned on. If it is off, the computer player does not construct or repair buildings.
- **Explore** – The computer player will create units specifically for exploration purposes if this control is turned on.
- **Ignore** – When turned on, this tells computer players to ignore the human player(s) when it calculates its population needs and when it decides to advance to the next Epoch. If turned off, the computer players tries to “stay close” to the human player(s) in these two respects.
- **Gather** – When this control is turned on, the computer player creates and sends Citizens to gather resources. Note that when the computer player is allowed to gather, it may do so whether it truly requires any resources or not (for example, if Cheat is turned on).
- **Citizen Percentage** – This control lets you specify what percentage of the computer player’s total population should be Citizens. For example, if this control is set to 50, then half of the computer player’s population (i.e., 50%) at any given time will be Citizens. Note that since some units count more towards the total population (e.g., each cavalry unit counts as 2 units for the purpose of determining population), the number of Citizens produced by the computer player in this example may not be exactly half of the total number of units produced.

NOTE: If you are planning to use computer players in your scenario, you must define where each computer player’s starting position is located. For each computer player, the first land unit you place on the map that is not a building (i.e., a unit that can move) defines that computer player’s “home base.” Do not use a ship as that will put the home base in the water. You can, if you want, set up a trigger to kill that first unit as soon as the scenario starts. The computer player will defend its home base and perform most of its initial activity there (assuming it is an active computer player).

Tech Tree Page

This page allows you to modify the technology tree for any player by enabling or disabling individual units, buildings, heroes, or technologies. Disabled items will not be available to that player during the scenario.

To modify a player’s technology tree:

1. Choose the player you want from the Player drop-down list.
2. Select the type of items (“Unit Types”) you want to enable or disable: Units, Buildings, Heroes, or Technologies. You can display the Epoch in which the items in the list become available by checking the Display Epoch box – note that this sorts the listed items by Epoch.

3. Move the item(s) you want from the Enable Technologies list to the Disable Technologies list (or vice-versa). This is accomplished by using the buttons provided. Move the selected item in the list (and any dependent items) with the < and > buttons or all items in the list with the << and >> buttons.

Note that when you select Technologies to enable or disable, the individual technology you select is highlighted green. All the technologies affected by the selected technology – the “dependent” technologies, such as a later unit upgrade – are highlighted blue. When you disable (or enable) the green technology, all the blue technologies are also disabled (enabled). For example, if you disable the upgrade to the Imperial Age Battleship, all the upgrades to subsequent battleships are also disabled. If an item in the disabled list is displayed in red it means it cannot be enabled unless one (or more) of its prerequisites is enabled first.

Options Page

The last of the player pages lets you set additional options for each of the players, including the diplomatic disposition (ally or enemy) of any player to any other player.

To change a diplomatic stance of two players to each other, click on the icon where the two players intersect. If there are only two players in the scenario, there will be only one intersection and, hence, only one icon. Note that the disposition is mutual, so if player 1 is the enemy of player 2, then player 2 must be the enemy of player 1. The icon colors mean the following:

- Green (complete circle) = Ally
- Red (broken circle) = Enemy

Other Options

The other controls on this page are as follows:

- **Game Unit Limit** – Lets you set the world population limit that gets evenly divided among all the players in the scenario. The number of units per player is based on the number of players you have chosen for the scenario. The number of units per player will vary slightly depending on which Epoch a player starts in (because some technologies add to a player’s pop cap and these techs are researched automatically, unless the scenario designer disables those techs).
- **Wonders for Victory** – Lets you set how many Wonders are needed for a wonder victory (if Victory Allowed is enabled). If you do not want Wonders to count towards victory during the scenario, set this value to zero (0).
- **Victory Allowed** – Victory (or defeat) can always be granted via triggers (see the section on Triggers later in this chapter). However, you can check this checkbox to allow a player or team to win by eliminating all the opposing players in the scenario in standard conquest fashion. This box is unchecked by default since designers generally prefer to set up their own victory conditions via triggers.
- **Teams Locked** – If checked, players are not allowed to change their diplomatic stances towards one another during the scenario on the Diplomacy screen. The scenario designer, of course, can still change stances via triggers.
- **Cheat Codes** – Check this checkbox to allow players to use Empire Earth’s cheat codes while playing the scenario. This is unchecked by default.
- **Unit Improvements** – Check this checkbox to allow players to improve their units during the scenario. If unchecked, players are not allowed to improve the attributes of their units when playing the scenario.

Story/Instructions Screen

On this screen you set various story elements for the scenario – instructions, hints, and others. This information can be changed during a game by creating appropriate triggers (explained in the Triggers Screen section). All the information below is displayed in its appropriate place on the Scenario Intro screen.

- **Scenario Inst. Map** – Choose the JPEG file for the map you want to display on the Scenario Intro screen, where the instructions are shown. These files must be saved in the ..\data\scenario folder.
- **Movie** – Choose the movie file you want to play before the start of the scenario. These files must be saved in the ..\data\movies folder. Only Bink Video (.bik) is supported.
- **Inst. Sound Over** – Choose the MP3 file to use for sound effects, voice over, or music for the Scenario Intro screen. Mp3 files must be saved in the ..\data\sounds folder.
- **Scenario Instructions** – Enter the instructions for the scenario. These can include directions and objectives. Instructions appear at the beginning of the scenario on the Scenario Intro screen (along with the maps and sounds, if any).
- **Hints** – In this field you can enter hints for the scenario. The hints are shown on a separate screen from the instructions so players won't see them unless they want to read them.
- **History** – Add any history or background information for the scenario in this field. This is optional but can be useful for providing an historical context or story elements.

Civilization Builder

You can enter the Civilization Builder to create customized civilizations for your scenario. See Chapter XIV in the EE Manual for information on how to use the Civilization Builder.

Triggers Screen

On the Triggers Screen you can create “triggers” which control actions and events that transpire during your scenario. There are five trigger components from which you build the conditional trigger statements. The components are: Triggers, Conditions, Effects, Objects, and Areas. They are defined below and described in detail in the following sections.

- **Trigger** – A Trigger is a set of conditions and related effects. Every trigger is periodically evaluated by the game engine. If a trigger's conditions are evaluated to be TRUE, then the trigger's effects are queued to happen in the game.
- **Condition** – A Condition is an expression evaluating some state of the game which can be tested to be TRUE or FALSE. For example, a condition might be: “Player2 has a population that is greater than or equal to 100.” If Player2's population count equals or exceeds 100, then this condition would be evaluated as TRUE. If Player2's population count is less than 100 the condition is FALSE.
- **Effect** – An Effect is an action, event, or change in the game that can be caused to occur. For example, an effect might create new units for player 1 or take 200 stone away from all computer players.
- **Object** – An Object is a unit or list of units (or buildings), which can be combined with a state such as “has 50 hit points” or “is near Player2's Town Center.” These may be specific units selected on the map or general-purpose descriptions of objects, such as “any cavalry archer that belongs to player 1.”
- **Area** – An Area is a rectangular region selected on the map, a specific continent or ocean, or “off” the map. You can also select a “town.”

Each component is accessible by clicking the button of the same name. For example, click on the Object button if you want to define an object. For each of the component types, you can create new ones, duplicate existing ones, or delete them. You can also reorder the lists of the components and give each component a unique name.

