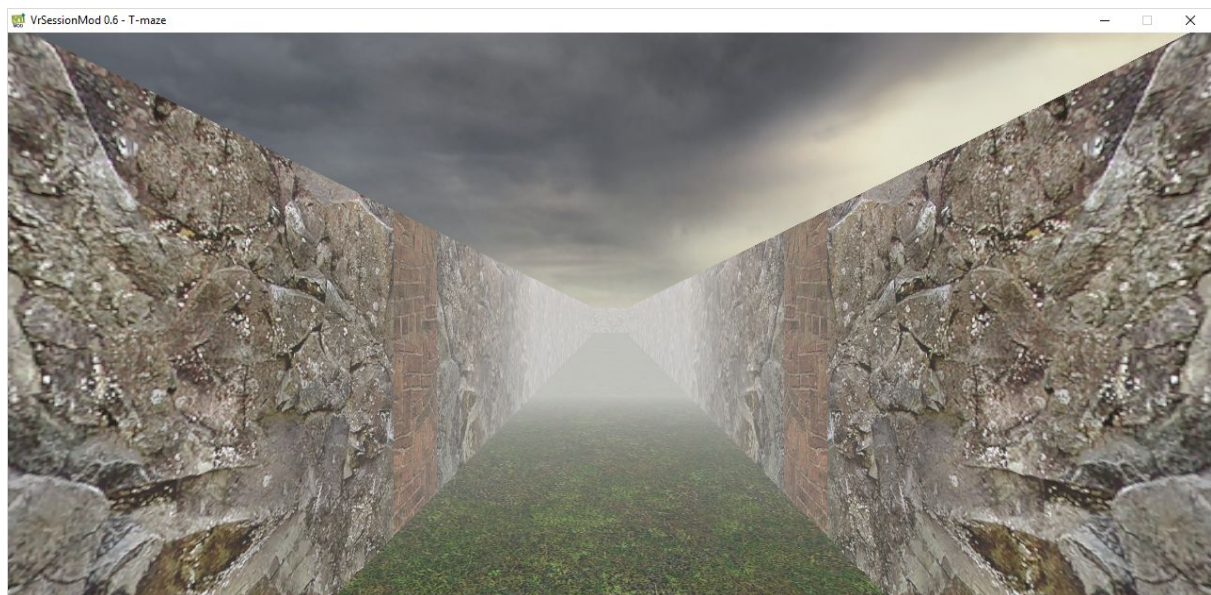


# Installation Guide

## Virtual T-Maze Paradigm using Virtual Reality Simulation Software CyberSession with Source SDK 2013 Modification: VrSessionMod06\_T-Maze



### Corresponding Publications:

- Virtually arousing movements: Skin conductance and heart period in a virtual T-maze paradigm
- Defining the v in movement: Introduction and validation of a virtual T-maze paradigm to measure (neuro)physiology ?

Authors: Johannes Rodrigues, Mathias Müller

Version 1.0

Contact: [t-maze@cybersession.info](mailto:t-maze@cybersession.info)

## Ressources:

### FTP:

<http://update.cybersession.info/T-Maze/VrProject.T-Maze.zip> (282 MB, 2019-10-15)

- Paradigm\
- sourcemods\
  - TwoLayerFeedForward\
    - neuronal\_network\_pattern\_classifier.m
- CyberSession-5.8.30.161.exe

[http://update.cybersession.info/T-Maze/TwoLayerFeedForward\\_Data.zip](http://update.cybersession.info/T-Maze/TwoLayerFeedForward_Data.zip) (330 MB)

- TwoLayerFeedForward\
  - Neuronal\_network\_pattern\_classifier.m
  - net\*.mat

### SVN Repos:

<https://crm.vtplus.eu/svn/open-access.t-maze/trunk>

#### Paradigm:

<https://crm.vtplus.eu/svn/open-access.t-maze/trunk/Paradigm>

Versuchsbatch\_Haupt\_VR.bat

#### SourceMods:

[https://crm.vtplus.eu/svn/open-access.t-maze/trunk/sourcemods/VrSessionMod06\\_T-maze](https://crm.vtplus.eu/svn/open-access.t-maze/trunk/sourcemods/VrSessionMod06_T-maze)

