



POPULOUS: REINCARNATED

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AI scripting guide

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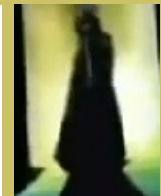
by [War]gba1990 » Fri Oct 14, 2016 1:12 pm

In this guide you will learn the bases of populous AI scripting, just for those who have no idea of scripting and would like to learn.

MAKE SURE TO COPY THE ORIGINAL POPULOUS FILES BEFORE EDITING THEM

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- 5.- First script
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2.- Tools required:

For this guide I will use Alacn's world editor (check downloads page, its the world editor) and a .txt file editor (notepad for example)

3.- Files:

We are going to work with **Script files**, **Attribute files** and **3 world related files** (.dat .hdr .ver)

First of all, open you populous directory folder.

It should be somewhere around here: C:\Program Files\bullfrog\populous or C:\Program Files(x86)\bullfrog\populous

This is the folder where we have the populous stuff (all levels, textures, all texts, sound ...) now we will go to the levels folder.

Inside the folder there are files named cpscr010.dat, cpatr010.dat, lev12001.dat ...

#Make sure to copy this files into your PC before editing them#

cpscr***.dat (script file)

- These files are the scripts, inside them are the orders that the computer follows in order to control one tribe of a particular level. So, as a level has a max of 3 computer controlled tribes, the level has a max of 3 scripts.

- The *** symbol is replaced by a number between 001 - 122
- The cpscr001 file contains the script for red in level 1. cpscr015 contains script for green in level 6.

cpatr***.dat (attribute file)

- These files contain the restrinctions for the AI.

- The *** symbol is replaced by a number which **MUST** be the same as the script number (cpscr file)
- The cpatr001 is the attribe file for red in level 1. cpatr015 contains restrinctions for green in level 6.

levl20**

- The ** is a number between 01 - 25, and it is the level. lev12001 = level 1 /lev12006 = level 6 (building bridges) / lev12023 = level 23 (infemo)

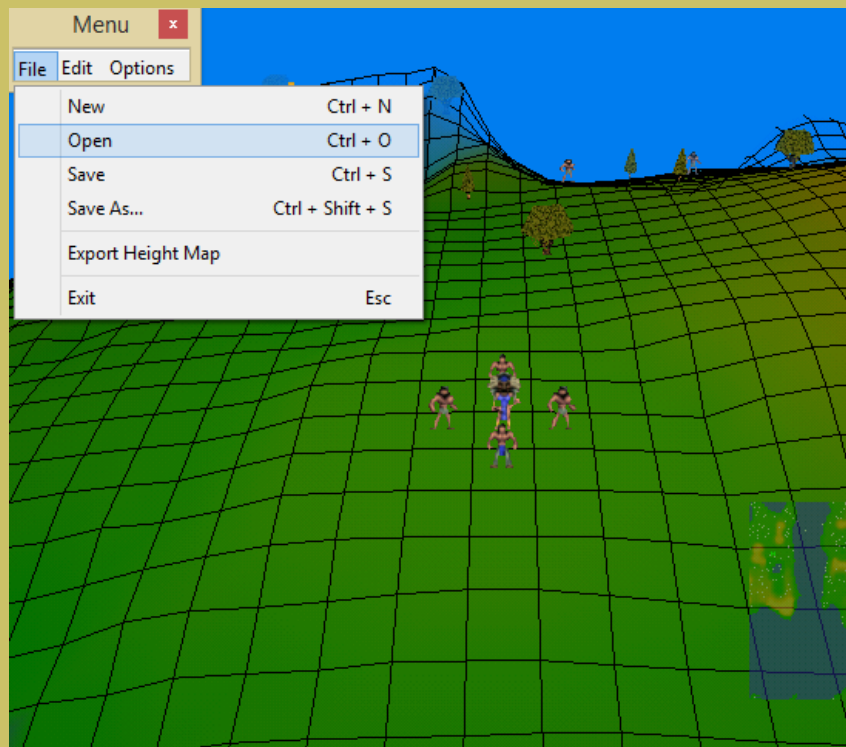
More info about levl files:

[SPOILER: SHOW](#)

4.- World Editor:

This tool can be used to edit all the lev1 files, the qpatr (attributes) file and also to compile/decompile scripts so populous can read them.

We will open level 6 so in top left corner: File -> Open. and look for lev12006.dat (if you had backedup your files you can open the backup)



I will not explain how to work with the world editor, I will just show the basic things required for programming.

- Go to: Edit -> Header

Here we can edit the header file (lev12006.hdr), for example, the map texture is C, change it, the map will look different (have in mind you have to save changes and then replace original files with modified ones)

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- Go to: Edit -> Header -> General

Here we have some important things.

Number of players:

- This is the number of players in the level. **IMPORTANT**, have in mind that red is player 2, yell = 3, green = 4. So **EVEN IF** just blue & green play, the num of players is 4!! as green is the 4th player.

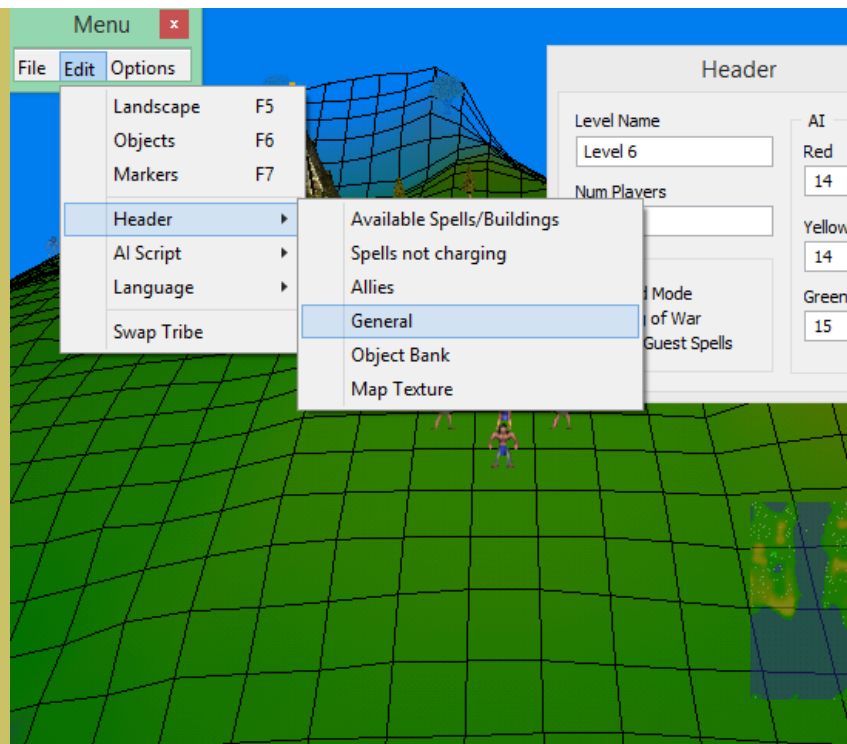
AI numbers:

- There are 3 windows in which you can only write numbers, the script number must go here.

- If yellow script is qpscr014.dat, the number is 14 for yellow. Here is where we link the map and the script.

- Change one of the numbers to 122 and try the level, that player will do nothing as script 122 is an empty file.

- **Make sure the script and the attribute file exist** for that number if not, the game will crash. (try to set the number to 001)



Just take a look at the different stuff in the world editor and just do try & error in order to learn (its one of the best ways).

5.- Script:

FIRST OF ALL make sure to visit these links:

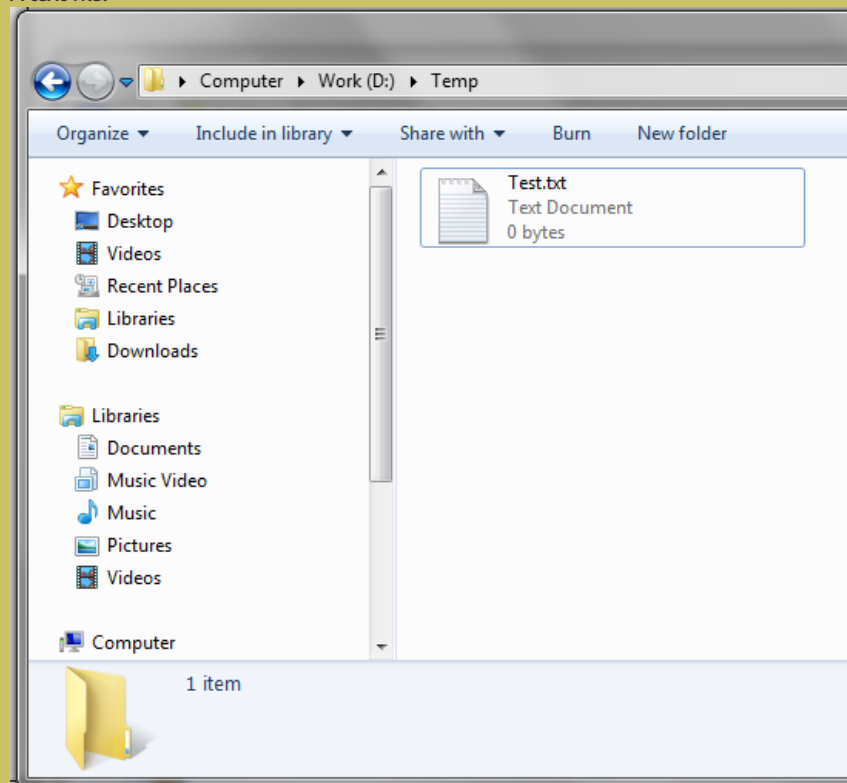
-> http://cdplayer.popre.net/resources/pop...p_1-10.htm

-> http://wiki.popre.net/Tutorial:AI_Scripting

First script:

In order to create a script, just create a new .txt file and open with notepad (or any other program). (I will be using a tool created by Daniel Price named Populous scripser)

A text file:



Your file should be empty, just write this: (Make sure to make the convenient line breaks)

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All the commands for the AI will be between both "{" and "}". We will now add an EVERY statement, in this way we can create a loop. (In order to make the code more clearly visible use the tab key to create a big gap, the editor here doesn't let me do it, so all is stuck)

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We have done a loop now, but as nothing is inside nothing would happen so we will add some things.