- **New** – Click the New button to create a new component (e.g., a new trigger or new object). You will need to click this button whenever you want to create a new trigger or trigger component.
- **Duplicate** – Select a component in the list and then click the Duplicate button to create an exact copy of it. The name of the component will be appended with “_Copy”.
- **Delete** – Selecting a component and clicking the Delete button will permanently remove it from the list of components.

- **Reordering** – The up and down arrows just to the left of the component list is used for moving a component up or down within its list. Select a component in the list and use the arrows to move it up or down. You can alphabetize the list by pressing the AZ button (except the Trigger list because the order of the triggers is important – see the following section on Triggers).
- **Name** – You can name the selected component by typing a name in the Name text box. Default names called “autonames” are shown in triangular brackets (“<>”).
- **Hide UI** – The checkbox just to the right of the Exit button (at lower-right) shows or hides the upper portion of the UI on the Trigger Screen. This is useful if you need to see more of the map on the screen.

The Description field allows you to leave notes to yourself (or others) about what each defined component is meant to do.

TIP: You can “jump” to a specific component you have defined by right-clicking on it. For example, in a trigger definition, you can right-click on a specified condition to immediately jump to the definition of that condition. Then, you can click on a specific object in that condition to jump to that object.

Component Names

It is very helpful to give components meaningful names so that they are easily identifiable. All components are given “autonames” for convenience, but you should come up with your own names to keep all the components and their uses straight. The autonames for conditions and effects are self explanatory, but autonames for objects are a little more involved. A full explanation of the object autonames is given in the Objects section later in this chapter. All autonames are enclosed in triangular brackets – for example, “<play sound>” or “<citizen213>” – so that they can be easily distinguished from the names you enter yourself.

Triggers

Clicking the Trigger button displays the controls used for setting up triggers. Triggers are made up of Conditions and Effects, which in turn are made up of Objects and Areas. Thus, to create a trigger, you must first create Objects and (optionally) Areas, and then Conditions and Effects. (Objects, areas, conditions, and effects are all explained in their own sections later in this chapter.)

Every scenario should have at least one trigger, this being the trigger that sets the victory conditions, unless you decide to turn on the Victory Allowed option (set on the Player Setup Options page). If Victory Allowed is enabled, then you do not need to create any triggers for your scenario if you do not want to. Every trigger you do create will be comprised of at least one Condition and one Effect.

You can name your triggers to make them easier to identify (default autonames are Trigger0, Trigger1, etc.). Once a trigger is defined, it is periodically evaluated during the scenario. If and when a trigger’s conditions are evaluated as TRUE then the trigger “fires” and its effects are put in a queue to be carried out. Triggers are evaluated once every game second. The options for triggers are described in the following subsections.

NOTE: A game second may not be the same as a real second – it depends on what the game speed is set to.

Trigger Order

The order of the triggers is important. You can set the order in which your triggers are evaluated by selecting a trigger in the list and using the up and down arrow buttons next to the trigger list. The reason trigger order is important is because certain triggers may require that other triggers fire first in order to work as intended. For example, if Trigger1 creates 4 Citizens and Trigger2 tells the 4 Citizens to gather wood, then Trigger1 should appear before (above) Trigger2 in the trigger list or else Trigger2 won’t have

any Citizens to act upon. If you wish, you can use the checkbox beneath the arrow buttons to display the unique number that was assigned to each trigger when it was created.

Trigger is On

New triggers are set to ON (box is checked) by default. You can set this OFF (box is unchecked) to keep the trigger from being evaluated, for example, if you want to have another trigger turn it on at a later point in the scenario. Once a trigger fires, it is turned OFF automatically (unless Looping is set ON – see below).

Condition True For

This control sets how many game seconds the condition(s) of a trigger must be TRUE before the trigger fires. The default is zero (0) – in other words, the instant the conditions are met, the trigger fires (though the effect(s) can be delayed, see the Trigger Statement section, below).

Looping

You can set a trigger to “loop” so that it is always active – that is, it does not turn OFF after it fires.

- ON – The trigger is constantly reevaluated even if it has already fired. Thus, the effects are carried out whenever the trigger is evaluated to be TRUE.
- OFF – The trigger is evaluated until its conditions are met (TRUE), then it fires once and is never reevaluated (unless turned back on by another trigger).

TIP: Strange things can happen if looping is turned on. Since the trigger stays active, the effect(s) will be carried out every game second that the conditions remain TRUE. Thus, if the effect is to create a Musketeer, your map might soon be filled with Musketeers! Once fired, a looping trigger is marked as “Has Fired.” You can then have another trigger check to see whether a looping trigger Has Fired and then use that trigger to turn the looping trigger off.

Include in Cinematic

Check this box if you want the trigger to be evaluated during Cinematic Mode. This is set OFF by default, meaning the trigger is evaluated only while the scenario is in progress and no cinematic is playing. See Start and End Cinematic Mode in the Effects section for more information.

Trigger Statement

The Trigger Statement defines the trigger in the form of an “IF... THEN” statement (e.g., IF Condition0 THEN Effect0). You choose the conditions and effects for a trigger via drop-down lists, one for each condition and effect in the trigger. These drop-down lists contain all the conditions and effects that you have created for the scenario (so you must create conditions and effects first; see the Conditions and Effects sections later in this chapter). Before you choose any conditions or effects via the drop-down lists, default values are used as place holders. “Always True” is the default Condition and “Do Nothing” is the default Effect.

Operators

Conditions can be combined using the operators NOT, AND, or OR. Effects can be combined using AND or OR. The END operator indicates the last condition or effect in the trigger. The AND and OR operators are chosen via drop down lists between the conditions and effects. The NOT operator is activated via a checkbox directly before the condition it is meant to modify. For effects, a Delay (in game seconds) can be specified.

The operators obey the following rules:

- **Not** – Any condition may be preceded by a NOT operator. The NOT operator applies only to the condition immediately following it and does not effect any other condition in the trigger. As you might expect, NOT tells the trigger to evaluate the condition as TRUE when the condition is NOT met.
- **Delay** – Entering a delay tells the game to wait the specified number of game seconds before carrying out the effect that immediately follows it. The delay count starts when the conditions are evaluated as TRUE and the trigger fires – this is considered time zero (0). Therefore, if different effects in a single trigger have delay times set, the delays are all relative to that zero time, and not relative to one another. Also note that, regardless of the delay time, there is no way to cancel an effect once it is queued up.
- **And** – Any condition may be immediately followed by an AND operator. If the condition preceding the AND operator is FALSE, then the condition(s) following the AND operator will not be evaluated. Effects can also be chained together using AND.
- **Or** – Any condition may be immediately followed by an OR operator. The OR operator logically joins all the conditions preceding it with all the conditions following it (until another OR operator is encountered). If the conditions preceding the OR operator are TRUE then the conditions following the OR operator will not be evaluated. For effects, the OR operator can be used to essentially randomize the effects of a trigger (e.g., play effect1 OR effect2 OR effect3).
- **End** – End is used to signal the end of the list of conditions and the end of the list of effects in the trigger statement. It appears only after the last condition and the last effect in the trigger.

TIP: There are no parentheses available for grouping conditions or effects in trigger statements. Such groupings can be created only by using the OR operator, so an expression such as “Condition1 AND (Condition2 OR Condition3)” can be expressed as “Condition1 AND Condition2 OR Condition1 AND Condition3”. The conditions in a trigger are always evaluated from left to right.