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# 1. Installing MOD

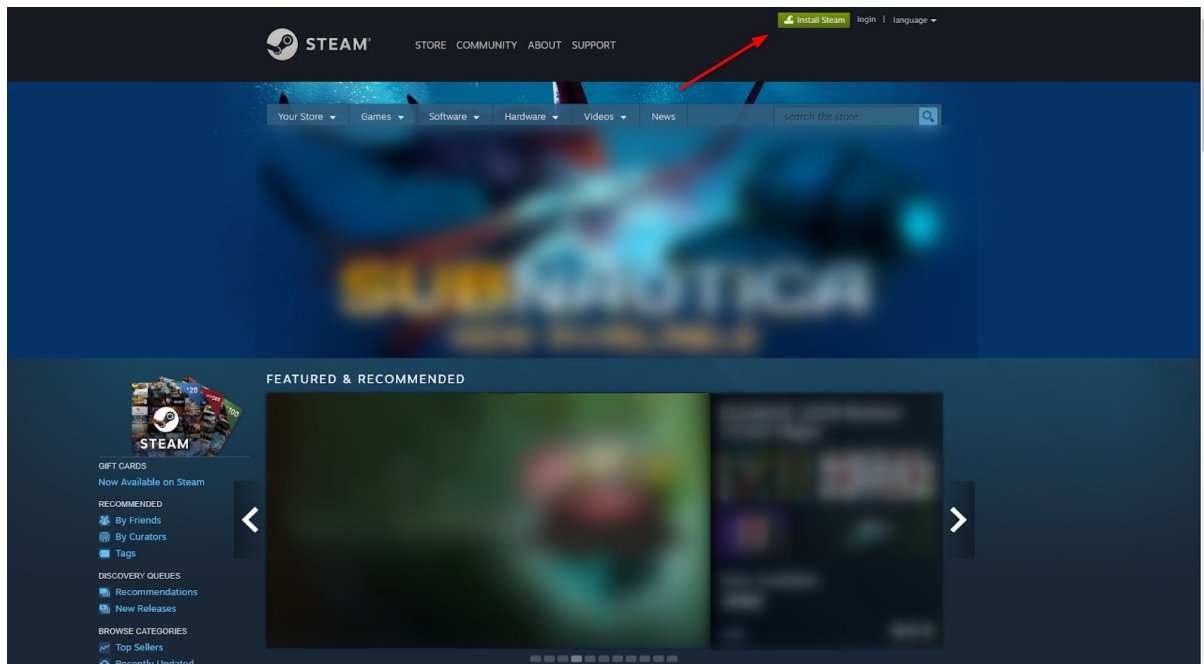
## 1.1. Introduction

This short tutorial describes how to install Steam and VrSessionMod in your Computer.

## 1.2. Downloading Steam Client

First visit the website <http://store.steampowered.com>

The website looks like:



Navigate to **Install Steam**.



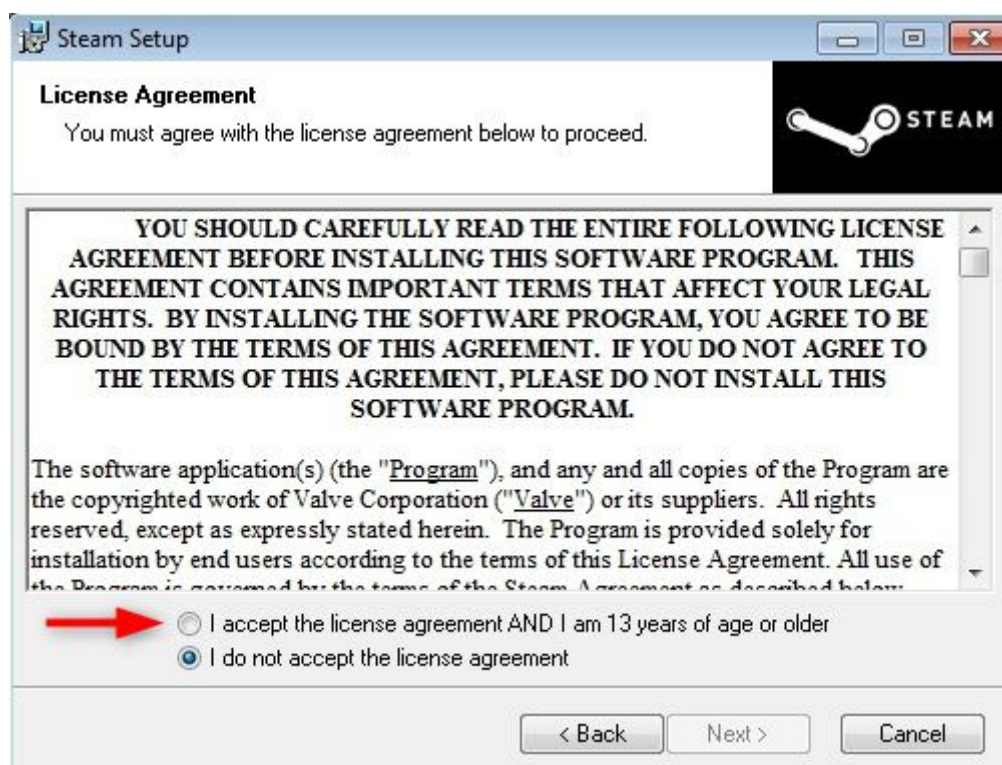
Click on **Install Steam Now** and confirm running the **SteamSetup.exe** file.