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Now the hard thing, I better go slow now:

Syntax:

```
DO ATTACK team num_ppl target_type attack_model damage spell1 spell2 spell3
attack_type bring_back_vehicles marker1 marker2 marker3
```

Example:

```
DO ATTACK BLUE 8 ATTACK_BUILDING INT_NO_SPECIFIC_BUILDING 999 INT_TORNADO
INT_SWARM INT_NO_SPECIFIC_SPELL ATTACK_NORMAL 0 5 -1 -1
```

Explanation: (see spoiler & link:

http://cdplayer.popre.net/resources/populous_scripthelp_1-10.htm#Do%20attack%20tutorial)

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So we will tell the AI to attack blue:

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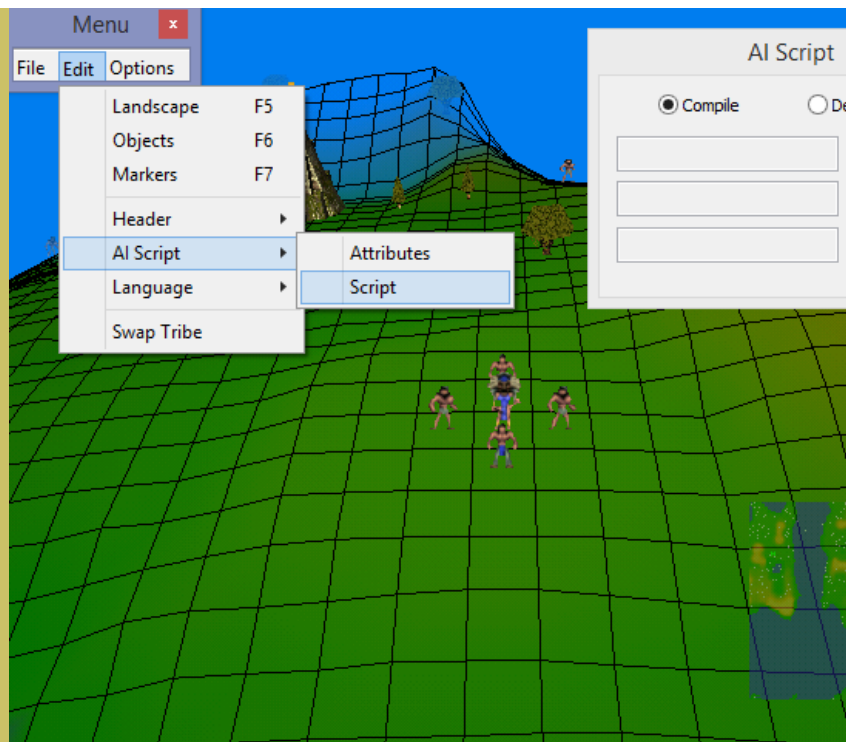
Now we have this simple code. in order to make the AI follow what we have written, we have to:

- 1.- compile it
- 2.- name it cpscr014.dat so we can use it on yellow level 6.
- 3.- replace original cpscr014 with our customised script.
- 4.- run popTB and check level 6.

For now, the AI will do nothing but attacking with braves, I will explain later how to attack with different kinds of troops and how to make them build.

6.- Compile & Decompile:

To compile is to transform the .txt file you have written into another file named cpscr***.dat In the world editor go to: Edit -> AI script -> Script, a new window should pop-up.



Log file:

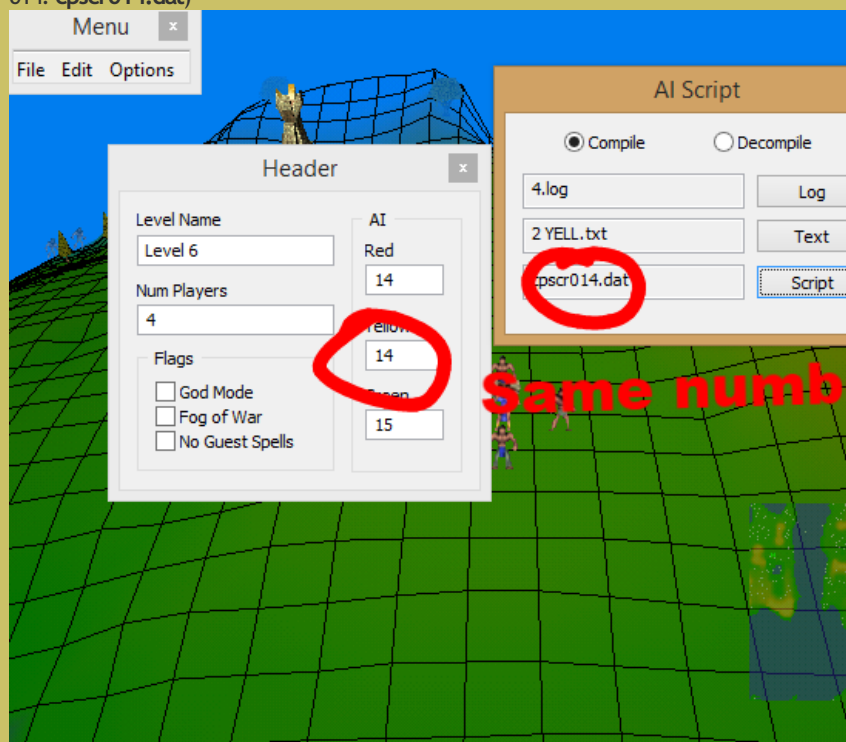
The log file is a text file which will tell you about any error in the code (example: misswrite a word, missing params, no closing brackets...) in order for it to be corrected.
The log file can be open with notepad and its extension is .log

Text file:

Here you must select your script, nothing complex, just look for it and select it.

Script:

This is the output, the World Editor will save a file with .dat extension in the location you select. (in order not to rename it later, just call it cpscr***.dat where *** is the **number of the script**. As we are going to try level 6, and the number for yellow is 14, then the *** is 014. cpscr014.dat)



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Decompile:

This is only used if you want to transform the .dat script into a text file that you can read. I **recommend** you to do it with some of Bullfrog's scripts (you may easily not understand them, but just look at the code and try to guess what the code would do). At the end of this post there are 2 txt files with scripts for red lv124 and red lv1 in populous the Anniversary

(script is almost the same as original one, so there is almost no problem (pop the anniversary, same maps as original but with harder AI))

Photos of part of scripts for level 15 & red for lev24.

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If you have already compiled the small code and replaced original qpscr014 with our new one (in the folder C:\Program Files (x86)\Bullfrog\Populous\levels) just run populous and play level 6. No need to do anything, just watch yell, it should be attacking every 42 seconds with 8 ppl (as they have low population, you can increase their people in the world editor by placing more braves or wildmen near the shaman)

7.- Advanced scripting:

BEFORE PROCEEDING MAKE SURE:

- You know how to Compile a script (if the AI did nothing but attack before, all is OK)
- You know how to use comments (the // and the /* */))
- You know how the IF / ELSE work
- You know how to edit the header file so a tribe uses a specific script. (just the numbers on the right in Edit -> Header -> General, 14 in the case of yell lev6)

If all is OK, just move on, else, go to:

-> [http://cdplayer.popre.net/resources/pop ... p_1-10.htm](http://cdplayer.popre.net/resources/pop...p_1-10.htm)

-> http://wiki.popre.net/Tutorial:AI_Scripting

The code that you should write is in the pictures, just in case they don't work, there is a spoiler below with the text they show.

Commands

Here: [http://cdplayer.popre.net/resources/pop ... p_1-10.htm](http://cdplayer.popre.net/resources/pop...p_1-10.htm) you can find a list of almost all commands (I have just seen like 3 or so that are not in the list), please DO NOT learn them by heart, just have the page open while scripting.

IF (INT_GAME_TURN == 0)

The first thing in the script should be this if:

```
1  {
2      IF (INT_GAME_TURN == 0)
3      {
4          /*
5              ALL HERE WILL BE EXECUTED AT GAME_TURN == 0
6              WHICH IS AT SOON AS THE GAME STARTS
7              REMEMBER, 12 GAME TURNS = 1 REAL LIFE SECOND
8              */
9      }
10     ELSE
11     {
12         /*
13             IF WE ARE IN MID-GAME
14             ALL IN HERE WILL BE EXECUTED
15
16             WE WILL WRITE ALL OUR CODE INSIDE HERE
17         */
18     }
19     ENDIF
20 }
21 SCRIPT_END
```

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I think it is quite clear due to the comments IF (INT_GAME_TURN == 0) is the start of the game, so we will set some variables and other things here (example: how many troops of each type, training huts they have to build...)
So the next step in order to make them build is this:


```

1 {
2     IF (INT_GAME_TURN == 0)
3     {
4         /*
5         ALL HERE WILL BE EXECUTED AT GAME_TURN == 0
6         WHICH IS AT SOON AS THE GAME STARTS
7         REMEMBER, 12 GAME TURNS = 1 REAL LIFE SECOND
8         */
9         DO SET_AUTO_BUILD ON
10        DO STATE_CONSTRUCT_BUILDING ON
11        SET INT_ATTR_MAX_BUILDINGS_ON_GO 5
12        SET INT_ATTR_HOUSE_PERCENTAGE 50
13    }
14    ELSE
15    {
16        /*
17        IF WE ARE IN MID-GAME
18        ALL IN HERE WILL BE EXECUTED
19
20        WE WILL WRITE ALL OUR CODE INSIDE HERE
21        */
22    }
23    ENDIF
24 }
25 SCRIPT_END

```

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I think the name of the statements already explain what they do. As you see, two of them have a INT_ATTR, this stands for internal attribute (if I am not mistaken), this values can be ether set here or at the cpatr file (the attribute file).