When either AND or OR is chosen, a new condition or effect is automatically added to the trigger statement (e.g., the first condition in the trigger is called Condition0, the next is called Condition 1, and so on). The left and right arrow buttons that appear on either side of the trigger statement allow you to scroll through the conditions and effects. You can have as many conditions and effects in a trigger as you want, but bear in mind that the longer a trigger is, the longer it will take for the game engine to evaluate it.

Deleting Conditions and Effects

You can remove conditions and effects from the trigger statement by clicking the Del button that corresponds to the condition or effect you wish to remove. For example, clicking the Del Condition1 button will delete Condition1 from the trigger statement and Condition2 (if there is one) will “slide down” to become Condition1, Condition3 will become Condition2, and so on. The Del buttons appear only if there is more than one condition or effect in the trigger statement because each trigger must have at least one condition and one effect.

Conditions

Clicking the Condition button displays the controls used for setting up conditions, which may then be used in triggers. Conditions are the parts of triggers that are evaluated to determine whether or not the trigger’s effects should take place. There are several types of conditions, chosen from a drop-down list, which are described below. The default condition is “Always True” which is useful if you want a trigger to fire immediately when the scenario starts. The specifics of the condition definitions are entered using the controls under the “Condition Details.”

Object Exists

An “Object Exists” condition is created automatically for each object you create for the scenario. When objects are added, deleted, or renamed on the Objects screen, their corresponding “object exists” condition is modified accordingly. Since there may be many of these conditions, they are not displayed on the Conditions screen, but are available on the Trigger screen in the Conditions drop-down lists.

The Object Exists condition is a general condition that tests whether the object you defined is in the state you defined. It is used if you want to evaluate the state of any units, buildings, trees, animals, etc. that you have defined as an object on the Object screen. For example, you could test to see whether a specified unit has entered a specified area or if a particular building has less than 50% of its hit points left. See the section on Objects for more information on objects and their possible states.

Player Conditions

You can set conditions that apply to particular players. In each such condition, you can choose the player(s) to whom the condition applies via a drop-down list. Your choices are:

- Any Human – Any of the human-controlled players in the game.
- Any Computer – Any of the computer-controlled players in the game.
- All Human – Every human-controlled player in the game.
- All Computer – Every computer-controlled player in the game.
- Any Exclude World – Any human or computer player, but not the “world player” which controls animals, trees, and other such objects.
- Player # – The player number indicated by the # (e.g., Player2).

Player Has Attribute

This condition is used either to test whether the selected player(s) has a certain amount of a given attribute or to compare attributes between players. For example, you might set a condition to test whether Player 1 has the same or more gold than any computer player. The different options for this player condition are explained below.

Attribute

This is the attribute to be evaluated. There are many player attributes (or statistics) to choose from, most of which are tracked by the game for the post-game statistics.

The choices are fairly self-explanatory – here are just a few examples:

- Resource – There are several choices: Any Resource, All Resources, or a particular resource.
- Population – The total population count.
- Units Killed – The total number of killed units.
- Razings – The total number of buildings destroyed.
- Conversions – How many units have been converted.

Modifiers

Choose an inequality or equality symbol to use in the condition.

- < – Less than.
- <= – Less than or equal to.
- > – Greater than.
- >= – Greater than or equal to.
- = – Equal to.

Use Amount or Use Player Attribute

If Use Amount is selected, you must enter a number. This is the amount that will be used to evaluate the condition, for example, if Player 2's gold is greater than 1000.

If you choose Use Player Attribute, you must select another Player and another attribute. The specified attribute of the first player(s) you chose will be compared to the attribute of the player(s) you choose here. Note that you can compare different attributes to each other, such as gold to population. The exact values of each are used for the comparison. If you want to compare the same attribute (e.g., gold to gold), you must select the same attribute in both attribute lists.

Player Has Technology

This Player Condition is used to test whether the selected player(s) has researched a certain technology, Epoch, or can train a certain unit. The technology, upgrade, or Epoch must be researched for the condition to be TRUE. The unit, however, does not have to be trained, just available to the specified player(s).

Has Researched

Choose a particular technology, Epoch, or unit from the drop-down list. Every such thing available in Empire Earth including buildings and unit upgrades is listed here.

Player Has Diplomacy

Using this condition you can test one or more players' diplomatic stance against any other player(s). For example, you might want to check to see if Player1 is an enemy of Player2.

Diplomacy Toward

This sets up the comparison. The first player selection you made is compared against the player(s) you select here. You can also choose the diplomatic stance: Ally or Enemy.

Trigger Has Attribute

This condition allows you to specify the state another trigger must be in for the condition to be TRUE. An example of its use is if you want a certain trigger to fire only after another trigger has fired.

Trigger

A drop-down list of all the existing triggers in the scenario.

Is On

The specified trigger is active but has not yet fired. (You can create a trigger to turn other triggers ON or OFF. See the Effects section.)

Has Fired

Once a trigger is fired, it is always in the state of "has fired." (You can create a trigger to reset a particular trigger to "not fired." See the Effects section.)

Game Has Attribute

Using these types of conditions, you can create triggers that test various game attributes. The choices are: Difficulty Level At, Elapsed Time Is, and Hour Is.

Elapsed Time Is

Set this to the number of game seconds you want to elapse from the start of the game before the condition is considered TRUE. You can enter both a Minimum and a Maximum value.

Hour Is

The condition will be TRUE anytime after the specified hour (in game time). The game uses a 24 hour clock (0-23), with 0 being midnight. Hour Is can be used to have effects take place during a particular part of the day/night cycle – for example, to have enemy units attack at night. Set the hour using the slider.

Chat Message Contains

Allows you to enter a string which, if it appears in any player's chat message, will cause the condition to be TRUE. The string is not case sensitive, but note that what you enter in this edit box must appear character-

for-character somewhere in the chat message. For example, the string “gold” would be found in the chat message “Give me 10 Gold.” But the string “give gold” would not be found in that same chat message.

Effects

Clicking the Effect button displays the controls used for setting up effects, which may then be used in triggers. Effects are the results of triggers, in other words, what happens in the game when a given trigger is fired. Delays can be implemented to keep the effect from happening for a specified number of game seconds (the default delay is zero (0) seconds – see the Trigger Statements section). There are several classes or “types” of effects, which are explained in the following subsections. The default effect for any new trigger is “Do Nothing,” which, appropriately enough, does nothing. It is merely a place holder.

Object

This class of effects has to do with objects, that is, units or buildings and their related states (see the Objects section). The effects below can apply to any object you define.

Create

Creates a specific unit or building in the location specified in the Object definition. The location can be relative to a defined object or in a defined area. When creating an Object, only the In Area, LOS/Range/Near, and Has Attribute modifiers are checked to decide where to place the object on the map. The Visible By, Has State, and Selected By modifiers are ignored when an object is created (See the Objects section, later in this chapter, for information about these Object States).

Freeze

Takes away control of the specified object (unit or building). The frozen unit(s) or building(s) may be selected, but cannot be given commands or take damage, nor can they be deleted. Planes in flight that are frozen will circle, but will not lose flight time. Frozen units will still “fidget” – they are not frozen in the literal sense. Also, frozen units can still be affected by other trigger effects.