## 1.3. Installing Steam Client

1. Launch the **Steam Installation Wizard**, and proceed by clicking the **Next** button.

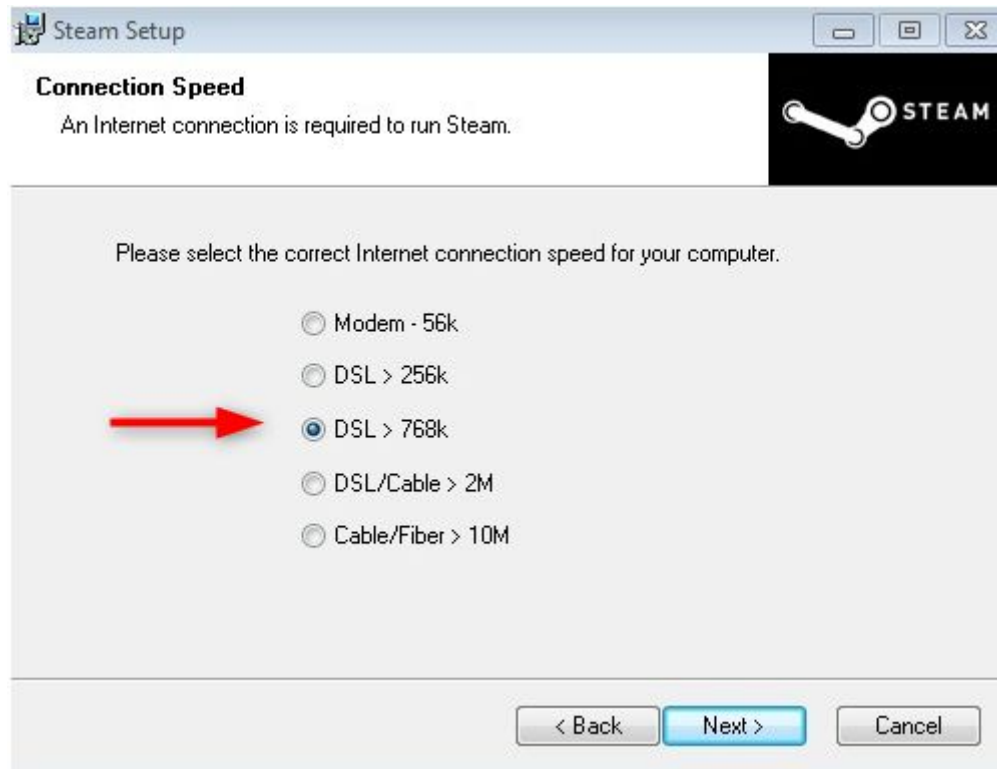


2. Accept the **Steam License Agreement**





3. Select your **Internet connection speed** to run Steam



4. Select the **language** to use when running Steam

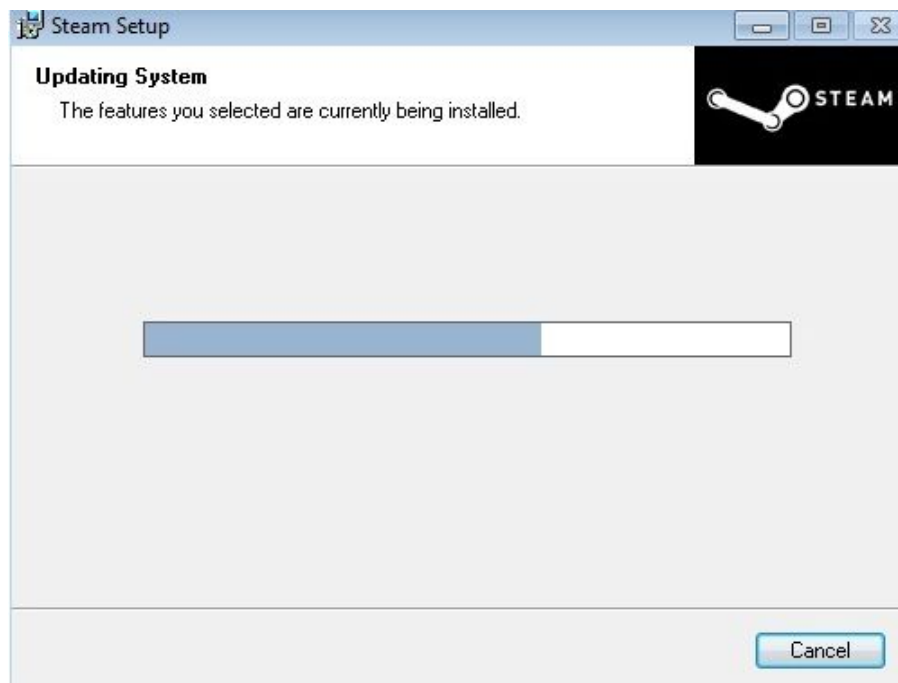


5. Select **folder** where you want Steam to be installed



- Recommendation for the installation select the folder **c:\Steam** (Sample CyberSession Configuration uses c:\Steam, see 3.3)
- (alternate: install to **v:\Steam** if separate SSD Drive is available, configure Steam-Path accordingly, see 3.3)

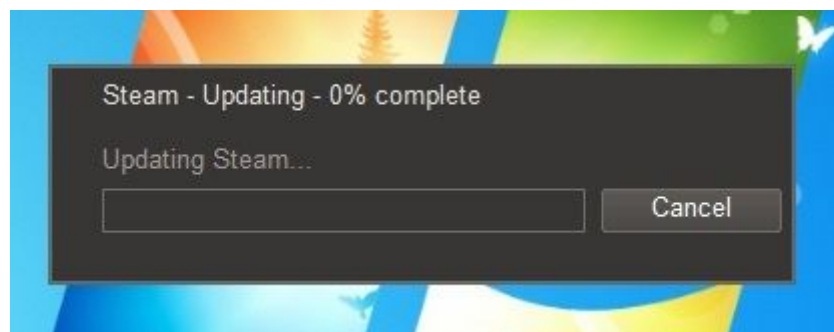
6. Wait for the Steam installer to finish installing and updating your system