SET INT_ATTR_HOUSE_PERCENTAGE 50, the function of this command is to set the max population a tribe will have. If it is set to 50%, the tribe will build until reaching 100 max population, if it is set to 100%, they will build untin getting the maximun amount of 199 people.

If we compile this code, our AI will now build a tower and huts.

Training huts

In order to make them build training huts we are going to use the SET INT_ATTR_PREF_WARRIOR_TRAINS number(0,1) so they build a warrior training hut:

```

1 {
2     IF (INT_GAME_TURN == 0)
3     {
4         /*
5         ALL HERE WILL BE EXECUTED AT GAME_TURN == 0
6         WHICH IS AT SOON AS THE GAME STARTS
7         REMEMBER, 12 GAME TURNS = 1 REAL LIFE SECOND
8         */
9         DO SET_AUTO_BUILD ON
10        DO STATE_CONSTRUCT_BUILDING ON
11        SET INT_ATTR_MAX_BUILDINGS_ON_GO 5
12        SET INT_ATTR_HOUSE_PERCENTAGE 50
13
14        SET INT_ATTR_PREF_WARRIOR_TRAINS 1
15    }
16    ELSE
17    {
18        /*
19        IF WE ARE IN MID-GAME
20        ALL IN HERE WILL BE EXECUTED
21
22        WE WILL WRITE ALL OUR CODE INSIDE HERE
23        */
24    }
25    ENDIF
26 }
27 SCRIPT_END

```

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We can also use:

INT_ATTR_PREF_BALLOON_HUTS
 INT_ATTR_PREF_BOAT_HUTS
 INT_ATTR_PREF_FIREWARRIOR_TRAINS
 INT_ATTR_PREF_RELIGIOUS_TRAINS
 INT_ATTR_PREF_SPY_TRAINS
 INT_ATTR_PREF_WARRIOR_TRAINS

MAKE SURE YOU USE SET BEFORE THE COMMAND AND WRITE A 1 AFTER (if you don't write the number, you are not telling them the amount of training huts they have to build!!) Try to add the INT_ATTR_PREF_FIREWARRIOR_TRAINS, if you compile it, they are not going to build it!! That is because they don't have the building available, you must enable it in the attribute file (cpatr***.dat)

The Attribute file

This file contains the available buildings and spells for the AI of a specific level. As we are working with yellow in "Building Bridges", open cpatr014.dat (Edit -> AI script -> Attributes), **make sure to open a copy of the original if not, the world editor won't be able to save it due to administrator permission.**

Once it loads tick, on the right, the Firewarrior option.

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Save the file and replace the original. They should now build a firewarrior hut.

INT_ATTR_PREF_WARRIOR_PEOPLE & DO TRAIN_PEOPLE_NOW

There are two ways of making the AI train people:

- 1.- Telling them when to do so by using the DO TRAIN_PEOPLE_NOW
- 2.- Telling them how many troops they should have and letting the AI auto-train.

I will explain the first one, then the second one.

DO TRAIN_PEOPLE_NOW

in order to make the command work, we will create inside the else a EVERY loop and inside the loop an IF statement.

```
7      REMEMBER, 12 GAME TURNS = 1 REAL LIFE SECOND
8      /*
9      DO SET_AUTO_BUILD                                ON
10     DO STATE_CONSTRUCT_BUILDING                      ON
11     SET INT_ATTR_MAX_BUILDINGS_ON_GO                 5
12     SET INT_ATTR_HOUSE_PERCENTAGE                   50
13
14     SET INT_ATTR_PREF_WARRIOR_TRAINS 1
15     SET INT_ATTR_PREF_FIREWARRIOR_TRAINS 1
16   }
17   ELSE
18   {
19     /*
20     IF WE ARE IN MID-GAME
21     ALL IN HERE WILL BE EXECUTED
22
23     WE WILL WRITE ALL OUR CODE INSIDE HERE
24     */
25
26     EVERY 256 //EVERY 256 GAME TURNS (NEAR TO 20 SECONDS)
27     {
28       IF (INT_M_BUILDING_WARRIOR_TRAIN == 1) // IF I HAVE 1 WARRIOR TRAIN -> DO WHAT
29       {
30         IF (INT_M_PERSON_WARRIOR < 10 && INT_M_PERSON_BRAVE > 5) // IF I HAVE LESS
31         {                                     // AND MORE THAN
32           DO TRAIN_PEOPLE_NOW 1 INT_WARRIOR // TRAIN 1 WARRIOR
33         }
34         ENDIF // END THE SECOND "IF"
35       }
36       ENDIF // END THE FIRST "IF"
37     }
38   }
39   ENDIF
40 }
41 SCRIPT_END
```

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In the picture is more clear than in the spoiler, just take a look at how all that opens is closed and after a IF there is a ENDIF at the end. (I many times forget this)

THE IF USES A DOUBLE EQUAL SYMBOL "==" IT IS NOT A MISTAKE, IT MUST BE A ==

Compile it, replace files and check. The AI should train warriors ,now, try to do the same for firewarriors.

AUTO TRAINING

In order to tell the AI how many warriors and firewarriors we want we will use SET

INT_ATTR_PREF_WARRIOR_PEOPLE number / SET

INT_ATTR_PREF_FIREWARRIOR_PEOPLE number

It is as easy as writing it at the IF (INT_GAME_TURN == 0)


```

1  {
2      IF (INT_GAME_TURN == 0)
3      {
4          /*
5          ALL HERE WILL BE EXECUTED AT GAME_TURN == 0
6          WHICH IS AT SOON AS THE GAME STARTS
7          REMEMBER, 12 GAME TURNS = 1 REAL LIFE SECOND
8          */
9          DO SET_AUTO_BUILD ON
10         DO STATE_CONSTRUCT_BUILDING ON
11         SET INT_ATTR_MAX_BUILDINGS_ON_GO 5
12         SET INT_ATTR_HOUSE_PERCENTAGE 50
13
14         SET INT_ATTR_PREF_WARRIOR_TRAINS 1
15         SET INT_ATTR_PREF_FIREWARRIOR_TRAINS 1
16
17         SET INT_ATTR_PREF_WARRIOR_PEOPLE 25
18         SET INT_ATTR_PREF_FIREWARRIOR_PEOPLE 25
19     }
20     ELSE
21     {
22         /*
23         IF WE ARE IN MID-GAME
24         ALL IN HERE WILL BE EXECUTED
25
26         WE WILL WRITE ALL OUR CODE INSIDE HERE
27         */
28
29         EVERY 256 //EVERY 256 GAME TURNS (NEAR TO 20 SECONDS)
30         {
31             IF (INT_M_BUILDING_WARRIOR_TRAIN == 1) // IF I HAVE 1 WARRIOR TRAIN ->
32             {
33                 IF (INT_M_PERSON_WARRIOR < 10 && INT_M_PERSON_BRAVE > 5) // IF I HA
34                 { // AND MOR
35                     DO TRAIN_PEOPLE_NOW 1 INT_WARRIOR // TRAIN 1 WARRIOR
36                 }

```

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You must also add 2 more lines, just copy and paste 'em:

```

DO STATE_TRAIN_PEOPLE ON
SET INT_ATTR_MAX_TRAIN_AT_ONCE 3

```

Main Drum Tower & Shaman position

In almost all the levels the AI builds a tower, in which the shaman usually is, and where people gather before an attack, it is the **Main Drum Tower**. The main drum tower is also the place where the base is built around.

In order to build one we will use:

```

DO SET_DRUM_TOWER_POS x z Where x and z are the coordinates in the map (check
markers in order to know the coordinates)
DO BUILD_MAIN_DRUM_TOWER This allows the drum tower to be built (in order not to build
it use DO DELAY_MAIN_DRUM_TOWER)

```

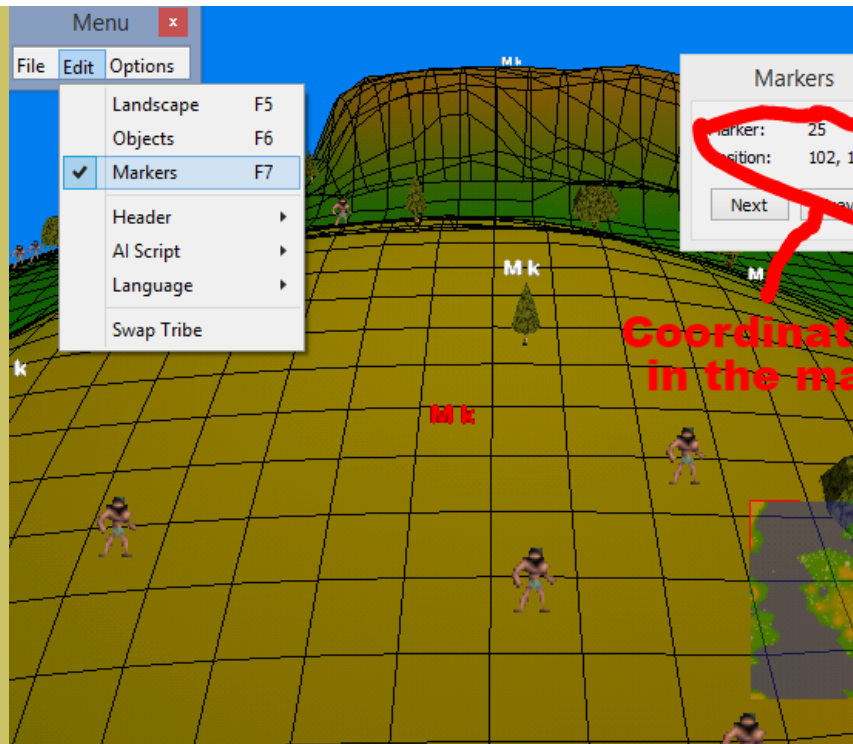
Before adding those 2 lines, I will explain how to set the position of the shaman.

```

DO STATE_SPELL_DEFENCE x z ON Where x and z are the coordinates