Unfreeze

Restores a frozen object to full control. The unit(s) or building(s) return to whomever’s control they were originally under.

Kill

Kills the specified unit(s) or building(s). The appropriate death animations and sounds play.

Remove

Permanently removes the specified unit(s) or building(s) from the game. No animations or sounds are played. This might be used, for example, to simulate a unit entering a building.

TIP: Use Task Object to Area to temporarily remove units from the map by selecting “off map” as the area.

Task Object

This effect commands the specified unit(s) to move to another defined object (such as another unit or a building). You can also specify a particular task or “action” that the unit(s) should carry out at the destination from the drop-down list. These actions work the same way they do during a standard game. If you specify “Normal,” the unit will perform whatever its normal right-click action is; for example, if a military unit is tasked to an enemy building, it will attack the building while a Citizen tasked to a resource will gather that resource.

If the normal right-click action is inappropriate for units in the Object (e.g., a military unit was tasked to a forage site) then those units will go idle once they reach the site. Selecting “patrol” or “attack move” will make this effect operate like Task Area (see below). The game will approximate the center tile of the location where the target Object is on the map and the units in the first Object will attempt to move to that tile.

NOTE: Use of this effect will unfreeze the specified unit if it was previously frozen.

Task Area

Same as Task Object except the unit(s) move to a specified area. (Defining areas is described in the Areas section, later in this chapter.) You can also move objects to the “off map” area, which removes them from the map but does not delete them from the scenario. This is like a storage area for units. To put them back on the map where they were, use the Previous Location area or you can task them to any other area on the map. However, if there are no unoccupied tiles in the specified area, then the unit will not come back from off map.

NOTE: Use of this effect will unfreeze the specified unit if it was previously frozen.

Stance

Allows you to set the specified object’s stance or behavior. The choices include all the standard unit behaviors as well as special stances such as Explore and Idle:

Unit Attribute

Lets you modify the attributes of the specific unit(s) or building(s) defined in the object. For example, you can change a unit’s hit points, used flight time, even how much stone a Citizen is carrying. The attribute you want to modify is chosen via the drop-down list. You can adjust the attribute up or down by a set value (number) or a percentage. If a unit’s hit points are set to zero or less, the unit dies.

NOTE: Attributes that apply to every unit of that type, such as Shock Armor or Attack Strength, are set using the Set Unit Class Attribute effect, described below.

Owner

This effect causes the unit(s) or building(s) in the defined object to change ownership. The unit(s) or building(s) can be given to a specific player or a randomly chosen player – the choices are similar to those available for the Player Conditions.

Units that have been damaged will still be damaged after the ownership change, however other modifications (such as using Set Object Attribute to increase the shock armor of a unit class) will be lost unless the new owner has had the same modifications made to that unit class.

NOTE: If a transport (including Airports and Fortresses) changes hands, any units inside the transport will also change owner whether they were members of the target Object or not.

Class Name

You can change the name of a unit type (i.e., class) with this effect. Note that all units of the type selected will be renamed, but only for the player to whom the units belong. For example, if you changed the name of one of Player 1’s Composite Bowmen to Robin Hood, all Composite Bowmen belonging to Player 1 would be renamed Robin Hood. Units that change ownership will receive the name appropriate to the player who receives them.

TIP: Name your units or buildings with a space preceding the name (press space bar once) to get the new name to show up when a player moves the mouse pointer over the

unit or building. Also, it's a good idea to set unit names right at the start of a scenario so that players do not briefly see the old unit name before the new name takes effect.

Face Object

Lets you set a direction for a unit to face. Select the units from the Object menu. Then set the direction for the units to face in degrees (°). Zero degrees (0°) is towards the top-right of the map. The degrees then run counterclockwise, so 45° points to the top of the map ("north") and 225° is towards the bottom of the map. If you select the Snap option, the units will instantly align themselves to face the direction you set. If you leave Snap unchecked, the unit will quickly rotate to the desired direction.

Class Attribute

With this effect you can change an attribute for an entire unit class, e.g., all Simple Bowmen or all Hospitals. This is similar to how Unit Improvements work in a standard game. You can either Increase or Decrease the chosen attribute via drop-down list. Each attribute can be changed by an exact amount or, by clicking Use Percent, you can specify a percentage for the change. Changes are relative to the base value of the selected attribute for that type of unit or building. The changes are also player-specific, so modifying the Marines of Player 1 will not affect the Marines of Player 2.

If an Object consists of units of different types, such as M1 tanks and Marines, both of these unit classes would be affected by the change in Attribute, so be careful not to adjust an attribute too high or low for one of the unit types you have selected. For example, you might Decrease the Hit Points of the M1's but this same decrease applied to the Marines will kill them!

NOTE: The plus (+) at the end of the attribute simply means that the attribute applies to a whole unit class rather than a specific unit.

TIP: Use this Effect to turn on or off the AI for the animals (e.g., hippos, chickens, etc.) in the scenario. The AI is on by default. To disable the animal AI, be sure the type of animal is represented in the object to which you are applying the effect. Then, choose the Animal AI Active+ attribute from the Attribute list. Decrease this attribute to a negative value to disable the AI for that type of animal. To enable the AI again, increase the value to a positive number.

Player

This class of effects is used to affect specific players. The effects, explained below, include awarding victories and allocating resources.

Award Victory

This Effect allows you to immediately award Victory to the specified player or players. Players that are not specified and are not on the same team as a specified player lose the game.

Script Camera

Using the Script Camera effect, you can create your own in-game movies. Specify the player(s) for whom the movie will play. Then set the following controls as you wish:

- **Move Camera** – Select Use Area or Use Object and select any area or object that you have already defined. The camera moves to the specified object or area (for large areas, it moves to the center of the area). To "turn off" Move Camera for a given effect, choose Off Map for the area or Empty Object for the object. Do this to make the camera rotate in place instead of move.
- **Face Camera** – Select Use Area or Use Object and select any area or object that you have already defined. The camera rotates to face the area or object specified. (Again, for large areas, the center of the area is the focal point.) To "turn off" Face Camera for a given effect, choose Off Map for the area or Empty Object for the object.

- **Follow** – Check this box to have the camera follow the object specified under Move Camera. If the camera is both moving with an object and facing an area, you might want to check this box to ensure the camera can stay pointed towards the area while it is moving around with the object.
- **Track** – If Track is checked, the camera continues to face the object specified under Face Camera even if the object moves.
- **Scroll Speed** – Set the speed of the camera's movement: Snap (i.e., the camera cuts immediately) or choose a number from 1 to 99. 99 is the slowest.
- **Zoom Level** – Set the level of the zoom from -50 to 50, or choose "Current" to use whatever the current zoom level is for the player. 50 is a wide shot of the ground from high in the air, 0 is a ground-level close-up, and -50 looks up towards the sky from ground level. This is the same way the zoom (mouse wheel) functions when you are in the Scenario Editor.

NOTE: Use the Game Effect "Start Cinematic Mode" to take away the player(s) ability to control the game so that he or she must watch the movie (unless they choose to exit the movie by pressing Esc). End Cinematic Mode restores control to the player. (See the Game section, below.)

