



3D VIRTUAL WORLD LEARNING ENVIRONMENT

Viewer installation and controls manual

AUTHORS

PANAGIOTIS VRETTIS
ANDREAS MALLAS

PARTNERS

UNIVERSITY OF PATRAS, GREECE
UNIVERSITY OF MAIA, PORTUGAL

✉ positivelearning@umaia.pt

🌐 www.positivelearning.eu

3D Virtual World Learning Environment Manual of Instructions

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Authors

Panagiotis Vrettis

Andreas Mallas

Ana Pontes

University of Patras, Greece

26504 Rio

University of Maia, Portugal

Av. Carlos de Oliveira Campos, 4475-690 Maia

Partners

Arsakeio Lyceum of Patras

Colegio Los Pinos

Rates School Cluster (Agrupamento de Escolas de Rates)

VšĮ "eMundus

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1. INSTALLATION AND SETUP

To view video instructions for installing, setting up the viewer, and creating an account click [here](#). The video should be used in conjunction with the manual.

a) Viewer Installation

To access a 3D VW, first, you have to download a viewer. To ensure maximum compatibility, the suggested viewer is Firestorm viewer. Open or copy and paste the following URL in your browser to open the download page:

<https://www.firestormviewer.org/os-operating-system/>

Select the appropriate distribution depending on your operating system (Windows, Mac or Linux, Figure 1). For Mac follow the instructions on this [link](#) under the “Step 3: Install Firestorm” tab of the page.

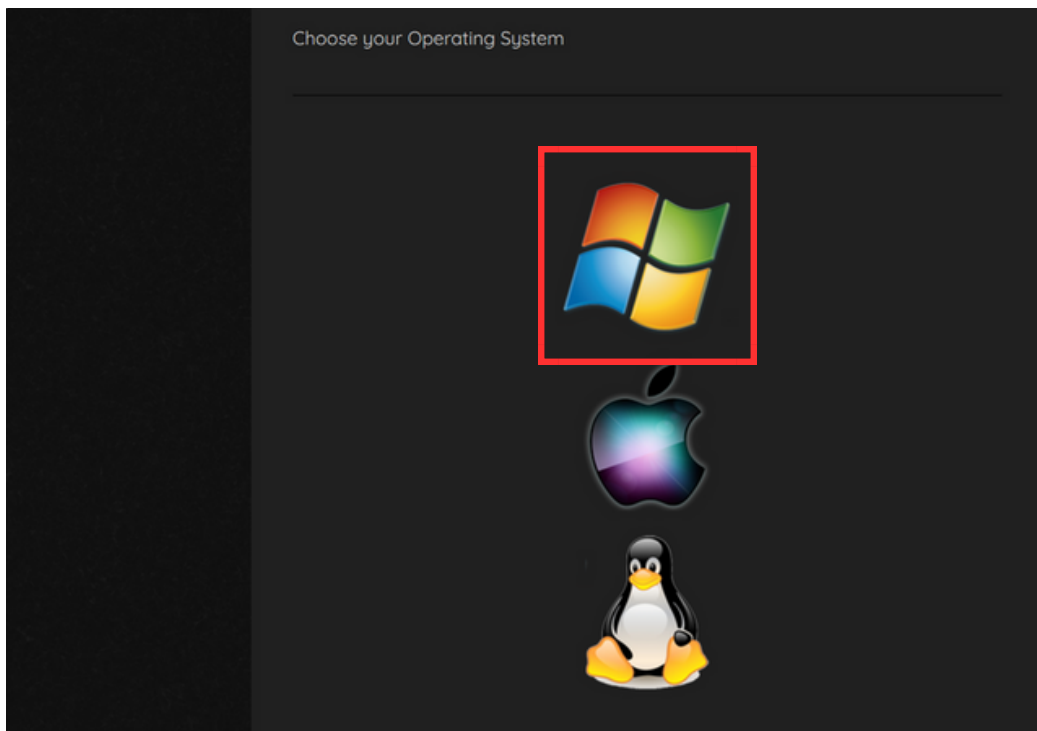


Figure 1: Firestorm download page, select operating system.