```

We will make the shaman be in the tower, so both, the main drum tower and the shaman coordinates will be the same. I will use level 6 to check coordinates. My coordinates are 102 182, so:



```

1  {
2      IF (INT_GAME_TURN == 0)
3      {
4          /*
5           ALL HERE WILL BE EXECUTED AT GAME_TURN == 0
6           WHICH IS AT SOON AS THE GAME STARTS
7           REMEMBER, 12 GAME TURNS = 1 REAL LIFE SECOND
8           */
9          DO SET_AUTO_BUILD ON
10         DO STATE_CONSTRUCT_BUILDING ON
11         SET INT_ATTR_MAX_BUILDINGS_ON_GO 5
12         SET INT_ATTR_HOUSE_PERCENTAGE 50
13
14         SET INT_ATTR_PREF_WARRIOR_TRAINS 1
15         SET INT_ATTR_PREF_FIREWARRIOR_TRAINS 1
16
17         SET INT_ATTR_PREF_WARRIOR_PEOPLE 25
18         SET INT_ATTR_PREF_FIREWARRIOR_PEOPLE 25
19         DO STATE_TRAIN_PEOPLE ON
20         SET INT_ATTR_MAX_TRAIN_AT_ONCE 3
21
22         DO SET_DRUM_TOWER_POS 102 182 // SET COORDINATES OF
23         DO BUILD_MAIN_DRUM_TOWER // BUILD THE TOWER
24         DO STATE_SPELL_DEFENCE 102 182 ON // SEND THE SHAMAN TO
25     }
26     ELSE
27     {
28         /*
29          IF WE ARE IN MID-GAME
30          ALL IN HERE WILL BE EXECUTED
31
32          WE WILL WRITE ALL OUR CODE INSIDE HERE
33          */
34
35         EVERY 256 //EVERY 256 GAME TURNS (NEAR TO 20 SECONDS)
36     {

```

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Result:

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Attack

We will now make the AI attack blue, it is going to be similar to the first attack we created, but this time, using troops, spells and more people.

I will divide this in several parts:

1.- INT_ATTR_AWAY

- 2.- DO NAV_CHECK
- 3.- IF / ELSE
- 4.- DO ATTACK

1.-INT_ATTR_AWAY:

In order to tell the AI which percentage of followers of each kind should participate in the attack, we will use these attributes:

INT_ATTR_AWAY_BRAVE
 INT_ATTR_AWAY_FIREWARRIOR
 INT_ATTR_AWAY_RELIGIOUS
 INT_ATTR_AWAY_SHAMAN
 INT_ATTR_AWAY_SPY
 INT_ATTR_AWAY_WARRIOR

They should start with SET, and at the end they should have a number between 0 - 100.

SET INT_ATTR_AWAY_BRAVE 0 0% of troops will be braves
 SET INT_ATTR_AWAY_SPY 0 0% of troops will be spies
 SET INT_ATTR_AWAY_FIREWARRIOR 45 45% of troops will be firewarriors
 SET INT_ATTR_AWAY_WARRIOR 55 55% of troops will be warriors
 SET INT_ATTR_AWAY_RELIGIOUS 0 0% of troops will be preachers
 SET INT_ATTR_AWAY_SHAMAN 100 The shaman will attack (if 0, she wont attack)

We will add this text into the script and also this other commands (all will be added at the IF(INT_GAME_TURN == 0), so they are set ASAP):

SET INT_ATTR_ATTACK_PERCENTAGE 100
 DO STATE_AUTO_ATTACK ON
 SET INT_ATTR_MAX_ATTACKS 999

```

10      DO STATE_CONSTRUCT_BUILDING                ON
11      SET INT_ATTR_MAX_BUILDINGS_ON_GO           5
12      SET INT_ATTR_HOUSE_PERCENTAGE              50
13
14      SET INT_ATTR_PREF_WARRIOR_TRAINS 1
15      SET INT_ATTR_PREF_FIREWARRIOR_TRAINS 1
16
17      SET INT_ATTR_PREF_WARRIOR_PEOPLE 25
18      SET INT_ATTR_PREF_FIREWARRIOR_PEOPLE 25
19      DO STATE_TRAIN_PEOPLE ON
20      SET INT_ATTR_MAX_TRAIN_AT_ONCE 3
21
22      DO SET_DRUM_TOWER_POS 102 182              // SET COORDINATES OF THE TOWER
23      DO BUILD_MAIN_DRUM_TOWER                   // BUILD THE TOWER
24      DO STATE_SPELL_DEFENCE 102 182 ON          // SEND THE SHAMAN TO POSITION
25
26      //Percentage of followers in attack
27      SET INT_ATTR_AWAY_BRAVE 0                  // 0% of troops will be braves
28      SET INT_ATTR_AWAY_SPY 0                    // 0% of troops will be spies
29      SET INT_ATTR_AWAY_FIREWARRIOR 45           // 45% of troops will be firewarriors
30      SET INT_ATTR_AWAY_WARRIOR 55               // 55% of troops will be warriors
31      SET INT_ATTR_AWAY_RELIGIOUS 0              // 0% of troops will be preachers
32      SET INT_ATTR_AWAY_SHAMAN 100               // The shaman will attack (if 0, she wont attack)
33
34      SET INT_ATTR_ATTACK_PERCENTAGE 100          // Percentage of total troops to attack
35      DO STATE_AUTO_ATTACK ON                     // Attack? On/Off
36      SET INT_ATTR_MAX_ATTACKS 999               // Max number of attacks
37    }
38  ELSE
39  {
40    /*
41    IF WE ARE IN MID-GAME
42    ALL IN HERE WILL BE EXECUTED
43
44    WE WILL WRITE ALL OUR CODE INSIDE HERE
45    */

```

2.- DO NAV_CHECK:

The nav_check command is used in order to know if the AI can attack by foot a specific tribe (in this case blue). Syntax:

DO NAV_CHECK team target_type model remember var

We will add it to our code inside a new EVERY, in this case EVERY 1024 (so they check each 85 secs), we will add later our attack order here too. WRITE IT IN THE ELSE, if not, the nav check will only get triggered at Game Turn 0.


```

34     SET INT_ATTR_ATTACK_PERCENTAGE 100    // Percentage of total people that
35     DO STATE_AUTO_ATTACK            ON     // Attack? On/Off
36     SET INT_ATTR_MAX_ATTACKS        999    // Max number of attacks
37
38 ELSE
39 {
40     /*
41     IF WE ARE IN MID-GAME
42     ALL IN HERE WILL BE EXECUTED
43
44     WE WILL WRITE ALL OUR CODE INSIDE HERE
45     */
46
47     EVERY 256 //EVERY 256 GAME TURNS (NEAR TO 20 SECONDS)
48     {
49         IF (INT_M_BUILDING_WARRIOR_TRAIN == 1) // IF I HAVE 1 WARRIOR TRAIN -> DO WE
50         {
51             IF (INT_M_PERSON_WARRIOR < 10 && INT_M_PERSON_BRAVE > 5) // IF I HAVE
52             {                                     // AND MORE THAN 5
53                 DO TRAIN_PEOPLE_NOW 1 INT_WARRIOR // TRAIN 1 WARRIOR
54             }
55             ENDIF // END THE SECOND "IF"
56         }
57         ENDIF // END THE FIRST "IF"
58     }
59
60     //NEW EVERY!!
61     EVERY 1024
62     {
63         DO NAV_CHECK BLUE ATTACK_BUILDING INT_NO_SPECIFIC_BUILDING 0 $RESULT //THE
64     }
65 }
66 ENDIF
67 }
68 SCRIPT_END

```

3.- IF / ELSE:

We are now going to add some IF statements so the attack will only happen if yellow has enough people to attack with.

- First, an IF to check the value of the NAV_CHECK.
- Second, an IF to check number of warriors and firewarriors.

```

43     WE WILL WRITE ALL OUR CODE INSIDE HERE
44     /*
45     */
46
47     EVERY 256 //EVERY 256 GAME TURNS (NEAR TO 20 SECONDS)
48     {
49         IF (INT_M_BUILDING_WARRIOR_TRAIN == 1) // IF I HAVE 1 WARRIOR TRAIN -> DO WE
50         {
51             IF (INT_M_PERSON_WARRIOR < 10 && INT_M_PERSON_BRAVE > 5) // IF I HAVE LE
52             {                                     // AND MORE THAN 5
53                 DO TRAIN_PEOPLE_NOW 1 INT_WARRIOR // TRAIN 1 WARRIOR
54             }
55             ENDIF // END THE SECOND "IF"
56         }
57         ENDIF // END THE FIRST "IF"
58     }
59
60     //NEW EVERY!!
61     EVERY 1024
62     {
63         DO NAV_CHECK BLUE ATTACK_BUILDING INT_NO_SPECIFIC_BUILDING 0 $RESULT //THE V
64
65         IF ($RESULT == 1) // First IF
66         {
67             IF (INT_M_PERSON_WARRIOR > 5 && INT_M_PERSON_FIREWARRIOR > 5) // Second
68             {
69             }
70             ENDIF
71         }
72         ENDIF
73     }
74 }
75 ENDIF
76 }
77 SCRIPT_END

```

4.-DO ATTACK:

Now we will write our do attack.