- Click **Finish** after Steam is successfully installed



- Proceed by **updating the Steam client**





## 1.4. Steam Account register and login

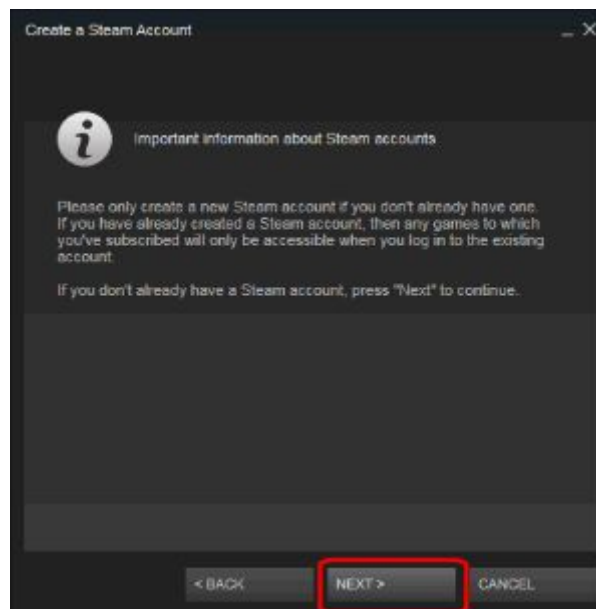
1. Click on **Login to an existing account** (Alternatively, you can **create a new account** if you don't have one.)



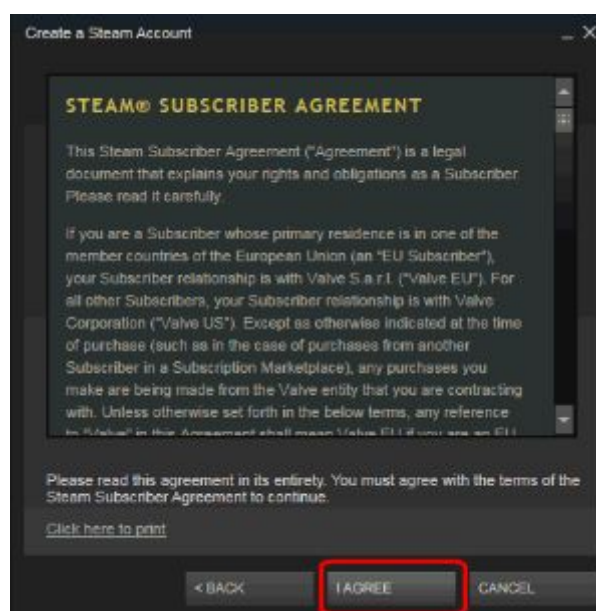
2. Click the **Create a new account**



3. If a screen explaining that you shouldn't create multiple Steam accounts appears, click the **Next** button to continue and create a new account



4. Review the Steam Subscriber Agreement, then click the **I agree** button



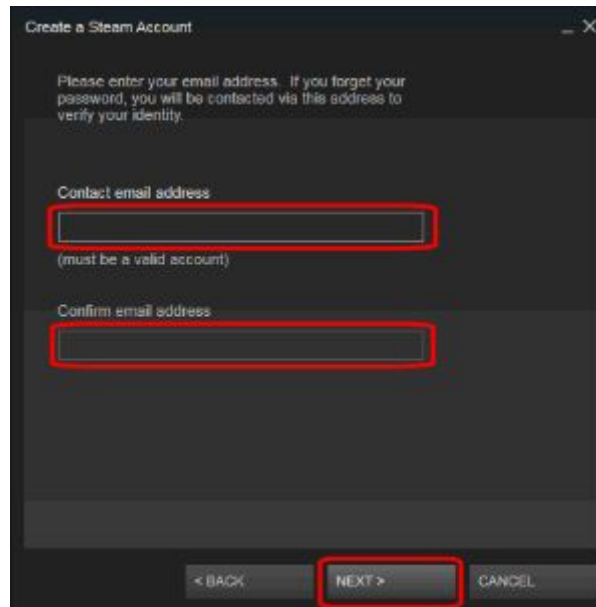
5. Review the Steam Privacy Agreement, then click the **I agree** button



6. Enter your preferred **Account name** (Steam will tell you if the name you are inserted is already used and ask you to enter a different account name), enter and confirm your password and then click the **next button**