In the next page (for windows) there will be 2 download buttons, select the 64bit version (Figure 2)

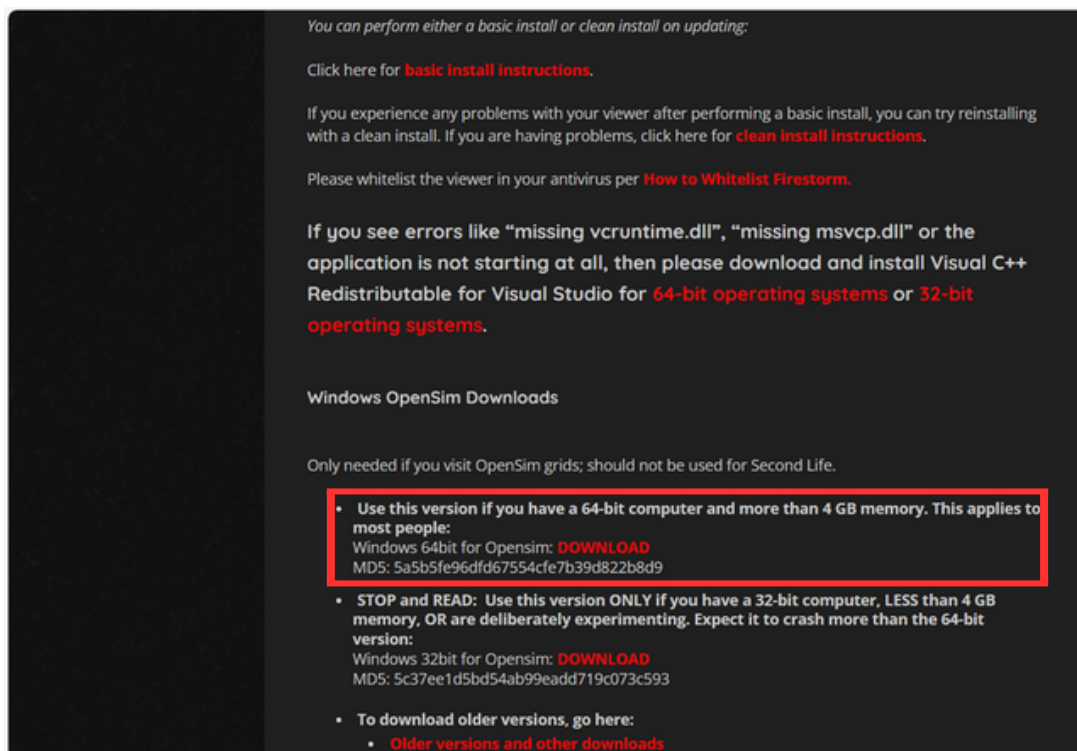


Figure 2: Firestorm download,select version.

When the download completes, double click the downloaded file to start the installation process.

i) MacOS

MacOS users should take a few extra steps to complete the installation process. First, download the macOS version of Firestorm as shown in Figure 1 and then find the .dmg file you just downloaded and double-click it to mount it. Then drag the Firestorm app icon into your Applications folder. More detailed instructions can be found [here](#).

Note: Apple's Gatekeeper software may initially prevent your opening the viewer, depending on your Gatekeeper settings. If it does, there is a simple way to change it: See "How to open an app from a unidentified developer and exempt it from Gatekeeper" [on this page](#). Once you have allowed Firestorm to open via this method, Gatekeeper will not flag it on subsequent launches (until you reinstall Firestorm again).

b) Setting up the viewer for the first time

When the installation completes, run the viewer by double clicking the Firestorm's icon created on the desktop. Once the viewer opens, follow the steps depicted in Figure 3.



Figure 3: setting up the viewer.

Step 1: Click the Viewer button on the top left corner

Step 2: Click the Preferences button

Step 3: Click the OpenSim button

Step 4: Enter the POSITIVE login URI:

<http://opensim.ceid.upatras.gr:9002> (Right click on the URI and press copy hyperlink, be careful to not include any spaces after the URI)

Step 5: Click the “Apply” button

Step 6: If all the previous steps were followed correctly the Grid will now be showing: “POSITIVE”.

