VR4STEM

Creating an Account and Connecting in the 3D World

VIRTUAL REALITY
FOR STEM
ENTREPRENEURSHIP
TRAINING
2015-3-RO01-KA205-022949
WWW.VR4STEM.RO

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Account Creation

You can create an avatar account (Firstname, Lastname, Password) here:

http://login.vr4stem.ro:5005/wifi/user/account/

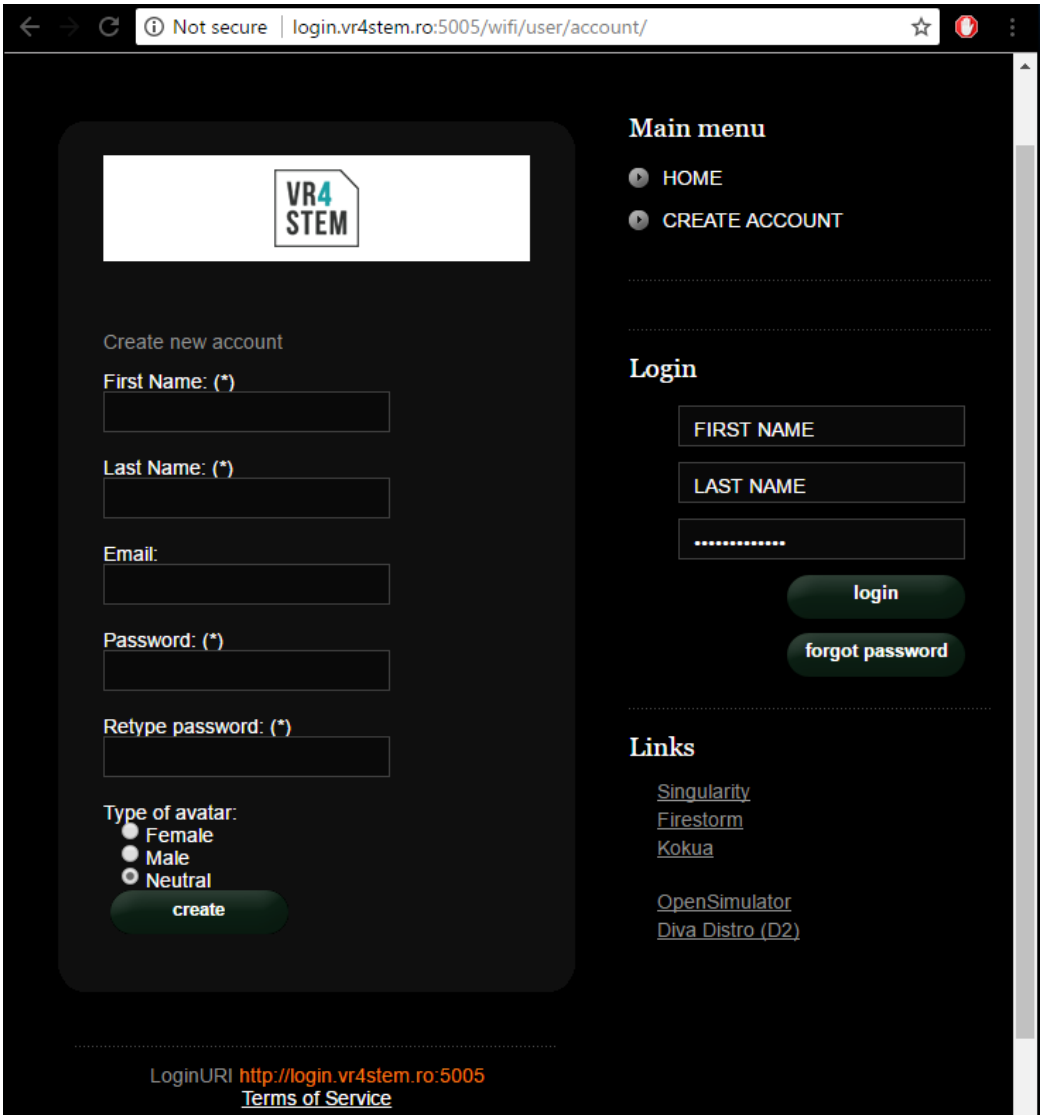

Figure 1: Creating a new avatar

To create the avatar you only need to provide a First Name, a Last Name and a Password.

You also select from one of the available avatar types (Female, Male, Neutral).This only affects the initial appearance of your avatar. You can freely modify your appearance later.

You can return to the above page later and use your account credentials to sign in and manage your account (e.g. updating your password,managing your inventory).

Installing the 3D Viewer Software

To connect to the 3D World with the avatar you have created you need 3D Viewer Software such as Firestorm or Kokua. We recommend using Firestorm. You can download it here:

http://www.firestormviewer.org/downloads/

Select the Operating Version you use and then download the version that indicates *SL &Opensim(32bit or 64bit)*

Figure 2: Download of Firestorm

After the file is downloaded, run it to initialize the installation and follow the provided instructions to install the application.

Find the VR4STEM World

Once you have downloaded and installed Firestorm you can run it from the installation folder or from the shortcut on your Desktop screen.