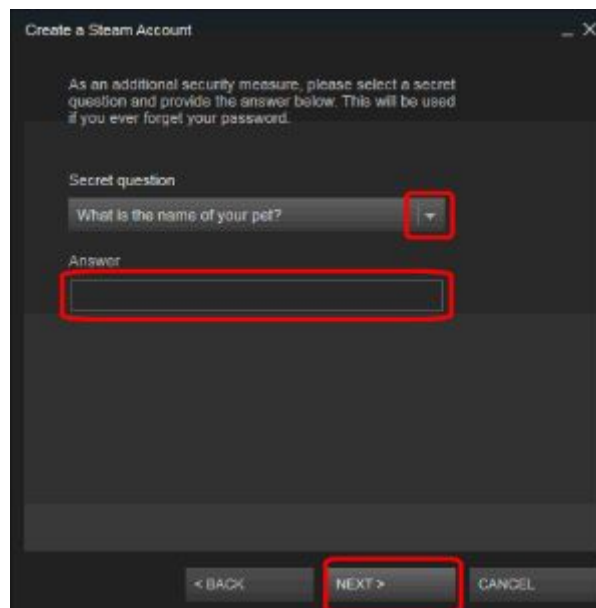
A screenshot of the 'Create a Steam Account' window showing the account creation form. It includes fields for 'Account Name', 'Password', and 'Retype password'. Below these fields is a 'NEXT >' button, which is highlighted with a red rectangle. There are also '< BACK' and 'CANCEL' buttons at the bottom.

7. Enter your contact email address, Steam will require this to be an email address that isn't already associated with a Steam account - if your email is associated with an existing Steam account you can cancel the new account creation and use **Retrieve a lost account** button on the Steam Login dialog to regain access to the existing account. After entering your email address, click the **Next** button



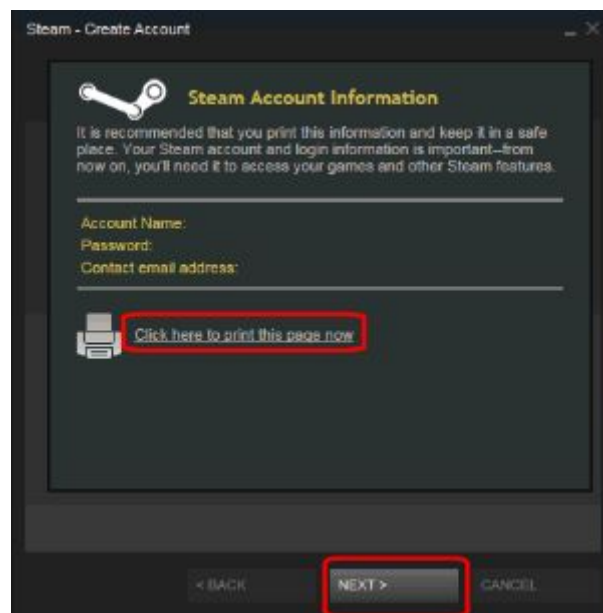
The screenshot shows the 'Create a Steam Account' dialog box. At the top, it says 'Please enter your email address. If you forget your password, you will be contacted via this address to verify your identity.' Below this, there are two text input fields: 'Contact email address' and 'Confirm email address'. Both fields are highlighted with red rectangles. At the bottom of the dialog, there are three buttons: '< BACK', 'NEXT >', and 'CANCEL'. The 'NEXT >' button is highlighted with a red rectangle.

8. Select a suitable **Secret Question** from the list and enter your answer, then click the **Next** button

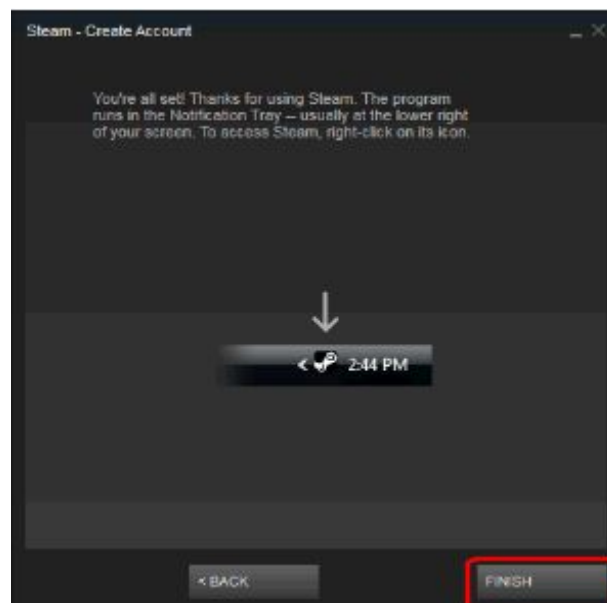


The screenshot shows the 'Create a Steam Account' dialog box. At the top, it says 'As an additional security measure, please select a secret question and provide the answer below. This will be used if you ever forget your password.' Below this, there is a 'Secret question' dropdown menu with the text 'What is the name of your pet?' and a red rectangle around the dropdown arrow. Below the dropdown is an 'Answer' text input field, also highlighted with a red rectangle. At the bottom of the dialog, there are three buttons: '< BACK', 'NEXT >', and 'CANCEL'. The 'NEXT >' button is highlighted with a red rectangle.