Step 7: Click the “Ok” button

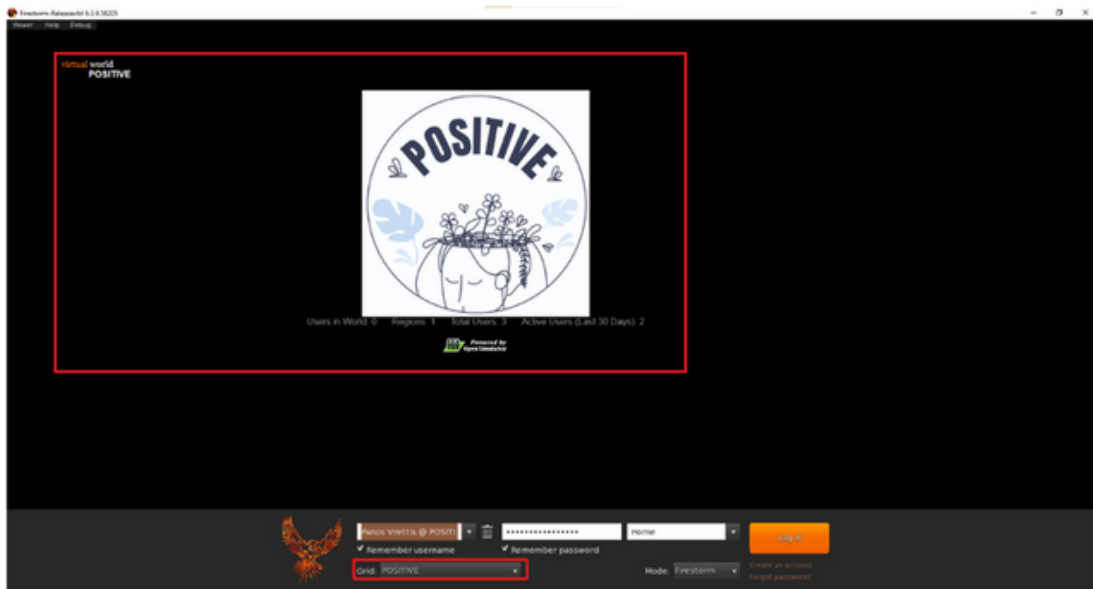


Figure 4: How the page should look like

Next select "POSITIVE" from the Grid menu if not already selected (Figure 4). After successfully selecting the grid, the POSITIVE logo will appear in the central section of the screen

c) Create an account

After you have successfully set up the viewer in the previous step, you have to create your account. Click "Create an account" (Figure 5, step 1) and a pop up to create your account will appear. To protect your anonymity, it is advised to **not use your real information**.

In this step, you enter your information that includes: first name (step 2), last name (step 3), password (step 4), retype password (step 5), Type of avatar (step 6), and press "create" (step 7). Note that the **email is not required** for anonymity reasons.