TIP: Place Camera Markers in your scenario to set an exact view with the camera. A Camera Marker marks the view shown on your screen at the moment you place the marker. This allows you to set up a camera shot without using a defined object (e.g., a tree or building) or area as a reference point. See Placing Camera Markers in the Unit Placement Screen section, earlier in this chapter, for more information.

Defeat

The specified player(s) immediately lose the game. The teammates of the player(s) are not affected.

Set Diplomacy

Changes the specified player(s) diplomatic stance toward another specified player or players to ally, neutral, or enemy.

Set Attribute Level

Allows you to increase, decrease, or set the exact amount of a particular attribute for the specified player(s). There are many attributes you can alter, including the population count, a specific resource amount, a randomly chosen resource, or all resources. You might, for example, increase Player 1's food by 500 as a reward for performing some task. Note that you can alter the player's statistics shown on the Post Game Summary screen by using this Effect.

Modify Tech Tree

This effect lets you alter the specified player's technology tree so that certain technologies and units are either available or not available during the scenario. For example, you could remove Stone Throwers for Player 1 so that Player 1 could never produce them during the scenario. Alternately, you could grant Player 1 the ability to make Stone Throwers. Note that making units available does not automatically make the building that produces them available. So, if a player is in the Copper Age and a trigger gives them aircraft technology, they will not be able to produce aircraft unless the Airport is also enabled (and constructed). If you enable the Airport but not the individual aircraft units then the building will be useless.

Award Civ Points

This effect lets you reward a player with civ points that can be used in the Civ Builder to purchase new attributes for the player's civilization. You can specify which player(s) and the number of civ points to award.

Fade In and Fade Out

These two Player Effects allow you to fade in the screen from black or fade out to black for the specified player(s). These effects each last for about 3 seconds and function only in Cinematic Mode (see Game Effects).

Visibility On/Off

These two effects allow you turn on or off full map visibility for the specified player. This does not effect any “visible by” object states.

Minimap Flare

With this effect, you can set off a Mini-map Flare for the specified player(s). Select whether to Use Area or Use Object, then specify the area or object over which the flare should fire. (For areas, the center of the area is used.) The Flare will be visible to the player(s) you set on his/her Mini-map.

Trigger

This class of effects modifies existing triggers. With it, you can turn specified triggers On or Off, or set their state to “Fired” or “Not Fired” regardless of whether they have been fired already. Triggers can be essentially “reset” using this effect.

Trigger

This is a drop-down list of existing triggers that allows you to pick the trigger you want to modify.

State

Lets you choose the state the specified trigger will enter once the effect takes place. There are four states from which to choose:

- **On** – Turns the specified trigger on.
- **Off** – Turns the specified trigger off.
- **Fired** – Causes the specified trigger to be evaluated as having been fired – note that this does not actually fire the trigger, but merely sets its status. Once a trigger is set to fired, it is always in the state of “has fired.” (You can reset a trigger using “not fired.”)
- **Not Fired** – Causes the specified trigger to be evaluated as never having been fired. This is the only way to fully reset a trigger once it has fired.

Media

This class of effects plays sounds, sends messages, and changes storyline text. Such effects are very useful for progressing a story or for giving a player directions or hints during the scenario.

Play Sound

Causes the specified sound file to play. The sound file must be in MP3 or .wav format and be saved in the ..\data\sounds directory under the Empire Earth root directory. Be sure to enter the extension of the file in addition to the file name. This effect could be used, for example, to give vocal directions or special audio cues.

TIP: If two MP3's are played in close succession, the second one may start before the first is finished. To ensure that your MP3s do not overlap, you should specify a delay time in your trigger definition for the effect that plays the second MP3.

Change Text

Changes the text entered on the Story/Instructions Screen (see the Story/Instructions Screen section earlier in this chapter). You can change the Hints, Instructions, and set the Loss and Victory text. You may either use Add Line to add your new text to the end of the old text, or select Clear to delete any specified text. Adding a line will automatically insert a carriage return for you, so the next line of text will appear on its own line.

Send Dialogue

Lets you send a dialogue message to the specified player(s). A dialogue message appears in the top-center of the screen, as opposed to a chat message, which appears at the left just like in a regular game.

- **Object** – Specify a defined object. The dialogue message will seem to come from the object. The portrait of the unit appears next to the message and the camera moves to look at it.
- **Player** – Specify the player(s) to whom this dialogue message is being sent.
- **File Name** – You can specify an MP3 or a .wav file to play along with the dialogue message. This could be a voice over of the message, for example.
- **Message** – Type the dialogue message in this field.
- **Camera Scroll Speed** – Set the speed that the camera moves to the specified object. The camera automatically zooms in on the specified object, and follows the object if it moves. You can set the scroll speed to Off (the camera does not move to the object), Snap (the camera cuts to directly face the object), or a speed from 1 to 10, 10 being the fastest.
- **Duration in Seconds** – This controls how long the message stays on the screen. If an audio file is specified, the dialogue will stay on the screen for the time it takes to play the audio file plus the time specified here. If no file is given, the message remains on screen for the amount of time specified here. When any dialogue completes, any sounds currently playing may be cut off.

Send Chat Message

Sends a chat message you provide to the specified player(s). The message appears in the chat area of the screen as opposed to the dialogue area.

- **Player** – Specify the player(s) to whom this chat message is being sent.
- **Duration in Seconds** – This controls how long the message stays on the screen.
- **Message** – Type the chat message in this field.

TIP: To make it appear as though a chat message is coming from a particular player or unit, manually enter a suitable name in the Message text field and type the message after the name.

Game

The following types of Effects produce effects related to the game world.

Set Daylight Hour

Allows you to set the hour in game time. The game clock is a 24-hour clock with 0 (zero) being midnight and 12 being noon. Using this effect you could have a scenario take place at a certain time of day – at dusk, for example. Note that this effect does not turn on the day/night cycle if it was turned off – it merely sets the time of day.

Set Day/Night Cycle Time

Set this to 0 (zero) to turn the cycle off. Any other value turns the day/night cycle on.

Start Calamity

Starts the specified calamity in a specified area or near a specified object (building or unit). This effect might be used to simulate a natural disaster, for example.

NOTE: The protective area of effect of Temples applies in scenarios, so calamities targeted on a protected area will not take place.

Fire Graphic Effect

Allows you to play a graphic effect, such as an explosion or water ripple or even a calamity (without the calamity's destructive forces). Select the effect you want to play from the Graphic Effect list. Then pick the defined object or area where you want the graphic effect to appear.

NOTE: Graphic Effects that require a unit to act on are labeled "(Unit)". Graphic Effects that require 2 or more units to act on are labeled "(Units)".

Start and End Cinematic Mode

These two effects are used to put the scenario into and then out of Cinematic Mode. While in Cinematic mode, the screen is shrunk to a letterbox format, units take no damage, and players have no control over the game. Essentially, the game "waits" for Cinematic Mode to end before the scenario continues. At any time, players can press the Escape key (Esc) on the keyboard to exit Cinematic Mode and return to the game. Otherwise, they must wait for the End Cinematic Mode effect to fire and return them to the game. The only two other active hotkeys are F3, which pauses the game (but not a sound in progress), and F9, which takes a screen shot.

With Start Cinematic Mode, you can specify the Game Speed – which controls how quickly the cinematic plays – by adjusting the slider. Setting the Game Speed to 0.1 creates a "freeze frame"-like effect. Note that the game continues to evaluate triggers in the background even if the Game Speed slider is set to its lowest value.