Remember the syntax:

DO ATTACK team num_ppl target_type attack_model damage spell1 spell2 spell3
 attack_type bring_back_vehicles marker1 marker2 marker3

The command I will add will be this one

DO ATTACK BLUE 10 ATTACK_BUILDING INT_NO_SPECIFIC_BUILDING 60 INT_TORNADO
 INT_LIGHTNING INT_SWARM ATTACK_NORMAL 0 -1 -1 -1

INSIDE THE EVERY 1024

```

45  */
46
47  EVERY 256 //EVERY 256 GAME TURNS (NEAR TO 20 SECONDS)
48  {
49      IF (INT_M_BUILDING_WARRIOR_TRAIN == 1) // IF I HAVE 1 WARRIOR TRAIN -> DO WHAT IT IS B
50      {
51          IF (INT_M_PERSON_WARRIOR < 10 && INT_M_PERSON_BRAVE > 5) // IF I HAVE LESS THAN 10
52          {                                     // AND MORE THAN 5 BRAVES
53              DO TRAIN_PEOPLE_NOW 1 INT_WARRIOR // TRAIN 1 WARRIOR
54          }
55          ENDIF // END THE SECOND "IF"
56      }
57      ENDIF // END THE FIRST "IF"
58  }
59
60  //NEW EVERY!!
61  EVERY 1024
62  {
63      DO NAV_CHECK BLUE ATTACK_BUILDING INT_NO_SPECIFIC_BUILDING 0 $RESULT //THE VARIABLE $R
64
65      IF ($RESULT == 1) // First IF
66      {
67          IF (INT_M_PERSON_WARRIOR > 5 && INT_M_PERSON_FIREWARRIOR > 5) // Second IF
68          {
69              DO ATTACK BLUE 10 ATTACK_BUILDING INT_NO_SPECIFIC_BUILDING 60 INT_TORNADO INT_
70          }
71          ENDIF
72      }
73      ENDIF
74  }
75  }
76  ENDIF
77  }
78  SCRIPT_END

```

SPOILER: SHOW

Result:

SPOILER: SHOW

8.- Links & FAQ:

Links:

-> http://cdplayer.popre.net/resources/pop...p_1-10.htm - Commands and a short intro.

-> http://wiki.popre.net/Tutorial:AI_Scripting - Short intro to scripting.

-> a-detailed-techniques-tutorial-for-making-a-sp-level-t6717.html - A complete guide on SP map making

-> http://populous.pe.hu/files/Documents/P...p_File.htm - Commands and short intro

-> single-player-maps-download-it-here--t8569.html - Download SP maps (try to decompile some scripts, it may well be easier to understand these than those by Bullfrog)

FAQ

Q: Do I have to quit the game and launch it again every time I want to try a new map or script?

You don't have to, just exiting from the level and going to the Solar System is enough for the script and the level to refresh. (Use Alt+Tab to navigate from the game to other programs)

Q: Why does my game closes every time I try a level I have made?

The most logical answer is that there are some files missing. Go to Edit -> Header -> General, and check that the AI numbers are set to the script you want to use (if you just want to test the map, set the numbers to 122). Check there is an Attribute file (qpatr***.dat) that exists with the same number as the script.

Q: Why are they not building training huts or not training troops?

First make sure the buildings are available for that tribe in the attribute file (qpatr***.dat), then, check the script so commands such as DO STATE_TRAIN_PEOPLE is ON or that SET INT_ATTR_MAX_TRAIN_AT_ONCE has a number that is not 0 at the end, make also sure the INT_ATTR_PREF_WARRIOR_PEOPLE has a number too.

If you have any problem first look for it at the forum (there is a nice search bar at the left), someone may have already solve it!!

Once you know the initial values the AI may have, it is recommended that you have a layout with the minimum commands.

HAVE FUN SCRIPTING!!

ATTACHMENTS

 [Scripts with comments.rar](#)

Decompiled scripts for 2 levels with comments in them
(10 KiB) Downloaded 3 times

Last edited by [War]gba1990 on Mon Oct 31, 2016 3:55 am, edited 3 times in total.

Smile

Re: AI scripting guide

by [War]gba1990 » Fri Oct 14, 2016 1:15 pm

QUOTE

I know I call the part 7 Advanced Scripting and that I don't even explain how to make the AI defend, but the post is already quite long and has a lot more of parts missing.

If anything is bad explained or not clear, please let me know.

Smile



[War]gba1990

Brave



Posts: 90

Joined: Sat May 11, 2013

11:48 am

Location: Dream city

Re: AI scripting guide

by [GoD]AztecWarrior » Sun Oct 16, 2016 2:51 pm

QUOTE

i like the examples at end of 5, but 7 is rather hard for someone who never learned any scripting or progr. languages (even basic ones), MAYBE you could give those nice green explanations you do for each line of syntax for bullfrog level1, and maybe some other level like 6, it would learn alot to understand what each thing means, knowing what the AI does in those levels

oh and gj nice guide btw



Divinity



[GoD]AztecWarrior

Preacher



Posts: 927

Joined: Sat Mar 07, 2009

2:46 pm

Location: Ourém, Portugal,
rua do casalao - vilar dos
prazeres caralhe, é ao pé
da casa do mogli(rofl).



Re: AI scripting guide

by [War]gba1990 » Mon Oct 17, 2016 5:50 am

QUOTE

“ [GoD]cute_bunny wrote:

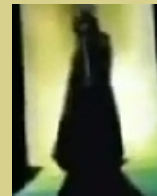
i like the examples at end of 5, but 7 is rather hard for someone who never learned any scripting or progr. languages (even basic ones), MAYBE you could give those nice green explanations you do for each line of syntax for bullfrog level1, and maybe some other level like 6, it would learn alot to understand what each thing means, knowing what the AI does in those levels

oh and gj nice guide btw

I could maybe upload a decompiled version of red level 1 and some other scripts with comments on, it is a good idea, thanks for it.

Ye, i know the explanation in 7 can be a complete maze, but it a lot better than the first draft I wrote.

Smile



[War]gba1990

Brave



Posts: 90

Joined: Sat May 11, 2013

11:48 am

Location: Dream city

Re: AI scripting guide

by [GoD]AztecWarrior » Wed Oct 19, 2016 1:05 pm

QUOTE

ok im going slowly, and i got a decent script to work (drum tower with shaman, building, training troops and attack if he has x troops, and few more things). even got code wrong and was able to spot the error in the middle of the mess
now i could use some help 🙄

1- If in level attributes the AI doesnt have lets say lightning, but in their attacks, one of the three spells is lightning, will she cast it? (i think so)

2- I had light, light, tornado, in the shaman's attack spells. she attacked, casted two lights, then backed to her base. (didnt cast tornado). why?

3- im not sure about this, but when AI had two warrior huts and commands to make warriors,



[GoD]AztecWarrior

Preacher



Posts: 927

Joined: Sat Mar 07, 2009

2:46 pm

Location: Ourém, Portugal,
rua do casalao - vilar dos
prazeres caralhe, é ao pé
da casa do mogli(rofl).



why they only used one of the warrior huts?

4- what this means? "SET INT_ATTR_MAX_TRAIN_AT_ONCE X" , and this? "SET INT_ATTR_MAX_BUILDINGS_ON_GO"

5- "DO NAV_CHECK BLUE ATTACK_BUILDING INT_NO_SPECIFIC_BUILDING 0 \$RESULT //THE VARIABLE \$RESULT == 1 IF OK"
can someone explain abit more about this variable things (" \$RESULT")?? what are those, and the meaning

6- "SET INT_ATTR_AWAY_BRAVE 10 // 0% of troops will be braves
SET INT_ATTR_AWAY_SPY 0 // 0% of troops will be spies
SET INT_ATTR_AWAY_FIREWARRIOR 35 // 45% of troops will be firewarriors
SET INT_ATTR_AWAY_WARRIOR 55 // 55% of troops will be warriors
SET INT_ATTR_AWAY_RELIGIOUS 0 // 0% of troops will be preachers
SET INT_ATTR_AWAY_SHAMAN 100 // The shaman will attack (if0, she wont attack)"

what if we want the first attack to be with those percentages, but the next one be with different percentages?

7- if drum tower is destroyed, they build another one asap in the closest place, or not? or maybe they will wait the terrain to be fertile again and rebuild it in same location?
what about if one of their warrior training huts is destroyed, they rebuild it? (if this is written: "SET INT_ATTR_PREF_WARRIOR_TRAINS 1")

8- In AI's attacks, if we get to kill X units of their army, will they back off? i've seen this in many sp level, so its probably true? is there a way to make them retreat after X% of units are killed? or is it automatic and the value is set and we cant change it? can we even make them not retreat?

9- what if we make scripts with spells and buildings, but that AI tribe doesnt have those checked in the attributes?