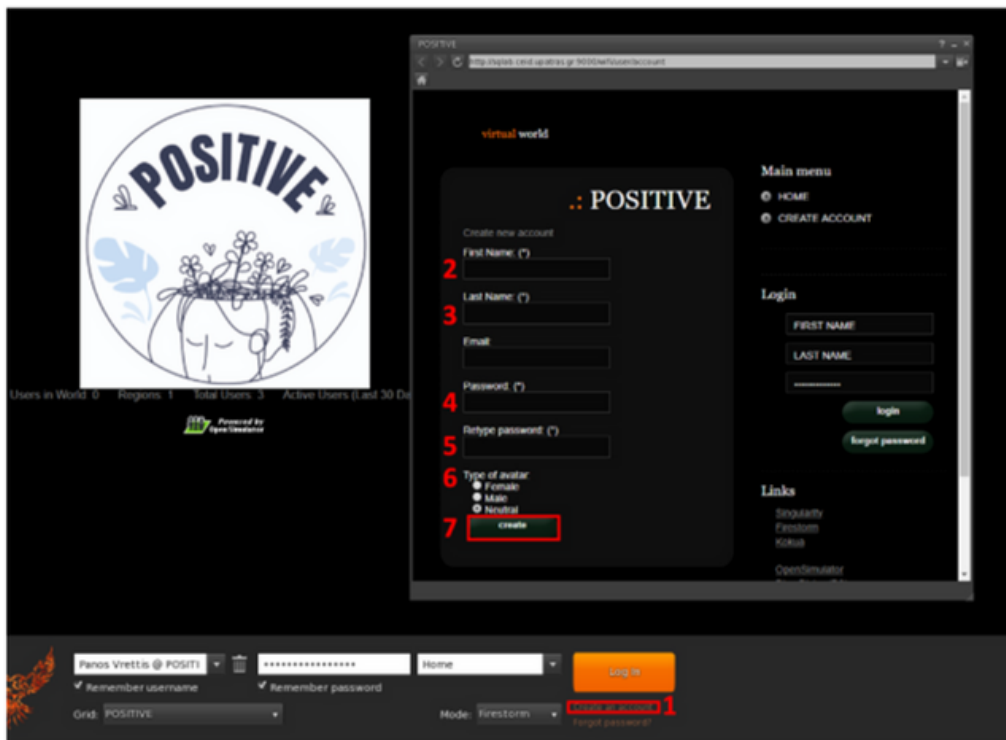


Figure 5: Create account page.

d) Login to the platform

To login to the platform follow the steps of Figure 6:

Step 1: Enter your username (usernames are two words, first and last name) e.g.

simple user

Step 2: Enter your password

(You can check the options to remember username and password)

Step 3: Ensure that last location is selected (in order to continue from your last location, the next time you log in to the platform)

Step 4: Click Log in

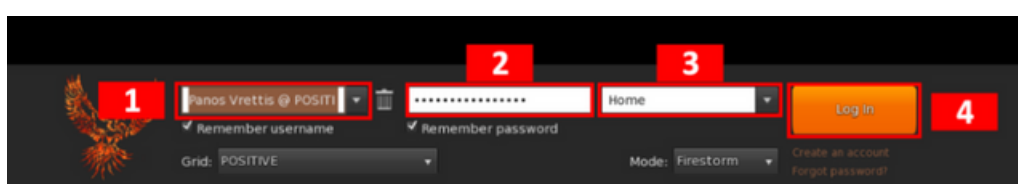


Figure 6: Fill in account details.

2. COMMUNICATION WITH REAL PLAYERS

a) Enabling voice

As a user, the first time that you open the Firestorm viewer, you will be asked by your operating system to allow Vivox to access the internet, click allow to enable the service, failure to do so will result in voice communication to be disabled in your viewer.

b) Using voice

To use voice communication, you must click on the voice icon. This functionality works similarly to a walkie-talkie where you must keep the icon pressed for the others to hear you (Figure 7).



Figure 7: Voice icon is pressed.

Optionally, you can also tick the tiny icon at the top right corner of the voice icon to change the behavior of the button from "hold to talk" to "click once and the button remains pressed" enabling you to talk without the need of holding the button (Figure 8). Note that when the button is pressed, a green icon appears on top of your avatar and at the chat field, indicating that nearby avatars can hear you.



Figure 8: The small icon is ticked.

c) Written communication



On your bottom left corner, there is a chat window, called nearby chat (Figure 9). Open the chat by pressing the nearby chat button or the Ctrl + H shortcut. Scroll up to see the chat history. Everything that you type here can be viewed by all Avatars (real players) of the virtual world.



Figure 9: Chat window.

3. CONTROLS

a) Avatar movement

Walk forward/backward:  

Turn left/right:  

Run: Double-tap walk forward/backward key or

Jump or fly up:  or  + 

Crouch or fly down:  or  + 

Sit: Right-click on self/object/ground and select "Sit" or  + 

Stand: Right-click on self and select "Stand"

Clicking the movement button (bottom box with a moving person icon, Figure 10) a pop-up dialog will appear showing the camera's controls (red box) where you can choose to walk, run, or fly, as well as move in any direction.