Triggers must be checked "Include in Cinematic" in order to be evaluated during Cinematic Mode. If not, they are ignored until Cinematic Mode ends. Any Trigger Effects that are queued to happen in Cinematic Mode will be aborted if Cinematic Mode ends before the Effects take place.

NOTE: Every Start Cinematic Mode should have an accompanying End Cinematic Mode or else the player is forced to press Escape to return to the game. When Cinematic Mode starts, any audio that is currently playing will be cut off. **Delays specified in the trigger definitions for Effects in Cinematic Mode are in Real Time and not Game Time.**

Ambient Weather

Turn ON or OFF the ambient weather effects (rain and snow).

AI

The AI Effects allow you to fine tune the computer players in your scenario. These effects give you much greater control over how the computer players behave compared to the AI Settings page.

NOTE: If you are planning to use computer players in your scenario, you must define where each computer player's starting position is located. For each computer player, the first land unit you place on the map that is not a building (i.e., a unit that can move) defines that computer player's "home base." Do not use a ship as that will put the home base in the water. You can, if you want, set up a trigger to kill that first unit as soon as the scenario starts. The computer player will defend its home base and perform most of its initial activity there (assuming it is an active player).

Modify AI Military Target

This Effect allows you to define additional, specific targets that the computer player(s) can either attack or defend (if it chooses to do so). These targets – which can be either an object or an area – are added to the

computer player's own preferences of what to attack or defend. When the computer player decides where to send its military units, it chooses from among all its preferences more-or-less randomly. You can tip the balance towards a particular target by creating more than one Modify AI Military Target effect that defines the same target.

You have several options when defining a possible military target:

- Choose the computer player you want to affect.
- Choose whether to use an Object or an Area as the target, then choose the specific one you want from among the objects and areas you have already defined.
- You can either Add a new target or Remove a target from the preference list.
- Finally, decide if the target is to be considered for an attack or defense.

Create AI Military Group

With this Effect, you can have the computer player(s) create a military group with units you specify and then have them either attack or defend a specified target. To create a military group:

- Choose whether to attack or defend the indicated target (if the Attack option is not checked, the military group will defend) with the military group.
- Check whether or not to have the computer player fill out the military group by choosing units from its predefined list of "Favorite" units.
- Choose whether to use an Object or an Area as the target, then choose the specific object or area you want from among the objects and areas you have already defined.
- From the list of Objects to Add, select which of the objects to include in the military group by clicking on the object in order to move it to the Objects Added list. Choices that do not make sense (e.g., a building or another player's units) are ignored.

NOTE: The effect of attacking or defending with the military group is a goal that the computer will work toward and carry out as soon as it has the units to commit; it will not necessarily happen immediately when the trigger fires.

Build Object

With Build Object, you can give the specified computer player(s) a goal to create a specific object. Just select the player and the defined Object that you want it to construct or train. This becomes the player's top build priority.

Maintain Object

Like Build Object, except this is an object that the computer player gives top priority for repair.

Set AI Toggle

This AI Effect allows you to turn on or off (activate or deactivate) any of the options available on the AI Settings page. The choices are identical to that page; this just gives you a way of changing those settings during the scenario.

Set AI Variable

This effect allows you to modify any of the AI variables in the game. The list of variables is extensive and they should be altered with caution. Help text provides information on what each variable controls.

Set Favorite Units

With Set Favorite Units, you can choose the computer player's favorite air, land, and sea units via the drop-down lists. Favorite units are given preference when the computer player creates units for any purpose, assuming specific units have not otherwise been specified.

Objects

Clicking the Object button displays the controls used for setting up objects, which may then be used in conditions and effects. “Objects” refers both to objects (e.g., units, buildings, etc.) and the possible states they may be in (e.g., owned by player 1, is in a specific area, etc.). Objects are used as qualifiers for Conditions, recipients of Effects, and to define where an Effect takes place.

NOTE: Be sure to use a unit (e.g., Citizen, Knight) in all your object definitions BEFORE placing it on a transport because you cannot add that unit to or remove or remove it from Objects after it becomes part of a transport’s cargo. You can, however, change the qualifiers of the Objects of which that unit is a part.

Object Autonyms

The autonaming of objects uses a few rules and symbols to help distinguish between similar objects. If an object contains a unit selected on the map, it is given an autonym of the unit’s class type (town center, citizen, clubman, etc.), followed by the unit’s unique identification number. Thus, one object may be named “<citizen213>” and another “<clubman012>”. If an object contains multiple units selected on the map, it is given an autonym of the first unit selected followed by a “+” symbol to indicate that there are more units in the object. For example, if an object contained both a Citizen and a Clubman, its autonym might be “<citizen213+>”.

For objects that use an Object Specification (see below), the autonym consists of the name of the class of unit used by the object. This may be additionally followed by an asterisk “*” if the object is dynamic. If the Object Specification uses a nested object, its autonym starts with a “#” and is followed by the name of the nested object.

Select On Map

This is a method of selecting units and buildings for use in an object definition. The names of the selected units appear in a list. You can select specific units and buildings on the map by clicking on them or “lassoing” them. Left-clicking and lassoing continually adds units to the object definition. Right-clicking or right-lassoing selected units removes them from the object definition. If you right-click on an empty part of the map, all units are removed from the object. Clicking on a unit in the list centers the map on that unit.

Object Specification

With Object Specification you can specify different units or buildings that are not yet on the map to be part of an object definition. During the scenario, the game engine looks for those units (or buildings) that fulfill the requirements you have provided and, once found, uses them in the object definition. Object Specifications are defined using the following criteria:

Owner

Use this drop-down list to select the player(s) who owns the unit(s) or building(s). Thus, for example, you can confine the Object Specification to look only for units that belong to player1 or that belong to any computer player, etc.

Family

This is a drop-down list of loose categories into which the unit(s) or building(s) must fall in order to be selected by the Object Specification. Families include buildings, submarines, mounted archers, heroes, units/buildings from a specific Epoch, etc. If a Family is selected, Class and Use Object are ignored.

Class

This is a drop-down list of specific unit types and building types, such as a Simple Bowman or a Hospital or a U-Boat. Use “Any Class” if you do not wish to specify a particular type. If a Class is selected, Use Object is ignored. Family supercedes both the Class and Use Object selections.

Use Object

You can create Objects that refer to other Objects you have already created. When you “nest” an Object inside a “higher-level” Object, the qualifiers of the higher-level Object overrule those of the nested Object, but only if the nested Object is of the type “Select On Map” or if it is an “Object Specification” that is not Dynamic. If the nested Object is Dynamic, then the nested Object is evaluated with its own qualifiers in order to return a list of units to the higher-level Object. Once the list of units is given to the higher-level Object, then the higher-level Object is evaluated with its own qualifiers.

In the case where a nested Object is defined as not Dynamic but it is not evaluated *before* the higher-level Object of which it is a part, then the nested Object is evaluated as if it were Dynamic – that is, it returns a list of units to the higher-level Object.

Example: Object A is defined as a citizen, selected on the map, with the qualifiers In Area and Selected By activated. Object B uses Object A in its definition and adds the qualifier Has Attribute with the value Hit Points = 50. Object A is, therefore, nested inside Object B. As a result, when Object B is evaluated, only the Has Attribute qualifier is used, so the trigger looks for the Citizen on the map and checks to see if it has 50 hit points. The other two qualifiers (i.e., In Area and Selected By) are ignored.