Firestorm initially has a predefined list of popular 3D Worlds to choose from. To be able to connect to the VR4STEM 3D World you first have to add it to the list. This only needs to be done once (the first time you run Firestorm on your computer):

1. From the horizontal top menu of Firestorm go to: Viewer -> Preferences
2. In the 'Preferences' window that will open, find in the left menu the option 'OpenSim'

3. In the Grid Manager tab, find the field 'Add new grid' and enter the following value, that is the address to the VR4STEM 3D World:

login.vr4stem.ro:5005

4. Click'Apply'. You can confirm that the grid has been successfully added, by checking the 'Manage Grids' list below for the entry: *Virtual World Platform/login.vr4stem.ro:5005*

5. Click 'OK'

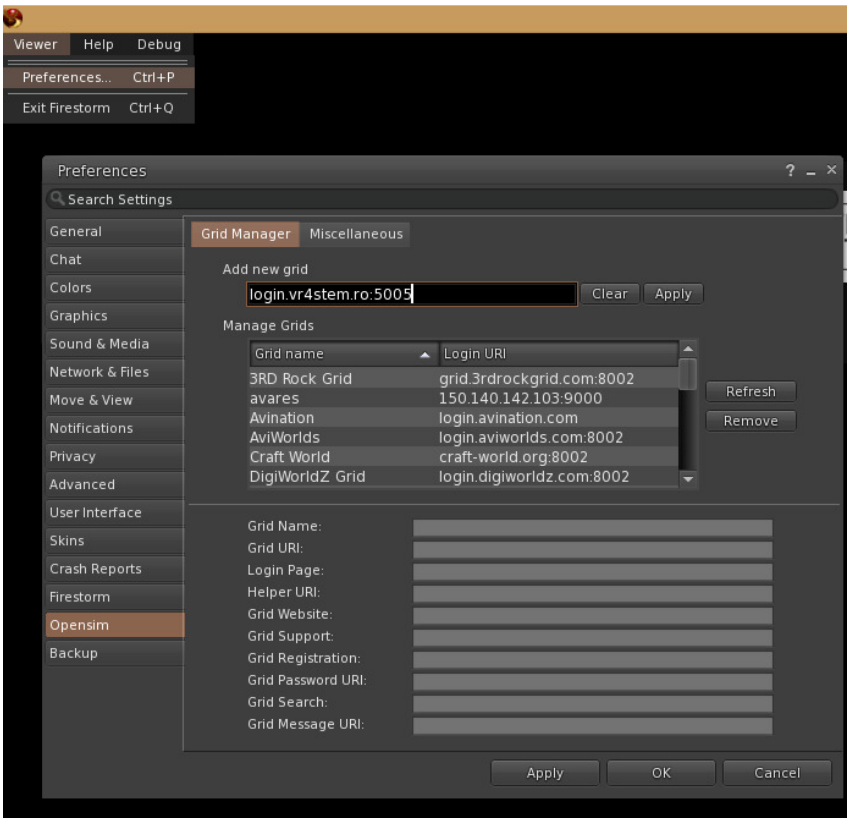

Figure 3: Adding the VR4STEM grip

For other 3D Viewers the steps are mostly identical.

Connecting to the 3D World

At the bottom of Firestorm you can find the form for logging in a Virtual World.

- For Username use the First Name and Last Name of the avatar you created in the 'Account Creation' step, separated by a white space character ' ' (e.g."John Doe").If you use some other 3D Viewer software there may be two distinct fields for First and Last Name.

- For Password use the password you created for your account at the 'Account Creation' step.
- For the field "Log into Grip", you need to choose from the list the VR4STEM grid, that your added in the previous step: **Virtual World Platform**
- The 'Start at' field determines the location of the grid you want your avatar to start at. Just select 'Home' to start at your characters default home location (you can change it later in the 3D World) or 'Last location' to start at the location you were located the last time you logged out of the 3D World.
- Finally click 'Log In' and wait a few seconds for the viewer to connect to the grid and initialize the 3D World.

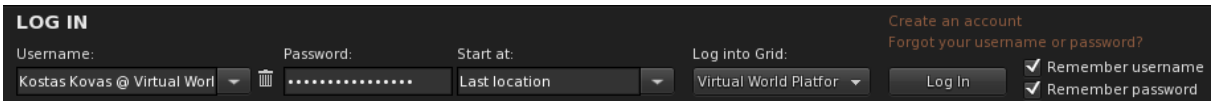

Figure 4: Log In the 3D World

Basic Controls

When your first enter the 3D World you should find nearby a panel with some basic instructions to control your avatar.