Figure 10. Movement Controls


i. Enable WASD movement

Instead of using the keyboard arrow keys (for those familiar with the keyboard WASD keys) you can enable WASD keys for movement by changing the following setting:

Avatar → Preferences → Move & View → Movement → Tick the “Pressing letter keys affects movement” option

b) Camera controls

The camera can be rotated using  

Scrolling the mouse wheel will change the zoom level or  two finger slide up or down on a trackpad. Zoom in completely and the camera will become first person.

4. AUDIO ADJUSTMENT

a) Introduction

Through the viewer, the player can set the volume of different audio groups (e.g., effects, music, and media) to their preference. After the user makes their adjustment, they do NOT have to repeat the process in subsequent playthroughs, as their settings are saved internally.

b) Firestorm viewer audio settings

To access the audio settings, click on the speaker icon in the Firestorm Viewer toolbar (Figure 11, 1).

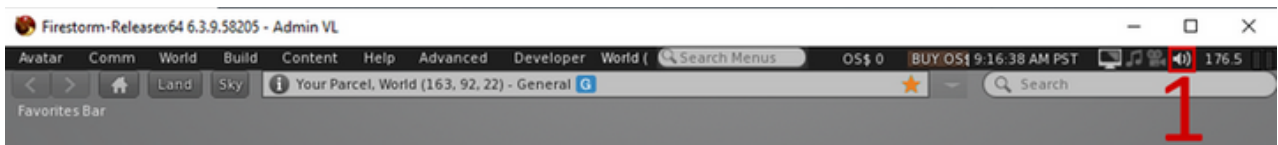


Figure 11. Click on the Speaker Icon to access the Audio Settings

The audio settings window (Figure 12, 2) includes 7 sliders. The Master slider adjusts the volume of the final (mixed) audio that plays. The other six sliders adjust individual (self-explanatory) audio groups. Using the checkbox next to them, you can disable the audio group altogether.

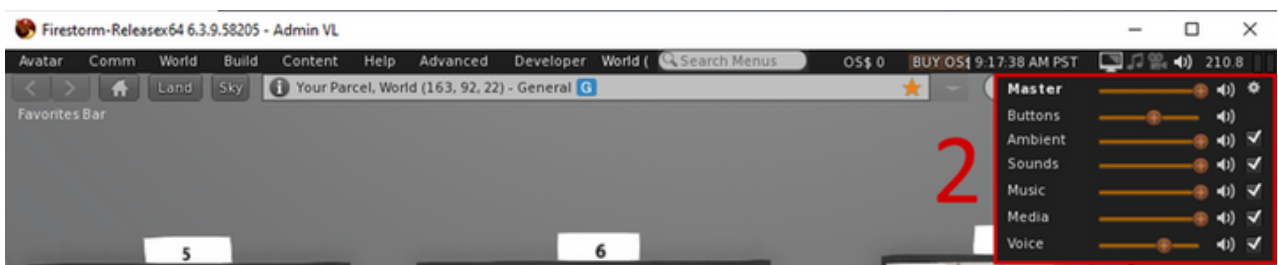


Figure 12. Adjusting Audio Settings

5. TROPHIES

By completing certain parts of the world, the player is rewarded with a trophy. Each trophy is unique, containing a unique inscription and description that relate to the content it is associated with. Completing the Tutorial and Scenarios will reward the player with a trophy. All trophies that the player has collected can be viewed in the Trophy Room (Figure 13) in the center of the world, along with their descriptions.