Use Object is always superceded by both Family and Class. If either is selected, the Use Object selection is ignored.

NOTE: Anytime you “nest” an Object in another Object with Use Object, the game will check to see if you are making a closed loop (e.g., A is nested in B which is nested in C which is nested in A). If this is the case, you will not be allowed to select that Object for nesting.

Dynamic

If Dynamic is unchecked, the first unit(s) or building(s) found to meet the indicated requirements will be chosen for the object definition and no further selecting will be done, even if the object definition is used in another condition or effect. Checking the Dynamic box means new units or buildings will be picked for the object each time the object is used (the same unit(s) may or may not be selected each time). This is useful if you want to use the same Object Specification in several condition and/or effect definitions but do not want the same unit(s) to be used each time.

Min and Max

You can set the minimum and maximum number of units or buildings to use in the object definition. When creating/selecting the object during the game, the game engine will be “satisfied” with the minimum number, but will try to find up to the maximum number of units or buildings that fulfill the requirements of the object. If you want the object to use a specific quantity, make Min and Max the same number. For example, if you always want five citizens to be chosen for the object, set both Min and Max to 5.

Object States

All of the states described below can apply to both Conditions and Effects, specifically the Object Exists condition and the Object class of effects. For the Object Exists condition these states act as qualifiers in determining whether the condition is TRUE or FALSE (for this purpose, all the qualifiers must be true in order for the condition to be evaluated as TRUE). For the Object class of effects they act as modifiers to describe how or where or to what the effect should be applied (e.g., kill a Citizen who is carrying 10 gold).

NOTE: The checkboxes for each of these States have three settings: OFF, ON, and NOT. OFF is represented by an unchecked box, ON is checked, and NOT is represented by an “X” in the box. The NOT setting is useful for excluding states, for example, NOT Near a specified object or NOT having a certain attribute.

In Area

If In Area is checked while a unit or building is selected, you can choose an area from among the areas you have defined (see the Areas section in this chapter). This is the “target area” for the condition or effect. Thus, you might want an effect to happen only when a specified unit enters a certain area. Bear in mind that you can also set the checkbox to NOT to have conditions be TRUE or effects fire when units are NOT in the specified area.

There are two special, predefined areas you can use: Off Map and Previous Location. The Off Map area is like a storage area for units that are not currently on the map but still exist in the game. It can also be used to remove units from the map that you want to return to the map later. The Previous Location area is used to return Off Map units to the location where they were when they were removed from the map.

NOTE: When the game tries to create an Object that is using the In Area qualifier, if the target Area does not contain any valid placement tiles for the object then the object will not be created.

LOS/Range/Near

Similar to In Area except you select an object (i.e., unit(s) or building(s)) instead of an area to be the “target.” For example, a condition might be evaluated as TRUE once a unit is within its Line Of Sight (LOS) of a specified building or an effect can be made to freeze units that are in Range of a specific cannon. The meanings of the states are as follows:

- **LOS** – The selected object is within its line of sight of the target unit(s) or building(s).
- **Range** – The selected object is within its attack range (for units) or area of effect (for certain buildings) of the target unit(s) or building(s).
- **Near** – The selected object is adjacent to the target unit(s) or building(s).

NOTE: Units that are Off Map or in a container (e.g., a transport) are never considered Near, in LOS, or in Range of another object.

Has Attribute

Lets you specify a particular attribute of an object (i.e., unit or building) that “narrows down” how a condition is evaluated or how an effect is applied. There are many attributes available in the drop-down list, such as Hit Points, Any Resource (being carried), or Attack strength. (A plus sign “+” means that attribute applies to an entire unit class, not just a specific unit or building.) You can set an exact amount, a range, or a percentage for the selected attribute. To set a range, enter a Min and a Max value. To set an exact amount, set the Min and Max to the same number. To use a percentage instead of an amount, check the % box. The percent is calculated with respect to the base amount of the specified attribute for that unit or building.

Bear in mind that if an object contains units of various types, then checking Has Attribute can lead to the Object State never being evaluated as TRUE if at least some of the units chosen do not all have that Attribute. For example, suppose you select a Battleship and a Chinook Helicopter Transport on the map and set an Attribute of “Cargo Count between 2 and 5.” Since Battleships cannot normally carry Cargo, this state can never be TRUE if it is used as an “Object Exists” condition in a trigger statement. Likewise, if you used that object in a “Kill Object” effect, the effect would not be carried out because no objects in the game fit the given description.

NOTE: Nested Objects can render the above example untrue. If Object A is a Bismarck and a Chinook, and Object B is Ref:A, Cargo 2-5, min1 max1, then Object B could be true if the player loads up the Helicopter.

Visible By

Lets you choose a player or players to whom the selected unit or building must be visible for the condition to be TRUE. For an effect, you might, for instance, give more hit points to a certain unit that is visible to Player 2. Visibility is determined by using the Line of Sight of any of the indicated player's units or buildings. Visible By is ignored for a Create Object effect.

Has State

This drop-down list is used to choose the task or action a specified unit or building must be performing in order for the condition to be TRUE or for the effect to be carried out. For example, you might want to have a condition be TRUE for a Citizen only when she is building/repairing a building. Or, you might want to have that Citizen go into a Defensive stance only while repairing a building. When used in a Create Object effect, Selected By is ignored.

NOTE: Many of the available unit/building states are specific to certain classes or families of units. For example, TakeOff, Taxi, Fly, etc. are specific to airplanes, while GatherResource applies only to Citizens.

Selected By

Defines the unit(s) or building(s) that the specified player must select in order for the condition to be TRUE. If a group is chosen for the object, only one member of the group must be selected for the condition to be TRUE. For an effect, Selected By could be used, for example, to remove a unit from the game if it is currently selected by a specific player. Selected By is ignored for Create Object effects.

Areas

Clicking the Area button displays the controls used for setting up areas, which may then be used in object and effect definitions. Areas can be defined in three ways: Select Rectangular Area, Select Continent Tile, or Select Town Tile.

Select Rectangular Area

Lets you select a rectangular area anywhere on the map. Select an area by clicking and dragging the mouse pointer over the desired area. The selected tiles are highlighted. When selecting an area, you can drag the mouse cursor off the map to select edge tiles.

Select Continent Tile

Continents are either areas of land or areas of water. A "continent" of land is any land mass surrounded by water that has a depth of two (2) or more. Land masses connected by shallows (water with a depth of one) are considered to be one continent. A "continent" of water (from here on called an "ocean") is any water mass of depth two (2) or more. Oceans entirely separated by land or shallows are considered to be separate oceans.

Select Town Tile

This works the same as Select Continent Tile, except the defined area is the Town (or towns) in which the selected tile is located. It finds all Towns (if any) that contain the selected tile and includes all the tiles in those towns in the definition of the area.

Center Camera On Area

You can center the camera on the selected area (in the list of areas) by clicking this button. This is a useful tool for reminding yourself where a particular area is. For rectangular areas, the camera centers on the center tile of the area.