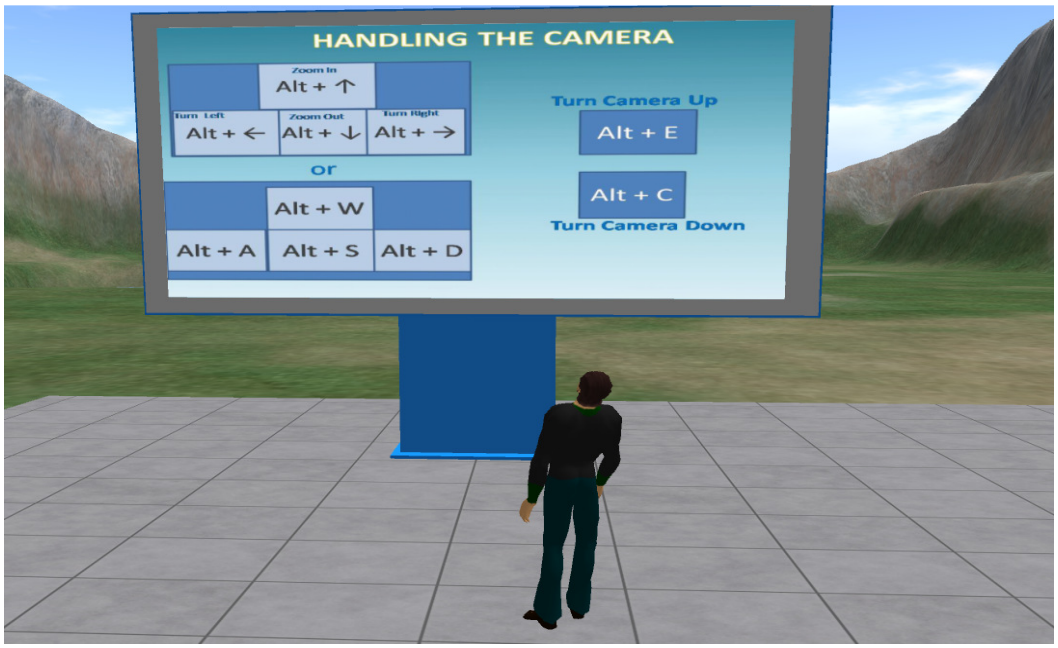

Figure 5: The initial location for a new Avatar entering the 3D World

Moving and Flying

You can move your avatar around with the Arrow Keys or WASD. If you prefer WASD, you should probably go to *' Avatar -> Preferences -> Move & View -> Movement'*and enable the option *'Pressing letter keys affects movement (i.e. WASD)'*

Figure 6: Moving instructions

Move Forward:	W or ↑
Move Backwards:	S or ↓
Turn Left:	A or ←
Turn Right:	D or →

You can turn flying on/off using F and then fly with E (Up) and C (Down).

Figure 7: Flying instructions

Turn Flying On/Off:	F
Fly Up:	E
Fly Down:	C

You can also move your character by clicking or double clicking on the ground, but you first need to enable the option *'Single / Double click on land'* from the Movement Menu (*' Avatar -> Preferences -> Move & View -> Movement'*) .

Controlling the Camera

You can control the Camera with the same keys you move and fly while holding at the same time the "Alt" key.

Figure 8: Camera control instructions

Zoom In	Alt + W or↑
Zoom Out	Alt + Sor↓
Turn Camera Left	Alt + Aor←
Turn Camera Right	Alt + Dor→
Turn Camera Up	Alt + EorPageUp
Turn Camera Down	Alt + Cor PageDown

You can also use your mouse:

Key/Mouse Combination	**Function**
Alt-Left Click	Zoom: You can control the degree of zoom by left clicking the spot, then moving your mouse forward or back. Side-side motion on the mouse will rotate the camera round the selected spot.
Ctrl-Left-Click	Orbit: Rotates the camera around the selected spot on screen.

Shift-Ctrl-Left-Click	Pan: Move the camera laterally or front-back, but without zooming or rotating.
Shift-Ctrl-Alt-Left click	Pan: move the camera up or down.

For more details you can check the following links:

Moving and Camera Control

http://wiki.phoenixviewer.com/fs_movement_and_camera

All Keyboard Shortcuts

http://wiki.phoenixviewer.com/keyboard_shortcuts

Modifying the Avatar's Appearance

Right Click on your Avatar→ Appearance → Edit Outfit

Figure 9: Appearance of the avatar

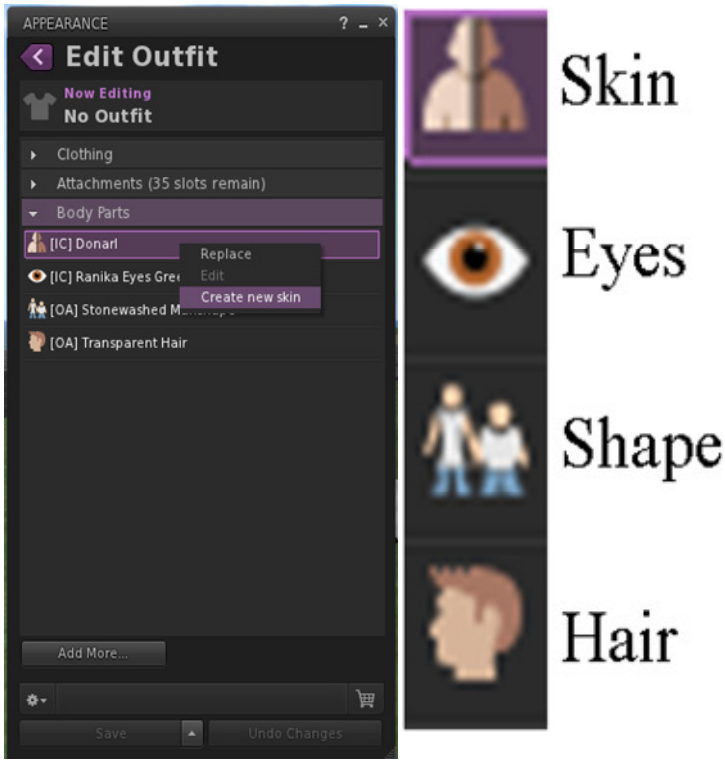

Figure 10: Appearance edit

On the “Edit Outfit” window, under “Body Parts”, locate the attributes you want to edit (Skin, Eyes, Shape or Skin).

Right Click on each one and then click “Create New”. Apart from the “Body Parts”, you can also change the Avatar’s “Clothing” using the same steps.

Just use the sliders to adjust each body part or clothe to your liking.