9. If you want a printed copy of your Steam account information click the **Client here to print this page now** link, then click the **Next** button



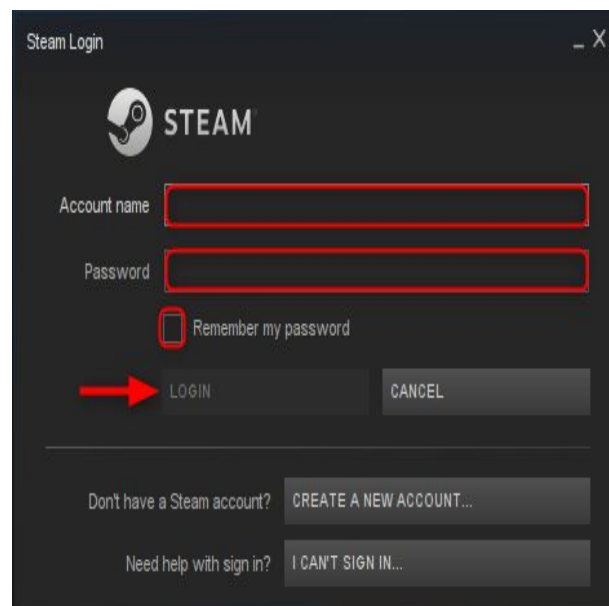
10. Review the information about how the Steam client is accessed after it is started, then click the **Finish** button



## 11. Login to your Steam account

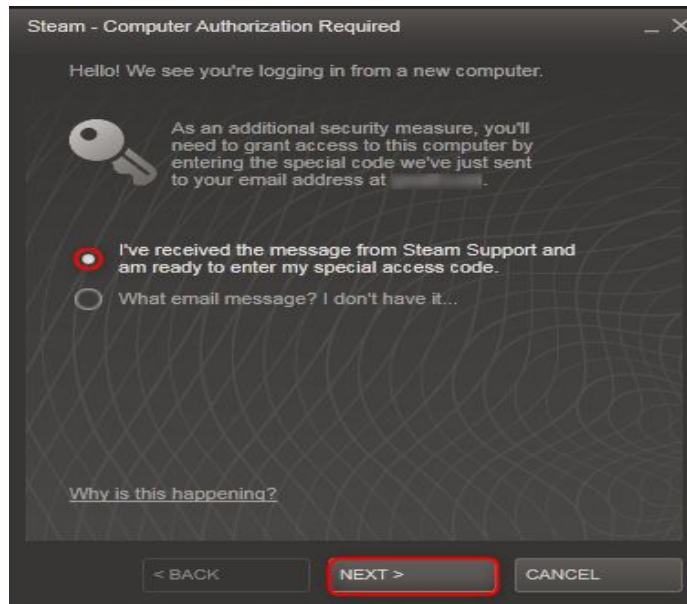


## 12. Enter your **account name** and **password** and click on **LOGIN**. Uncheck “*Remember my password*” if you are using public computer





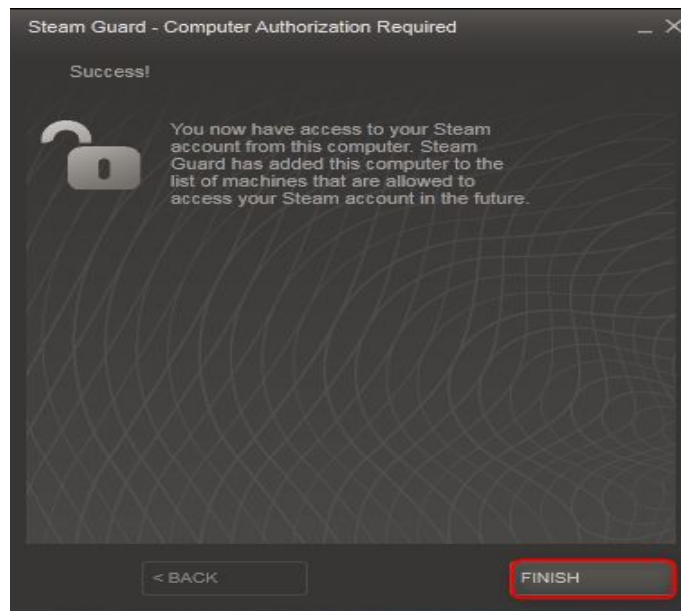
13. When you log on to a new computer for the first time, computer authorization is required. Steam will automatically send you a special code to the email address stored on your Steam account. Leave the selection "*I've received the message from Steam Support and I'd like to enter your special code now*" **confirmed** and **click on NEXT**



14. Enter the **Special access Code**, Uncheck "*Remember This Computer ?*" if you are using public computer and click on **NEXT**