10- what program you use to write the scripts? notepad works but i think most of you use a txt editor with the line numbers on the left, which is probably better



Divinity

Re: AI scripting guide

by [War]gba1990 » Thu Oct 20, 2016 6:43 am

It is good to hear that you are getting things to work

“

1- If in level attributes the AI doesnt have lets say lightning, but in their attacks, one of the three spells is lightning, will she cast it? (i think so)

Ye they will use it even if not marked in the attribute file. As you can see I told yellow to attack with Tornado (part 7) and she casts it although I haven't marked it. I suppose the spell restrictions just work for the SET_SPELL_ENTRY, which is kinda a way of saying: "Hey you can use this spell to defend" or "Don't use firestorm to defend, only use it outside your base".

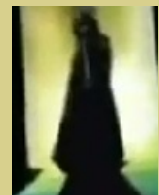
“

2- I had light, light, tornado, in the shaman's attack spells. she attacked, casted two lights, then backed to her base. (didnt cast tornado). why?

Could be because of mana, if you tell the AI to attack too soon they may not have enough mana for that spell. You can do something like:

CODE: SELECT ALL

QUOTE



[War]gba1990
Brave



Posts: 90
Joined: Sat May 11, 2013 11:48 am
Location: Dream city

```

EVERY 512
{
  IF (INT_M_MANA > INT_M_SPELL_TORNADO_COST) // If my mana > tornado cost
  {
    SET $spell INT_TORNADO
  }
  ELSE
  {
    SET $spell INT_LIGHTNING
  }
  ENDIF
  DO ATTACK BLUE 6 ATTACK_BUILDING INT_NO_SPECIFIC_BUILDING 999 $spell
  INT_LIGHTNING INT_LIGHTNING ATTACK_NORMAL 0 -1 -1 -1
}

```

This is what Bullfrog does (more or less), you can also use **DO GIVE_ONE_SHOT INT_TORNADO RED** to give red one shot of torn.

“

3- imnot sure about this, but when AI had two warrior huts and commands to make warriors, why they only used one of the warrior huts?

No way to change that, they will use the one closer to reenc site (if I am not mistaken).

“

4- what this means? "SET INT_ATTR_MAX_TRAIN_AT_ONCE X" , and this? "SET INT_ATTR_MAX_BUILDINGS_ON_GO"

INT_ATTR_MAX_TRAIN_AT_ONCE: Max percentage of total population allowed to be trained at the same time (auto-trained). I usually set it to 3 or 5.

INT_ATTR_MAX_BUILDINGS_ON_GO: Max amount of plans that the AI will place (auto-place, they will still place buildings if DO BUILD_AT is used) set it to 5 if you want them to build faster. **I FORGOT TO ADD THIS**, the AI has a max amount of entries (INT_CP_FREE_ENTRIES) this means that the AI has a max number of buildings that can simultaneously build, it is 10, and it is reduced by 2 for each plan. Once the building is completed will increment in 2. They can build a max of 5 structures at the same time (you can use DO BUILD_AT to place as many plans as u want, the problem is that they wont send braves to them).

“

5- "DO NAV_CHECK BLUE ATTACK_BUILDING INT_NO_SPECIFIC_BUILDING 0 \$RESULT //THE VARIABLE \$RESULT = 1 IF OK"

can someone explain abit more about this variable things ("RESULT")?? what are those, and the meaning

The NAV_CHECK checks for a route by foot to another tribe (BLUE in this case). The last parameter must be a variable (variables are represented by "\$" followed by a name with NO SPACES, in this case the name is "RESULT"), now think in binary code, just 0 and 1, if the tribe cannot reach enemy (different islands or a diff dividing) the variable's value will turn to 0. If they are in the same piece of land they can walk in order to reach BLUE, so it is 1.

SPOILER: SHOW

“

6- "SET INT_ATTR_AWAY_BRAVE 10 // 0% of troops will be braves
 SET INT_ATTR_AWAY_SPY 0 // 0% of troops will be spies
 SET INT_ATTR_AWAY_FIREWARRIOR 35 // 45% of troops will be firewarriors
 SET INT_ATTR_AWAY_WARRIOR 55 // 55% of troops will be warriors
 SET INT_ATTR_AWAY_RELIGIOUS 0 // 0% of troops will be preachers
 SET INT_ATTR_AWAY_SHAMAN 100 // The shaman will attack (if0, she wont attack)"

what if we want the first attack to be with those percentages, but the next one be with different percentages?

Edit them in mid-game, although they are set at the start, they can be edited along the game, so just before the attack command copy and paste this ones but with different percentages.

“

7- if drum tower is destroyed, they build another one asap in the closest place, or not? or maybe they will wait the terrain to be fertile again and rebuild it in same location? what about if one of their warrior training huts is destroyed, they rebuild it? (if this is written: "SET INT_ATTR_PREF_WARRIOR_TRAINS 1")

If main drum tower is destroyed, yes, they will rebuild it (normal towers no) and as you say, as close as possible or as soon as terrain goes fertile. Warrior hut the same, but not in the same location they will build it where they can (just go to any SP level and destroy their train huts, they will build them where they are able to)

“

8- In AI's attacks, if we get to kill X units of their army, will they back off? i've seen this in many sp level, so its probably true? is there a way to make them retreat after X% of units are killed? or is it automatic and the value is set and we cant change it? can we even make them not retreat?

SET INT_ATTR_RETREAT_VALUE X, it is used for this purpose, if X = 0, they will not retreat. Dunno if X is a percentage or what it is.

Check also SET INT_ATTR_BASE_UNDER_ATTACK_RETREAT X, where X is 1 or 0. If one they retreat if base under attack, if 0 they will attack even while being under attack.

“

9- what if we make scripts with spells and buildings, but that AI tribe doesnt have those checked in the attributes?

Best thing is try and error. If buildings unchecked they shouldn't build them, if they do, they will surely not use them (not training in that building or not building boats/balloons). Spells are a bit weird, they will use the spells of the DO ATTACK even if unchecked, so I guess that will just allow them to use while defending.

“

10- what program you use to write the scripts? notepad works but i think most of you use a txt editor with the line numbers on the left, which is probably better

I use a program named Populous Scripter wich was created by Daniel Price ([http://test.popre.net/forum/populous-c- ... 7s150.html](http://test.popre.net/forum/populous-c-...7s150.html)), it was designed to write in another language (yes, there are more than 1 populous programming languages, at least 4) but I write using this language. I just use this program cause of, as u say, line numbers. His site is down, so just go to <http://pop-archive.16mb.com/>, I think there should be something in utilities (use ctrl+F to search) with the name scripter or programming that could do the job, they may also be designed for other languages rather than this one, but that doesn't matter as you can still write it and then compile it in the worlds editor.

Set Spell Entry

Enables a spell for the ai shaman to use. The spells are numberd from 0 upwards (using 'entry'). The spell and its mana cost are defined using internal variables (such as INT_BLAST and INT_M_BLAST_COST). The frequency parameter does not appear to control the rate of use of the spell or the time it takes to cast - more work needed. The spell will only be cast if the specified number of enemy people are within range (including the shaman). If 'base' is set to 1, the spell will only be used in the base area, if 0, only outside the base.

Syntax:

DO SET_SPELL_ENTRY entry spell mana frequency ppl base

Smile

Re: AI scripting guide

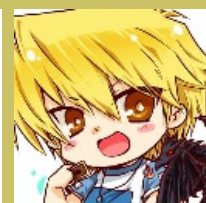
by KosjaK » Thu Oct 20, 2016 10:45 am

Gotta add note to "Set Spell Entry": people depends on whether 'base' or not. If 'base' is true (1), then people will refer to number of specialists (fws etc...). If 'base' is false (0), then people refers to total number of all types of units (will cast spell on anyone nearby).

Examples:

DO SET_SPELL_ENTRY 0 INT_BLAST 4096 64 3 1 - means, that shaman will cast blast only on

QUOTE



KosjaK
Spy

3 specialists. (mostly inside base)
DO SET_SPELL_ENTRY 1 INT_VOLCANO 65535 1024 1 0 - means, that shaman will cast
vp;camp on any type of unit. (mostly anywhere)



Posts: 187
Joined: Mon Oct 29, 2012 7:24 am
Location: Russia / Roston-On-Don

Re: AI scripting guide

by [GoD]AztecWarrior » Thu Oct 20, 2016 3:15 pm

QUOTE

what is the meaning of "base" there?

also, i used a shaman to attack and cast magical shield, but she didnt. all other spells worked fine (cant blame the mana now)
(INT_SHIELD)

i hope i can keep using this thread to ask questions about scripts, and hopefully someone will answer when they see it, if they know! thanks for helping

so, whats wrong here?

SPOILER: SHOW

and now this:
i wrote this "set \$1 int_b_person_brave" (is it ok?)
then wrote this:

SPOILER: SHOW

whats wrong?



Divinity

Re: AI scripting guide

by KosjaK » Fri Oct 21, 2016 1:50 am

QUOTE

“ [GoD]cute_bunny wrote:
what is the meaning of "base" there?

also, i used a shaman to attack and cast magical shield, but she didnt. all other spells worked fine (cant blame the mana now)
(INT_SHIELD)

i hope i can keep using this thread to ask questions about scripts, and hopefully someone will answer when they see it, if they know! thanks for helping

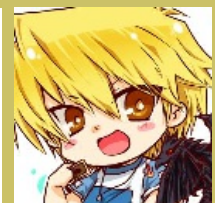
so, whats wrong here?

SPOILER: SHOW

and now this:
i wrote this "set \$1 int_b_person_brave" (is it ok?)
then wrote this:

SPOILER: SHOW

whats wrong?



KosjaK
Spy



Posts: 187
Joined: Mon Oct 29, 2012 7:24 am
Location: Russia / Roston-On-Don

1. About shaman not using ms, make sure u have ticked ms spell in AI's attr file.
2. You're making paradox, trying to train a brave into a boat? That's not for command is, but instead, you can use these:

STATE_BUILD_VEHICLE ON/OFF - toggle ai build vehicles (boats, balloons).