Figure 11: Editing your body shape

For more details check the following links:

Editing Outfits

http://wiki.phoenixviewer.com/my_outfits_tab

Editing Shapes and Other Body Parts

http://wiki.phoenixviewer.com/fs_edit_body_part

Sun Position

If it gets too dark, you can adjust the Sun Position in your viewer at '*World -> Sun Position*'

Figure 12: Sun position of a new grid

Your Inventory

Your avatar has a file folder with files organized by their type (e.g.Body Parts, Animations, Gestures, Objects, Textures, Notecards).

You can access it by clicking the suitcase icon on the bottom right.

During your interaction with items in the 3D World you may receive some files like Clothes or Notecards (Text Files) with information. These files can be located in your Inventory on the corresponding folder.E.g. If you received a Notecard, you can find it in: *Inventory -> Notecards*

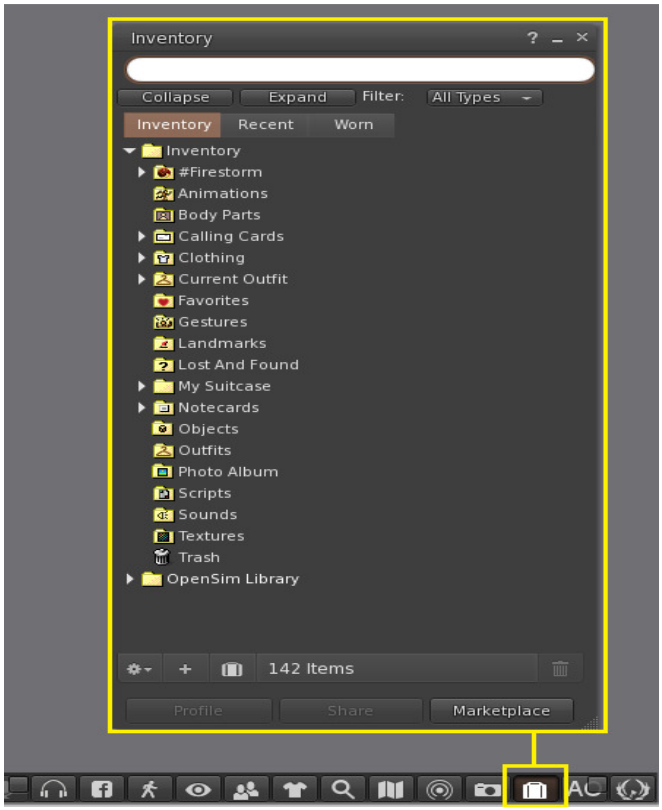

Figure 13: Inventory

For more information you can check the following link:

http://wiki.phoenixviewer.com/my_inventory_tab

Communication

On the bottom left of the interface there is a 'Nearby Chat' field where you can write text messages. These messages can be viewed by other users in the 3D World with avatars located near you.

By opening the 'Conversations - Contacts' menu (the speech balloon icon) you can view a list of users that are currently logged in the Virtual World.You can send them private messages or even have group chat with some of them. You can also add some users as 'Friends' so you later find them easier and be able to quickly teleport to their position.

You can use a microphone to communicate with your voice. Enabling the microphone checkbox on the bottom left, allows your voice to be heard by any avatars nearby. You can also make private calls with specific avatars through the 'Conversations - Contacts' menu.

Another way to communicate is through Gestures. These are animations that your avatar carries out in the 3D World. You first need to locate the gesture files in your Inventory (OpenSim Library -> Gestures) and activate them (right click -> Activate).Then right click on your Avatar and select Gestures to view the list of available gestures. You can double click or select a gesture and click 'Play' to execute it. Alternatively you can assign akeyboard combination or a command to use in the chat to execute it. For example you can configure your avatar to wave at another when you press *Ctrl+F4*or when you write '*/wave'* at the chat.

You can check the following links for more information:

Chat

http://wiki.phoenixviewer.com/fs_chat

Gestures

http://wiki.phoenixviewer.com/fs_gestures

Navigation

Teleportation Panels can be foundin every Island/Course, that allow users to access the other areas. The main areas of the 3D World are:

- Main Island
- Entrepreneurship
- Lasers
- Computer Architecture
- Drones
- Gamification
- Robots
- Data Mining
- 3D Printing
- Mobile Programming

In the Teleportation Panel, the area that the user is currently located is highlighted.Clicking on the name of one of the available areas teleports the user to that area, arriving on a predetermined landing point, located at the start of the course.

Figure 14: Main Islands menu

Additionally, some areas have panels that allow the user to quickly teleport at a specific topic of the course