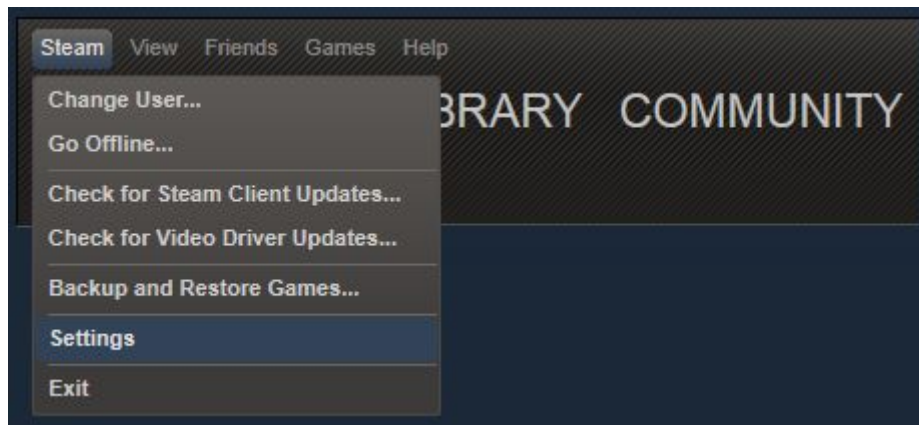


15. Click on **Finish**.

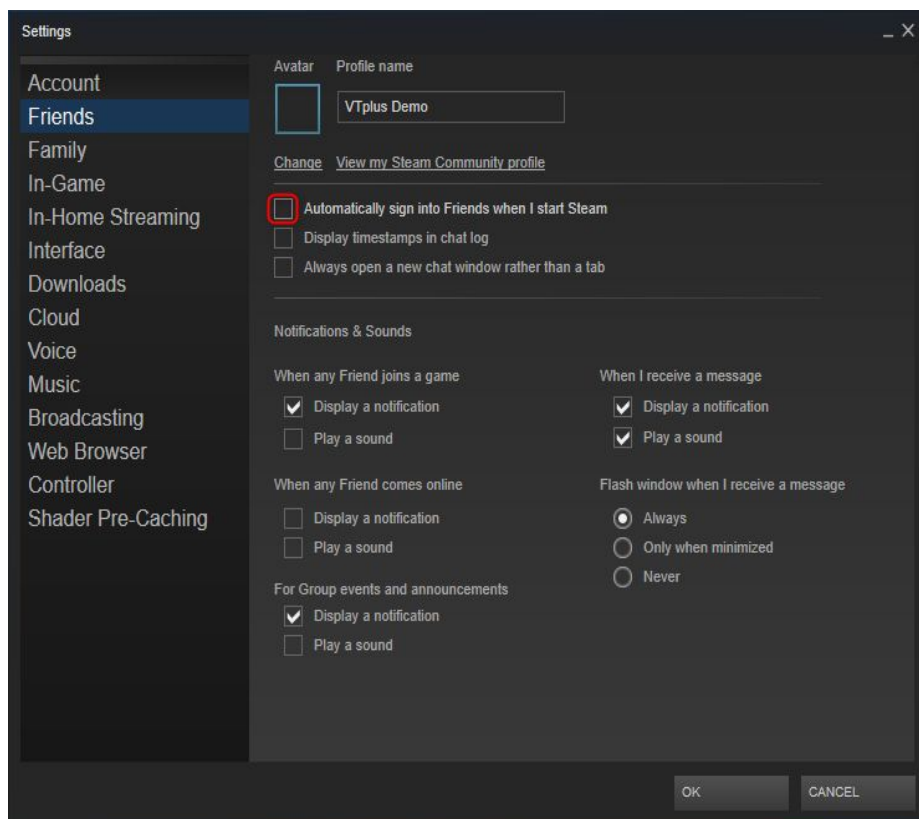


## 1.5. Steam configuration

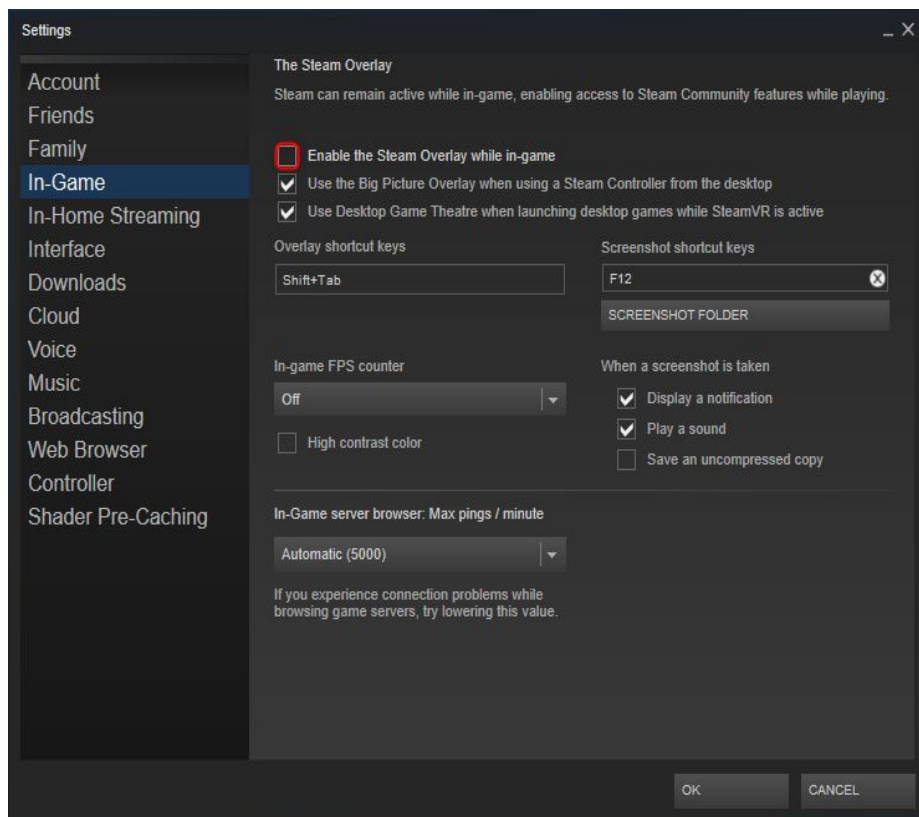
First Click on **Settings** from the **Steam** Menu.