INT_ATTR_PREF_BOAT_HUTS 1 - thats for building a boat hut.

INT_ATTR_PREF_BOAT_DRIVERS 7 - is the thing u need for ai to build boats, determines how much boats ai has to build. (not sure is it percentage or not)

They will automaticly build boats, i hope.

Example:

CODE: SELECT ALL

```
{
  IF ( INT_GAME_TURN == 0 )
  {
    DO STATE_BUILD_VEHICLE ON
    SET INT_ATTR_PREF_BOAT_HUTS 1
    SET INT_ATTR_PREF_BOAT_DRIVERS 5
  }
}
SCRIPT_END
```

3. "i wrote this "set \$1 int_b_person_brave" (is it ok?)" Yes, it's oki.

About code, more details? Like, what's actually wrong, is it not appearing? Is it crashing game?

Although, i would add another var as making it happen only once, unless another call makes it happen again.

CODE: SELECT ALL

```
EVERY 32
{
  SET $1 INT_B_PERSON_BRAVE
  IF ( $1 > 4 && $2 == 0 )
  {
    DO SET_TIMER_GOING 52
    SET $2 1 //to avoid timer resetting.
  }
  ENDIF
}
```

Re: AI scripting guide

by [War]gba1990 » Fri Oct 21, 2016 6:12 am

Some other stuff about boats:

SET INT_ATTR_PEOPLE_PER_BOAT X, where X is the number of people that will go to build a boat (5 or 8 is ok)

DO STATE_FETCH_FAR_VEHICLE ON/OFF //Bring boats to coast

DO STATE_FETCH_LOST_VEHICLE ON/OFF //Send someone to take boats with no people in. (Notice that in many levels, the AI will send another boat/balloon with 2 braves to a vehicle that has no one in)

Have in mind that vehicles will start to be constructed once they have reached the number of people u have marked in the INT_ATTR_HOUSE_PERCENTAGE. This means that they will give priority to huts and then to boats/balloons.

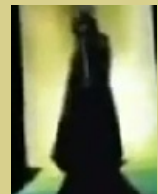
You can set INT_ATTR_HOUSE_PERCENTAGE to a low value at the start and then use this so that they build boats and then keep building.

CODE: SELECT ALL

```
EVERY 256
{
  IF (INT_M_VEHICLE_BOAT > 2)
  {
    SET INT_ATTR_HOUSE_PERCENTAGE 100
  }
  ENDIF
}
```

Smile

QUOTE



[War]gba1990
Brave



Posts: 90
Joined: Sat May 11, 2013 11:48 am
Location: Dream city

Re: AI scripting guide

by [GoD]AztecWarrior » Fri Oct 21, 2016 6:31 am

QUOTE

DO SET_SPELL_ENTRY entry spell mana frequency ppl base

whats the meaning of "base" here?

k most things are now working, i was able to fix
theres a thing that bothers me: if ai is on island, they attack by boat (its fine)
if they are connected, but attack type is by boat, they get inside boat, and they get outside
boat and walk to attack (wtf)

finally, how can i make ai only have 1 boat at all times?

Last edited by [GoD]AztecWarrior on Fri Oct 21, 2016 7:57 am, edited 2 times in total.



Divinity



[GoD]AztecWarrior
Preacher



Posts: 927
Joined: Sat Mar 07, 2009
2:46 pm
Location: Ourém, Portugal,
rua do casalao - vilar dos
prazeres caralhe, é ao pé
da casa do mogli(rofl).



Re: AI scripting guide

by [War]gba1990 » Fri Oct 21, 2016 6:40 am

QUOTE

If 'base' is set to 1, the spell will only be used in the base area, if 0, only outside the base.
So it would be like saying "You can use lightning at base" or "You cannot cast volcano at base"
If you want them to cast a spell inside base and outside (swarm, blast, light) you have to do
2 spell entries, one with base 0 and other with base 1.

Base is defined by a marker and the commands

DO SET_BASE_RADIUS "number"
DO SET_BASE_MARKER "marker"

If i am not mistaken 1 radius = 1 square of Alacan's world editor (did a test with
COUNT_PEOPLE_IN_MARKER)

Attack on foot.

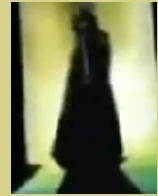
Just place a marker in the sea and tell them to group there, that may do.

One boat all the time.

CODE: SELECT ALL

```
EVERY 64
{
  IF (INT_M_VEHICLE_BOAT > 0)
  { //This part will be executed if num of boats > 0
    STATE_BUILD_VEHICLE OFF
  }
  ELSE
  { //This part will be executed if num of boats == 0
    STATE_BUILD_VEHICLE ON
  }
  ENDIF
}
```

Smile



[War]gba1990
Brave



Posts: 90
Joined: Sat May 11, 2013
11:48 am
Location: Dream city

Re: AI scripting guide

by [GoD]AztecWarrior » Fri Oct 21, 2016 7:16 am

QUOTE

got it

anyway, i thought shamans would only cast 3 spells. i put shield light shield, and she casted 2
shields when gathering with people (should be only 1?), then when reach my base, casted
light and 4 swarms (wtf?), and even some blasts 🤖



[GoD]AztecWarrior
Preacher



Posts: 927
Joined: Sat Mar 07, 2009
2:46 pm
Location: Ourém, Portugal,

Web2PDF

converted by Web2PDFConvert.com

also, they are gathering two times, first one should be in drum tower, but its at a random point in their base (there isnt even any marker there). second time, its good cuz its in the marker i told, but as i said before, they casting spell 1 and 3 the first time they gather, and they should only cast spell 1

also, how to make shaman retreat after casting spells?i think there was a command just cant find

why cant i do this? error compiling

SPOILER: SHOW



Divinity

rua do casalao - vilar dos
prazeres caralhe, é ao pé
da casa do mogli(rofl).



Re: AI scripting guide

by [War]gba1990 » Fri Oct 21, 2016 8:24 am

QUOTE

```
“ Log File wrote:  
** Max Vars Reached (64) - line 203  
SET $64 INT_NO_SPECIFIC_BUILDING
```

And yes, it is true. You can only create a up to 64 variables.

Many of them are just useless for example from \$1 to \$40 all of them are Internal game variables.

Internal game variable definition: It is a variable that cannot be changed by the script such as INT_MY_NUM_PEOPLE, you cannot set it to 40 so that braves pop up. (you haven't done this, just an example)

So you have been doing something like:

```
SET $1 1  
SET $2 80  
SET $3 920
```

You have set the variables to constants or variables that can be checked whenever u want, unless u want to sum them up in that case this is better:

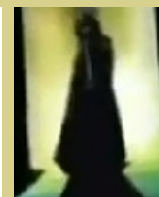
CODE: SELECT ALL

```
EVERY 256  
{  
    SET $1 INT_M_PERSON_WARRIOR  
    SET $2 INT_M_PERSON_FIREWARRIOR  
    INCREMENT $1 $2 //Sum up both values  
    SET $2 INT_M_PERSON_RELIGIOUS //Reusing $2  
    INCREMENT $1 $2 //Sum up both values  
  
    //YOU CAN ALSO USE ONLY 1 VARIABLE  
    SET $3 INT_M_PERSON_WARRIOR  
    INCREMENT $3 INT_M_PERSON_FIREWARRIOR  
    INCREMENT $3 INT_M_PERSON_RELIGIOUS  
}
```

You must reuse variables. The If at the top is bad because it can be replaced by the second one (and you are saving a variable there)

CODE: SELECT ALL

```
EVERY 256  
{  
    //BAD  
    SET $3 INT_MY_NUM_PEOPLE  
    IF ($3 > 40)  
    {  
        blah, blah, blah...  
    }  
    ENDIF  
    //-----\\  
    //GOOD  
    IF (INT_MY_NUM_PEOPLE > 40)  
    {  
        . . . . .  
    }  
}
```



[War]gba1990
Brave



Posts: 90
Joined: Sat May 11, 2013
11:48 am
Location: Dream city

Setting one spell for each variable is quite useless too, dunno what are you going to use it for, but try to set variables to a value when you are going to use them: *This one may be a bit confusing*

CODE: SELECT ALL

```
EVERY 1024
{
    SET $RANDOM INT_RANDOM_100 // Creating a var with a random number
    between 0 - 100
    SET $TRIBE 0 //0 means BLUE
    IF ($RANDOM < 30) // If the random number is less than 30 (1/3 chance)
    {
        SET $RANDOM INT_RANDOM_100 //Reusing same variable
        IF ($RANDOM < 50) // If the random number is less than 50 (1/2
    chance)
    {
        SET $TRIBE 1 //1 means RED
    }
}
-- ~
```

I can even use the \$TRIBE in another attack in another EVERY, because as soon as this EVERY 1024 is triggered, the \$TRIBE will be set to 0 (and then randomly changed) and it won't matter the previous value. Have in mind that the name is just a name it should be linked with the var's function (in order not to confuse it) but can be used for anything.

Shaman casting more spells:

Did u use the SPELL_ENTRY?

What does base do?

U are telling her "Hey u can use swarm out of the base", so she casts it when there are enemies nearby.

Looks like shield and inv will be used first.

The shaman auto retreats after casting the 3 spells of the do attack, just leave her alive, check that she casts spells (dont confuse them with those auto casted by the "spell entry") and look, she should retreat unless she has the hands up phenomena.