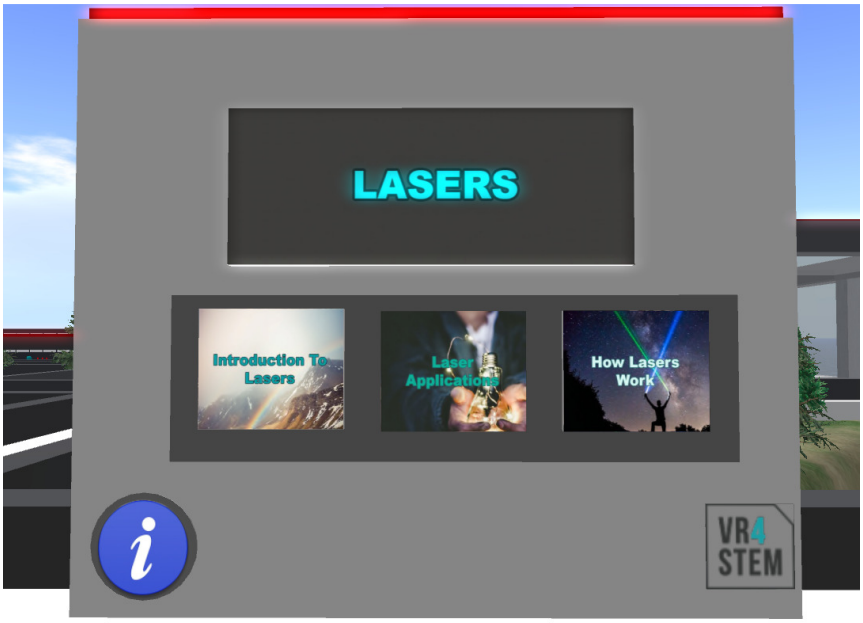

Figure 15: Panel for teleporting to a specific topic

Alternatively you can use the World Map in world ->World Map(Ctrl + M)

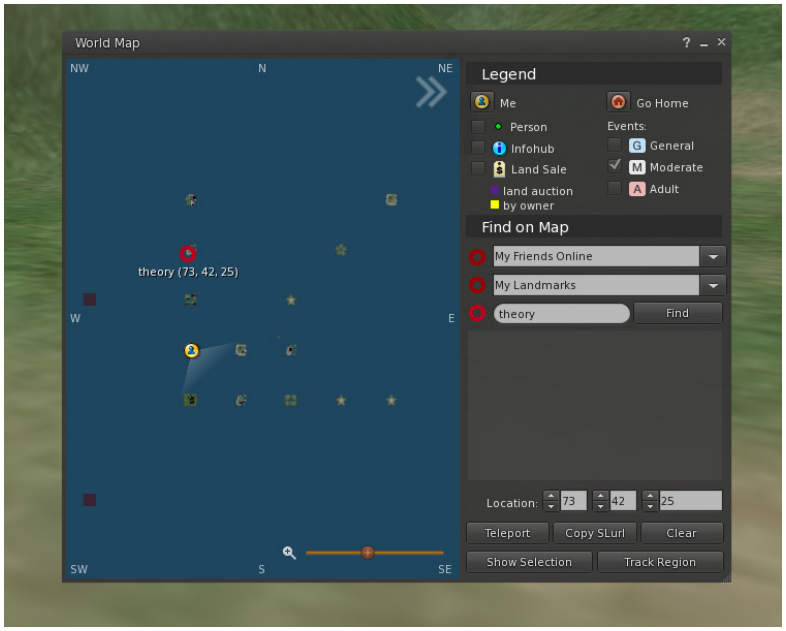

Figure 16: Map Example

Presentations

At Presentation Panels, click to go to the next Slide.

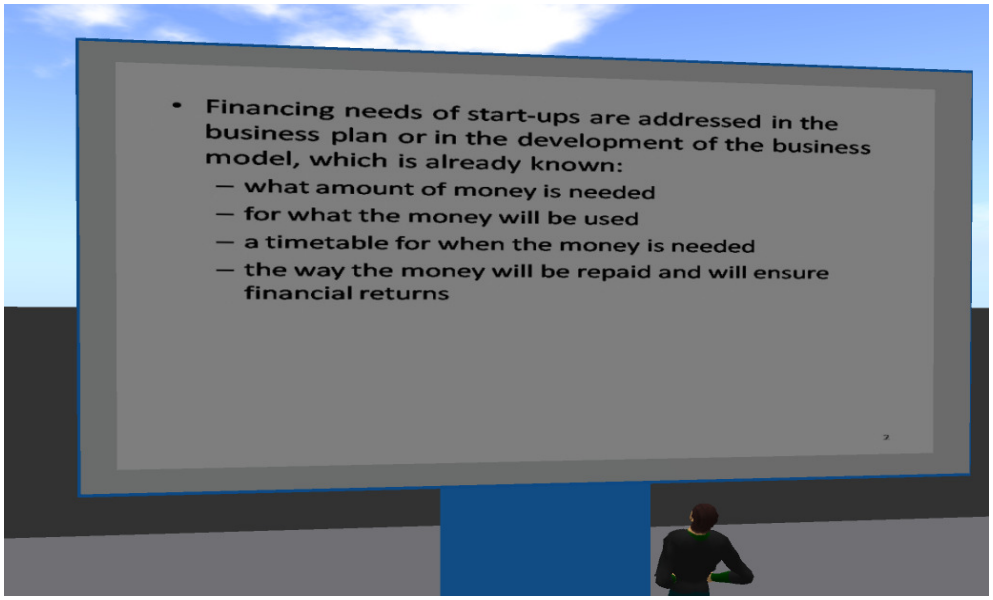

Figure 17: An example panel

Figure 18: Panels presenting theoretical aspects of the courses

Websites

Some panels display Web Pages. A navigation bar will be displayed on top, when you click or hover on them.