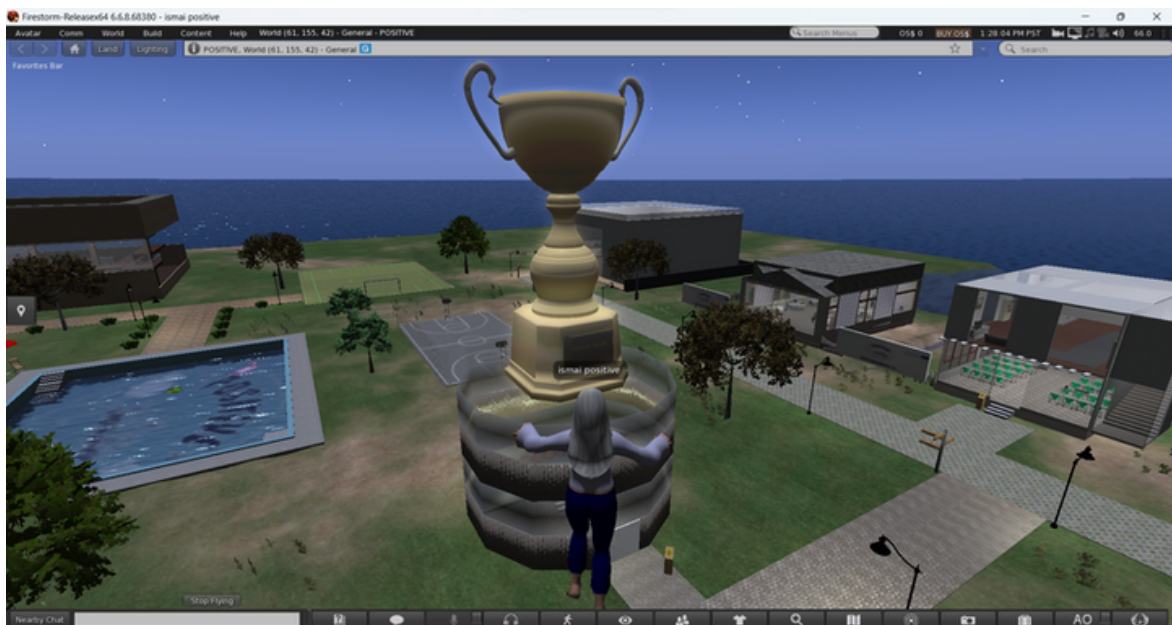


Figure 13. Trophy Rooms

6. INSTRUCTIONS FOR PLAYING

a) Interacting with the world

To interact with any object in the virtual world, point your mouse cursor over it and press left-click. In contrast, pressing right-click will open a wheel of interaction options. For the purposes of this project, the use of left-click to interact with interactable objects is sufficient. Conversations can also be started by simply interacting with a Non-player Character (NPC) in the same manner.

b) Step by step instructions

i. Language selection

After completing the previous steps of this manual, you can now log into the virtual world. First, you must choose your language out of the 5 available (English, Greek, Portuguese, Spanish, and Lithuanian). To do so, when you first enter the world, you will be placed in a room with a world map. By clicking on the available flags/regions on the map (Figure 6), you can select the desired language. After selecting a language, click on the POSITIVE Logo to be teleported to the Tutorial.