Smile

Re: AI scripting guide

by [GoD]AztecWarrior » Fri Oct 21, 2016 12:08 pm

how to make ai shaman move to a certain place (marker?) what about cast a spell in that marker?



Divinity

QUOTE



[GoD]AztecWarrior
Preacher



Posts: 927
Joined: Sat Mar 07, 2009
2:46 pm
Location: Ourém, Portugal,
rua do casalao - vilar dos
prazeres caralhe, é ao pé
da casa do mogli(rofl).



Re: AI scripting guide

by [War]gba1990 » Fri Oct 21, 2016 12:26 pm

Depends on what you want to do but:

- Like red does in level 12 (on the hill where she casts LB)

DO STATE_SPELL_DEFENCE x z ON

She will get at that position and defend it (as when she is in a tower)

- Cast a spell at marker like lvl 20 with AOD or 15 with shield

DO SPELL_ATTACK spell marker direction

example: DO SPELL_ATTACK INT_ANGEL_OF_DEATH 70 0

dunno what direction does, set it to 0 and it will work.

NOTE: sometimes the shaman stops at the marker and does nothing

- Use LB to join.

the spell_attack may work but I prefer to use a DO ATTACK.

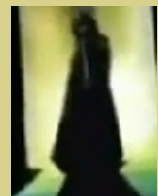
DO ATTACK team num_ppl target_type attack_model damage spell1 spell2 spell3

attack_type bring_back_vehicles marker1 marker2 marker3

numpl = 0 so no troops(make sure the away for shaman is more than 0)

target_type = ATTACK_BUILDING (dont use attack marker, cause if not the LB will be cast earlier)

QUOTE



[War]gba1990
Brave



Posts: 90
Joined: Sat May 11, 2013
11:48 am
Location: Dream city

Spell1 = INT_LAND_BRIDGE
rest of spells, no specific spell
marker 1 = from where
marker 2 = to where

Smile

Re: AI scripting guide

by [GoD]AztecWarrior » Fri Oct 21, 2016 1:38 pm

ty second way worked for what i wanted

what is wrong here, cant compile:

SPOILER: SHOW



Divinity

QUOTE



[GoD]AztecWarrior
Preacher



Posts: 927
Joined: Sat Mar 07, 2009
2:46 pm
Location: Ourém, Portugal,
rua do casalo - vilar dos
prazeres caralhe, é ao pé
da casa do mogli(rofl).



Re: AI scripting guide

by [War]gba1990 » Fri Oct 21, 2016 3:06 pm

DO PRAY_AT_HEAD, not in capital letters.

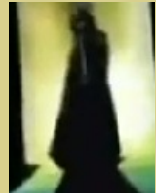
When compiling, the .log file tells you the errors you have made, it should say something like:

Line xxx DO pray_at_head 1 5

Unknown command.

Smile

QUOTE



[War]gba1990

Brave



Posts: 90
Joined: Sat May 11, 2013
11:48 am
Location: Dream city

Re: AI scripting guide

by [GoD]AztecWarrior » Sat Oct 22, 2016 5:58 am

the create trigger thing: what needs to be set on the trigger? timed, proximity?, and what values? to make sure trigger is only activated when we ask it in the script



Divinity

QUOTE



[GoD]AztecWarrior
Preacher



Posts: 927
Joined: Sat Mar 07, 2009
2:46 pm
Location: Ourém, Portugal,
rua do casalo - vilar dos
prazeres caralhe, é ao pé
da casa do mogli(rofl).



Re: AI scripting guide

by [War]gba1990 » Sat Oct 22, 2016 10:50 am

You have that answer in the Populous Anniversary mod. The enemy shaman always casts shield this way, by triggering it in the script.

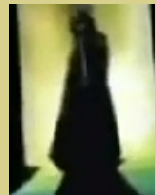
Proximity

then, pray time at max (just put 9999 and the numbers will cahnge to the max value) and trigger count at max, rest all 0.

Before asking, try to think about it, "How can I make them do this?" and then, after 2 days of thinking and no results ask. In that way you will learn faster.

All I know of programming is populous, so when I started like a year ago I had no idea of anything (not even IF/ELSE). If you try to solve your own problems, you will be able to find solutions faster (and errors). Search among all expansions some of them will teach you how to make them build in a more practical way, others how to attack randomly and other how

QUOTE



[War]gba1990

Brave



Posts: 90
Joined: Sat May 11, 2013
11:48 am
Location: Dream city

the defense works.

Smile

Re: AI scripting guide

by [GoD]AztecWarrior » Sat Oct 22, 2016 2:28 pm

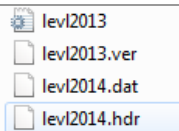
thought i could use this topic to ask about lang file

so the initial messages have numbers like 0 (level 12), 79, 110 (level 4), 14, 140, etc
i wonder why those number are so random...i mean, if level 1 message is 78 or 78, it clearly
doesnt mean the line number in the lang file...seems kinda random, cuz level 12 is way after
and it's the message indexed as "0"

anyway, how this works?

i know how to change the starting messages/level name, but what if i need extra slots for
more messages per level? what numbers to use, how can i know, how many can i have?

ATTACHMENTS



also, whats the first file of the 4? what it does/means?

2f3bd1476995c2f05501989eb9ce6d5e.png (2.27 KiB) Viewed 51 times



Divinity

QUOTE



[GoD]AztecWarrior
Preacher



Posts: 927
Joined: Sat Mar 07, 2009
2:46 pm
Location: Ourém, Portugal,
rua do casalao - vilar dos
prazeres caralhe, é ao pé
da casa do mogli(rofl).



Re: AI scripting guide

by [War]gba1990 » Sun Oct 23, 2016 1:48 am

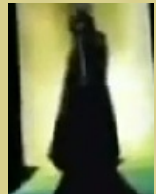
lang-empty-file-and-some-info-t11130.html

dunno the reason why they are random. In the link there is a tthe bottom an empty lang file.
Each line (that can be changed) has the index instead of the message, in that way, just write
your message, remember the index and thats it.

That file has .inf extension. I have no idea of what it is used for but if you open one of them
with notepad they sohwsomething like " Island 1 portal 2 ". Maybe someone with more
knowledge can answer.

Smile

QUOTE



[War]gba1990
Brave



Posts: 90
Joined: Sat May 11, 2013
11:48 am
Location: Dream city

Re: AI scripting guide

by [GoD]AztecWarrior » Sun Oct 23, 2016 6:24 am

thanks thats handy



Divinity

QUOTE



[GoD]AztecWarrior
Preacher



Posts: 927
Joined: Sat Mar 07, 2009
2:46 pm
Location: Ourém, Portugal,
rua do casalao - vilar dos
prazeres caralhe, é ao pé
da casa do mogli(rofl).



Re: AI scripting guide

by [GoD]AztecWarrior » Sun Oct 23, 2016 9:23 am

in my level 2, human only has blast and hut, but after 3 seconds of game start, human gets
permanent spell swarm...

QUOTE



[GoD]AztecWarrior
Preacher

i remember in bullfrog level 2 we get permanent swarm, but my script and level are different, why is it happening?
(if im not wrong, someone once told me if i put a vault any knowledge in a level, the human will get all the spells unlocked in that level, from bullfrog) example: even with different map and script, if i save my map in level 6 and dont check convert and lb, they will still appear at start, because in bullfrog's level 6 there are two vaults of knowledge for those spells. why that happens? idk why, but it shouldnt, and it sucks (idk if its true)

what stuff like this means?
SET INT_ATTR_SHAMEN_BLAST 64

--
and this?
DO SET_BUCKET_COUNT_FOR_SPELL INT_BLAST 8



Divinity

Re: AI scripting guide

by [War]gba1990 » Sun Oct 23, 2016 10:42 am

QUOTE

“ [GoD]cute_bunny wrote:

in my level 2, human only has blast and hut, but after 3 seconds of game start, human gets permanent spell swarm..

i remember in bullfrog level 2 we get permanent swarm, but my script and level are different, why is it happening?

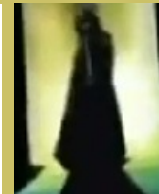
(if imnot wrong, someone once told me if i put a vault any knowledge in a level, the human will get all the spells unlocked in that level, from bullfrog) example: even with different map and script, if i save my map in level 6 and dont check convert and lb, they will still appear at start, because in bullfrog's level 6 there are two vaults of knowledge for those spells. why that happens? idk why, but it shouldnt, and it sucks (idk if its true)

what stuff like this means?
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and this?
DO SET_BUCKET_COUNT_FOR_SPELL INT_BLAST 8



Posts: 927
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[War]gba1990

Brave



Posts: 90
Joined: Sat May 11, 2013 11:48 am
Location: Dream city

It is true that if the tribe doesn't exist or dies in that level, you will get that spell/building (if there are vaults). Try to change the tribe of that level 2 to green, you will not receive swarm then. In order to avoid that you can do this

CODE: SELECT ALL

```
{
  IF (INT_GAME_TURN == 0)
  {
    //INITIAL VALUES
    blah blah blah...
  }
  ELSE
  {
    IF (INT_GAME_TURN < 33)
    { //This part will be executed every game turn until gameturn = 33
      DO REMOVE_PLAYER_THING BLUE INT_SWARM //Remove the spell from blue
panel
    }
```

Shaman blast is (in theory) the damage that enemy shaman will deal:
Controls the damage done by the ai Shaman's blast. Normal values are 0,32,64 or 128. At 0 she would take 6-8 blasts to kill an enemy shaman; at 256 she could do it with 2-3.

SET_BUCKET_COUNT_FOR_SPELL is (in theory) the mana cost for AI spells. Dunno if the value is percentage, actual cost or any other stuff.

Smile

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