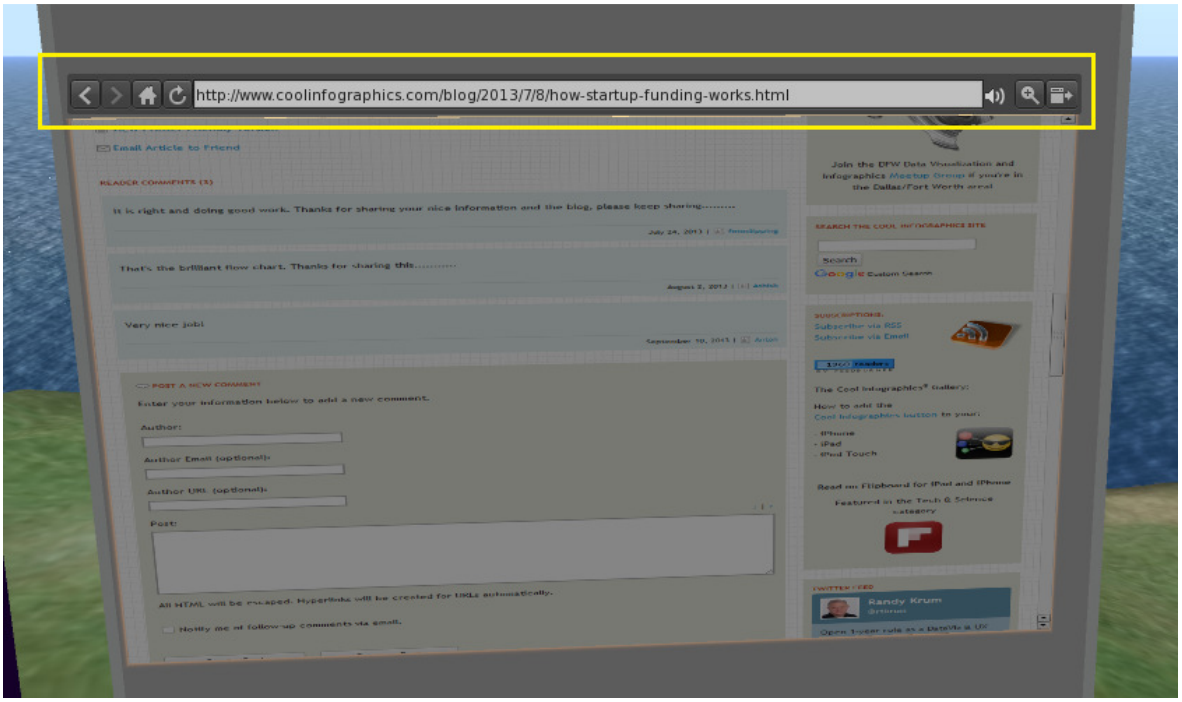

Figure 19: Website browsing

You can interact directly with the page.

You can use the zoom in Icon to center/zoom your view on the panel.

You can use the next icon to open the webpage with your default Browser.

 Reload this page

 Zoom In/ Center view for better display

 Open this Page with your Web Browser (e.g. Chrome, Firefox)

Accepting Notecards/Objects

When you interact with items in the World you may receive a Notecard or other Files. A window will appear asking you to accept the item Offered.

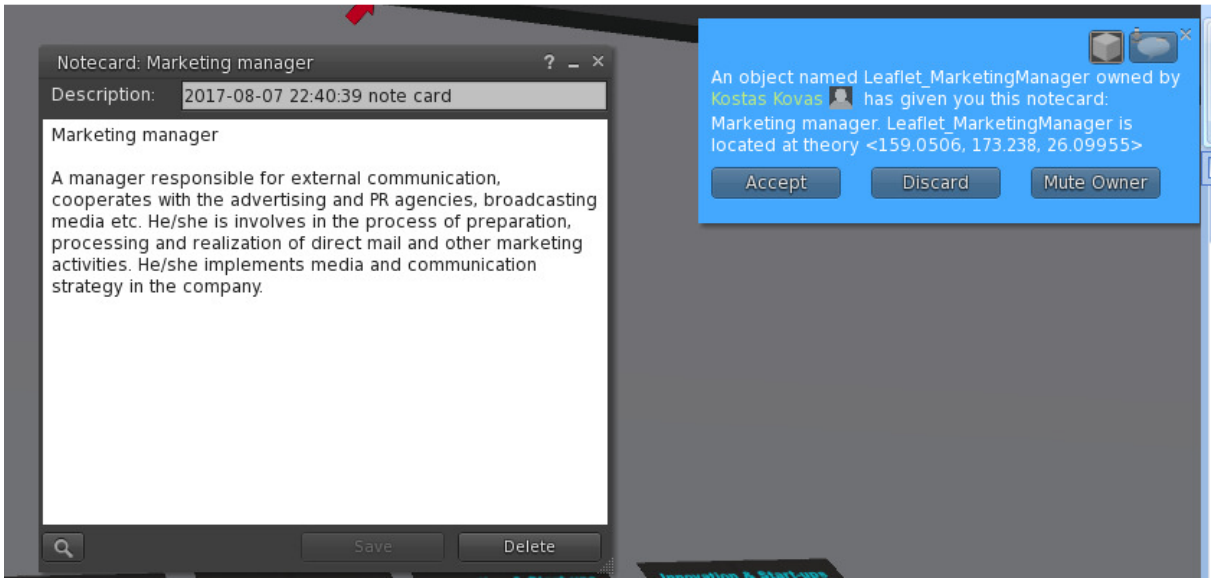

Figure 20: Notecard example

Quizzes and Gamification

Gamification is simply the application of game-like elements and mechanics such as score, time limits and awards systems to engage and motivate people to achieve pre-determined goals such as improving performance or learning something. Most Games have some common features: There are rules, objectives and some type of reward or recognition for achieving the goal. Most games try to be fun and entertaining. Gamification tries to take the essence of games, and apply it into real world, non-game situations.

During your visit in the 3D World you will encounter various objects that you can interact with. Usually you will find relevant instructions nearby.