Trigger Examples

The section is meant to introduce you to using the Scenario Editor, specifically how to create triggers. Because the Scenario Editor provides an essentially limitless number of possibilities, this set of examples can serve only as a basic introduction to the concepts and techniques of creating triggers and scenarios. The best way to familiarize yourself with the Scenario Editor is to experiment with it, and these examples provide a good foundation for that. (Thanks to Albert Meranda for these examples)

The following examples explain how to put together several basic trigger statements. They also demonstrate some of the basic functions of triggers. The main objective of this exercise is to create a trigger in which a unit entering a town causes nearby units to “freeze,” that is, the player loses control of the nearby units. Then you’ll create a trigger that reverses this condition, and another that prevents these two effects from happening at all. Finally, you’ll make a trigger that causes the town area to be destroyed if all the special effect units enter the town at the same time. Throughout the process, the triggers and components will be given useful names to describe what they do. These names ARE NOT the actual triggers themselves; they are just reminders so that you can keep their functions straight.

1. Start Empire Earth and go into the Scenario Editor by clicking the Game Tools and then the Scenario Editor buttons. The first thing you’ll need to do is make the map, so go to the Map Creation screen by clicking the Map Creation button (lower-left corner of the screen). Select the Random Map radio button. Select a Small Map Size and a Continental Map Type. Now click Create Map to create the map.
2. Now you’ll start building the triggers. Click on the Triggers button at the bottom of the screen.
3. To create triggers, you must first create the components from which the triggers themselves will be put together. Click the Object button and then click the New button to create a new object.
4. The default setting is Select On Map, which is the method you want for this example. Lasso your starting town center and citizens to select all of them. Name this object “my town” by typing the name in the Name text field.
5. Click the Effect button to go to the effect screen. Click New to create a new effect. The default effect is an Object Effect, and this is the type you want.
6. Under Action, choose Freeze Object from the drop-down list. Next, select “my town” as the object. Note that the effect is automatically named “<freeze my town>”.
7. Click the Units button at the bottom of the screen. On the Units page, pick Knight from the list and place it on the map (several tiles from the town) by left clicking. This will be the first special effect unit.
8. Click the Triggers button again and then click the Object button. Click New to create another new object and select the Knight you just placed on the map.
9. Now click the LOS checkbox and then select Near from that drop-down list. From the adjacent drop-down list, which lists the available objects, select “my town”. Note that the object was given a default name enclosed in triangular brackets “<...>”. To help you remember what the function of this object is, name the object “freezer near my town” by typing it into the Name field.
10. Since creating an object automatically creates a condition of the type Object Exists, you do not need to create this condition for the trigger. Instead, click the Trigger button and click New to create a new trigger. Under Condition 0 select “freezer near my town Exists”.
11. Now you need to set the effect for this trigger. Under Effect 0, choose “<freeze my town>”.
12. Finally, make sure the trigger is on (i.e., checkbox is checked), and also check the Looping checkbox so that the trigger doesn’t shut off after it has fired. This trigger is now finished. Name it “the big freeze”.

Test the trigger by pressing the Test button. Have the “freezer” walk into the town and notice that the citizens designated as part of “my town” become frozen and cannot be controlled. Keep in mind that since you’ve selected three citizens and a town center to be called “my town,” even if one of the citizens is far away from the town he (or she) will still be affected. Likewise, if your “freezer” is far away from the town and one of the citizens that is included in “my town” walks up to him, the town center and the other citizens will also be affected.

A trigger that reverses the freeze effect can be made using pretty much the same steps.

1. Go back into the Scenario Editor via the Game Options Menu (or pressing F1) and place a new land unit on the map – a Dragoon, for example – to be the unfreezing unit.
2. Now go to the Triggers screen by clicking the Triggers button.
3. Click the Object button. Create a New object and select the unit that you just placed.
4. In the lower portion of the object screen, click the LOS checkbox and then select Near from that drop-down list. From the adjacent drop-down list, which lists the available objects, select “my town”. Name this object “unfreezer near my town”.
5. Click the Effect button to go to the effect screen and then click New to create a new effect. Under Action, choose Unfreeze Object from the drop-down list. Select “my town” as the object to unfreeze. Note that the effect is automatically named “<unfreeze my town>”.
6. Again, in this case you do not need to create a condition, so click the Trigger button to go to the triggers screen. Then, click New to create a new trigger. Under Condition 0 select “unfreezer near my town Exists”.
7. Now set the effect – under Effect 0, choose “<unfreeze my town>”.
8. Finally, make sure the trigger is on by checking that checkbox and also check the Looping checkbox so that the trigger doesn’t shut off after it has fired. This trigger is now finished. Name it “the big thaw”.

Test your scenario again. Now, when the “freezer” enters the town, control is lost. But when the “unfreezer” enters the town, control is restored. If you have both units near the town at the same time, their effects will alternately cancel each other out every second, so that you’ll have one second of control, followed by one second of loss of control, and so on. Another trigger can be created that will prevent your town center from being endlessly frozen and thawed by these special units.

1. Re-enter the scenario editor and place a new land unit that will be designated the town’s protector.
2. Next, go to the Triggers screen and click the Object button. Select the new land unit you placed and give it the qualifier of Near “my town” just as you did for freezer and unfreezer. Name this object “protector near my town”.
3. Click the Trigger button and select the trigger labeled “the big freeze” from the list of triggers.
4. Right after Condition 0 in the trigger statement, you’ll see a drop-down list labeled END. Change the END to AND. Condition 1 appears in the trigger statement – this is how you add more conditions (or effects) to a trigger. For Condition1, choose “protector near my town exists” and check the NOT box in front of this condition. This makes the trigger statement: “If freezer is near my town AND protector is NOT near my town, then freeze my town.” The freeze effect will now take place only if the freezer enters the town and the protector is not nearby.

This situation can also be applied to the “unfreezer” with essentially the same steps. Try modifying the trigger “the big thaw” yourself so that the protector also prevents the unfreezer from having any effect. You’ll need to add a second condition using the AND operator and use NOT to make the trigger statement, “If unfreezer is near my town AND protector is NOT near my town, then unfreeze my town.”

Finally, let’s create a trigger that takes effect only if all three specially designated units are near the town at the same time.

1. In the scenario editor, go to the effect screen. Create a New effect and set the type of effect to Object. Select Kill as the Action and select “my town” as the object to be killed. Note that this effect gets named “<kill my town>”.

2. Now click Trigger and create a New trigger. In the condition part of the trigger statement, select “freezer near my town Exists” for Condition 0, then select AND. For Condition 1 choose “unfreezer near my town Exists”, then add another AND. For condition 2, select “protector near my town Exists”.
3. For the effects, set Effect 0 to “<kill my town>”. Name this trigger “the big explosion”.

Now, whenever all the above conditions are TRUE, that is, when the units designated “freezer”, “unfreezer”, and “protector” are all near the town at the same time, the town and citizens will be destroyed. Note that it did not matter in what order you put the three conditions since they were connected by ANDs. If you had used ORs instead, then the town would be destroyed if any one of the three special units went near the town.

Test your work. Then try adding some of your own triggers to this scenario. For example, you could place down another Town Center and call it “town2”. Then define a new object by selecting the Knight (the “freezer”) and adding LOS town2 to the definition – call the object “freezer in LOS of town2”. Then create a Player class of effect (instead of an Object class) that awards victory to any human player. You can then create a trigger that awards a victory when the freezer gets within its Line Of Sight of Town 2.