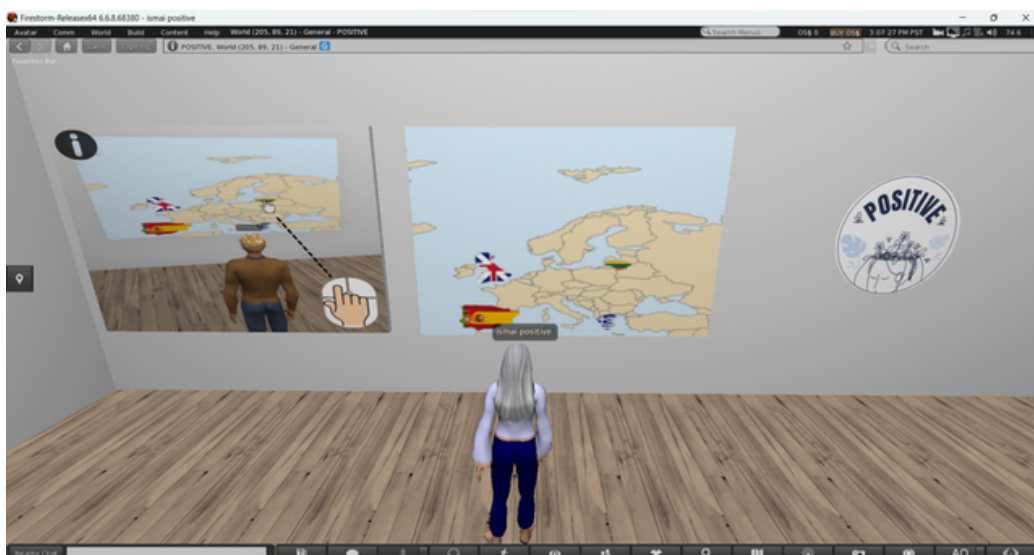


Figure 6. Map

ii. Tutorial

In the tutorial (Figure 7), you will learn the basics of navigating and playing the game. The tutorial consists of 7 steps, each a separate panel with an image. Click on each panel to get instructions, starting from 1 and moving to the next. Read the instructions carefully while observing the images that are displayed.

Some instructions are optional.

The main aims of the tutorial are:

- getting acquainted with avatar navigation,
- learning to change your avatar's appearance (optional),
- learning the game's mechanics,
- get acquainted with player – NPC dialogue.



Figure 7. Tutorial Room (TR)

After going through all the steps, you will receive a Trophy for doing so. You can exit the Tutorial room into the open world by clicking on the **exit sign** near the entrance (Figure 8).



Figure 8. Exit sign TR

iii. Scenarios

Each scenario can only be played by one player at a time. To enter a scenario, click on the “enter” button next to the entrance (Figure 9). If another player is currently playing the scenario, you will be informed. Else, you will be teleported inside, and the scenario will begin. After you complete a scenario, you will receive a trophy as a reward. You can exit by clicking on the various exit buttons located in the scenario (Figure 10).

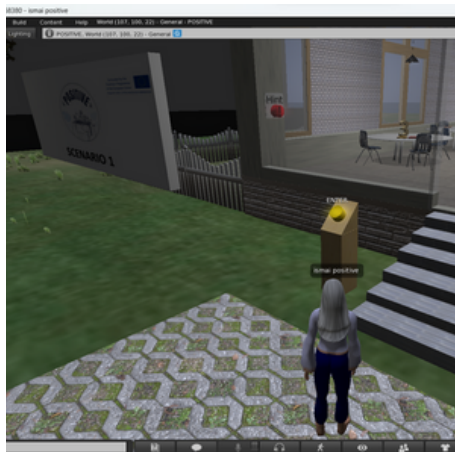


Figure 9. Enter button



Figure 10. Exit button

iv. Interactive Map & Signs

To help players navigate the virtual world, interactive maps are placed in multiple locations (Figure 11). The player can click on a labeled location on the map to teleport to it. The same functionality is provided by the various signs.



Figure 11. Interactive maps

7. TECHNICAL ISSUES

As with any application, when running a viewer for virtual worlds you may encounter technical issues. Firestorm viewer is an application with a great community supporting it and with wealthy online material regarding common technical issues and their suggested solutions. We will refer anyone that is experiencing technical problems with the viewer to read the common problems related to [Firestorm](#) and if this is not sufficient then contact the POSITIVE project. In order to run Firestorm Viewer without any problems please ensure that your system meets at least the minimum system requirements.

i. Firestorm viewer requirements

	Minimum	Recommended
Operating system	Windows 8.1, 32-bit	Windows 10, 64-bit
	Linux 64-bit kernel 4.4	Linux 64-bit kernel 4.15 or newer (1)
	Mac OS 10.11 (El Capitan)	Mac OS 10.15 (Catalina)
Internet connection	750 Kbps down, 100 Kbps up	10 Mbps down, 1 Mbps up
Display	1024×768 pixels	1920×1080 pixels
Memory	8 GB for 64-bit systems 4 GB for 32-bit systems	16 GB
Disk Space	1 GB application 1 GB cache	1 GB application 10 GB cache
Processor	Dual Core @ 2.70 GHz(3)	Quad Core @ 3.30 GHz(3)(4)
Graphics Card		NVidia GeForce GTX 980 AMD Radeon R9 290X 1.12 GHz with 4 GB Memory (2)

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