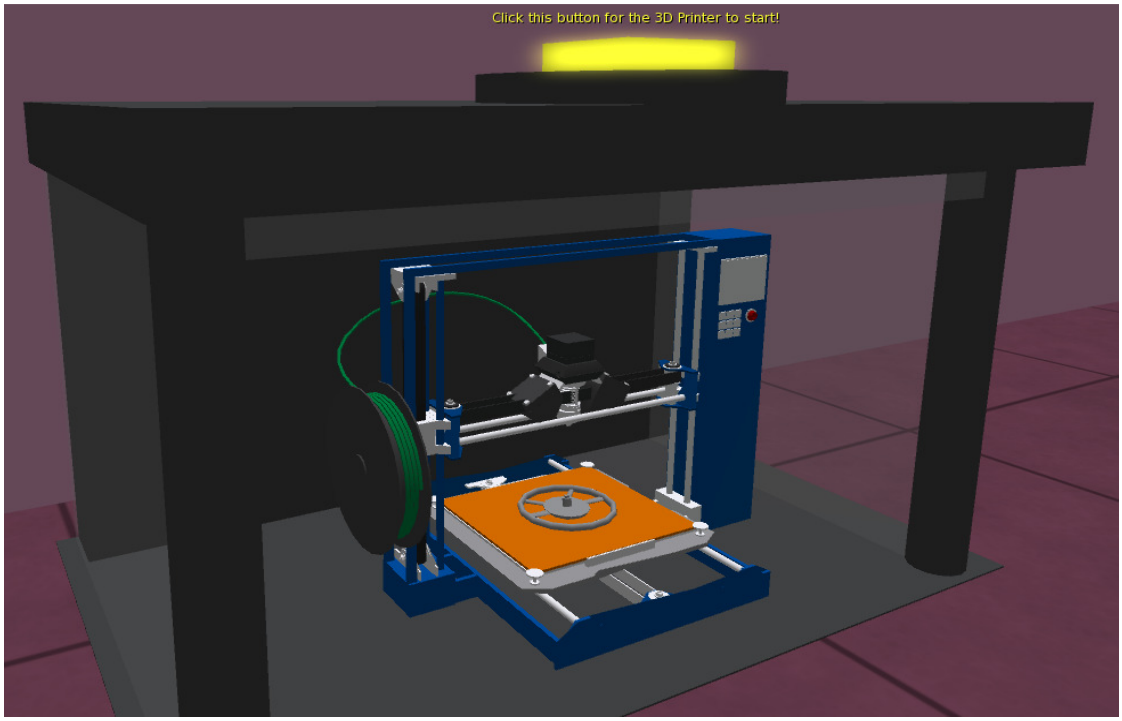

Figure 21: Interacting with 3D Objects

A common activity includes a series of multiple choice questions that you have to answer correctly to receive some piece of information, an object or a reward.

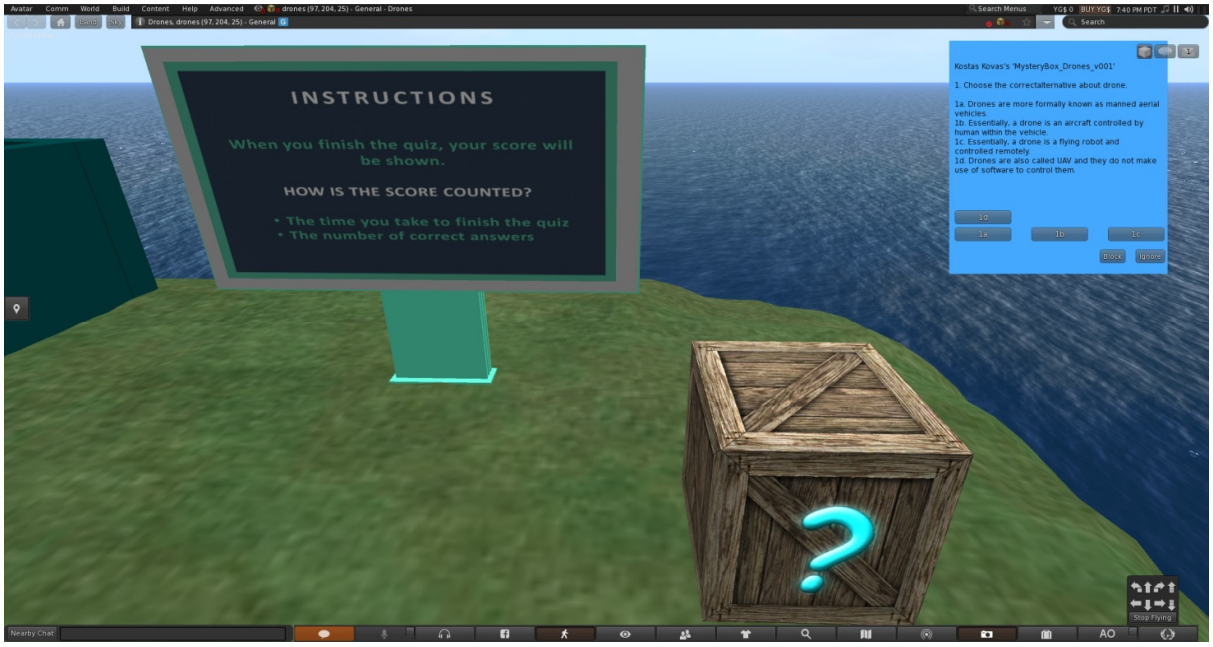

Figure 22: Example Quiz instructions

Another type of activity requires that you select a series of cards in the correct order to specify the steps of some procedure.

Figure 23: Specifying the correct order of a procedure

In another type of activity you may need to choose from a list of parts the suitable ones for building a specific item.

Figure 24: Selecting the correct parts for building something

Another example of activity is exploring an area and collecting specific objects scattered around it. The goal is to find all the parts of some complex object. A panel displays the pieces you have already found. When you collect all pieces the object will appear nearby allowing you to interact with it and continue the learning activity.

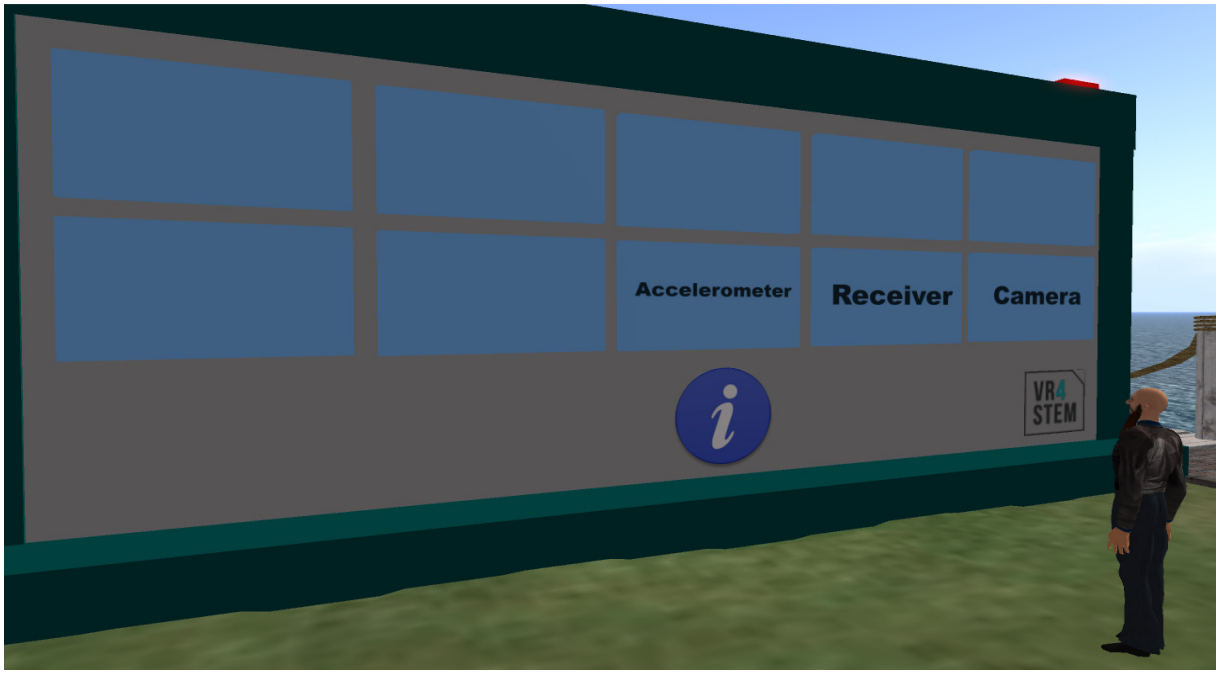

Figure 25: A panel displaying the parts you have already discovered

Some activities may give you HUD items. HUD items are custom control windows that appear on your screen. You can find these objects in your Inventory (Inventory -> Objects) and double click them to display them on your screen.

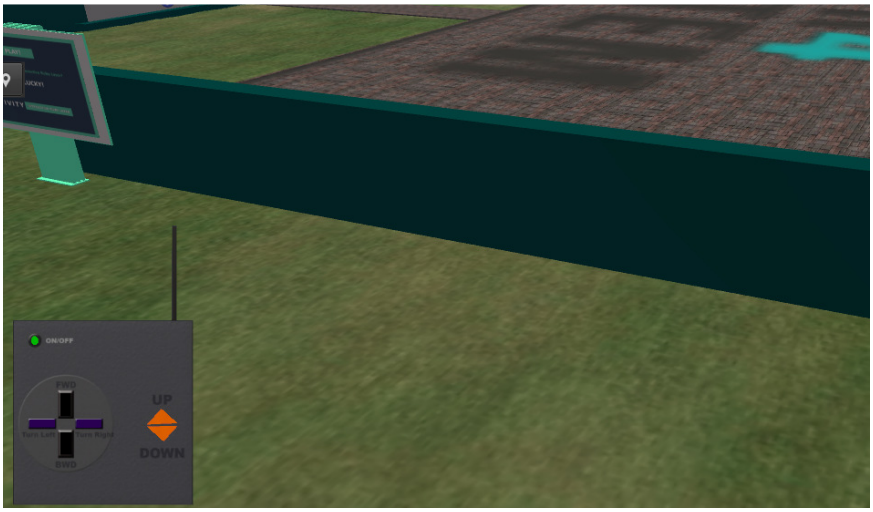

Figure 26: A HUD element (remote controller) on the screen, allowing you to navigate a drone

Similar to HUDS, you may receive attachment objects. You can find these objects in your Inventory and double click them to wear them on your avatar.

Figure 27: An avatar wearing a mask attachment

During your visit you may encounter NPC characters. These are avatars controlled through scripts, configured to execute specific actions. In most cases approaching the NPC character will trigger it to speak to you or guide you somewhere. You can have a dialogue with some NPC characters using a Dialogue menu that appears on your screen.

Figure 28: Dialogue with an NPC character