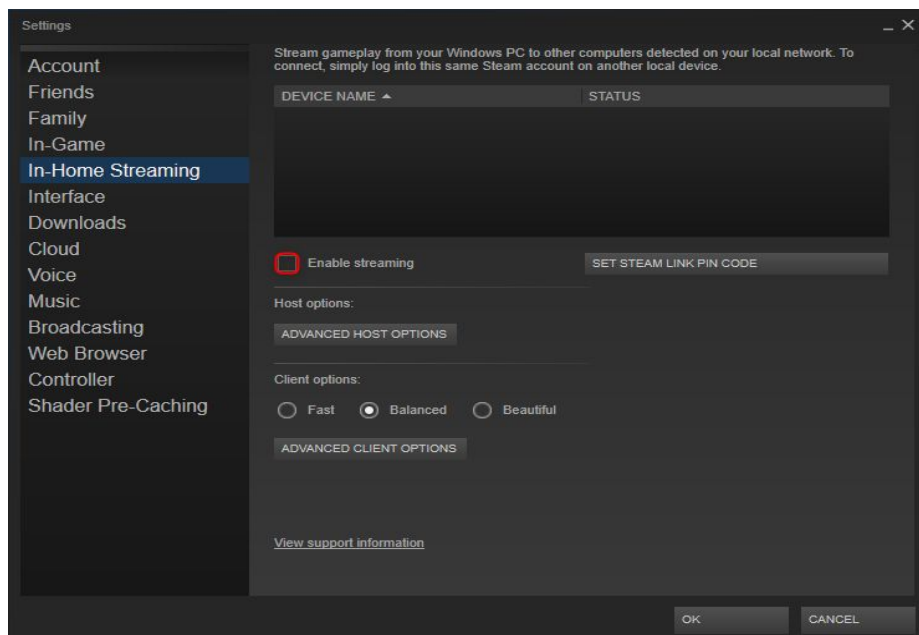
1. Click on **Friends** and **Disable** “*Automatically sign into Friends when I start Steam*”



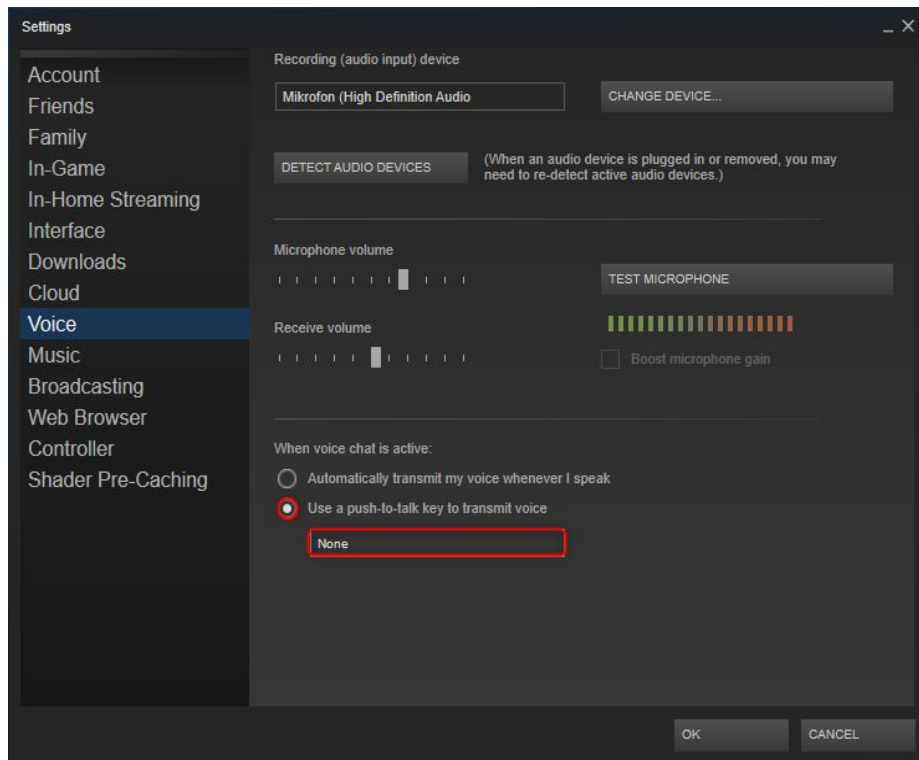
- Click on **In-Game** and **Disable** “*Enable the Steam Overlay while in-game*”



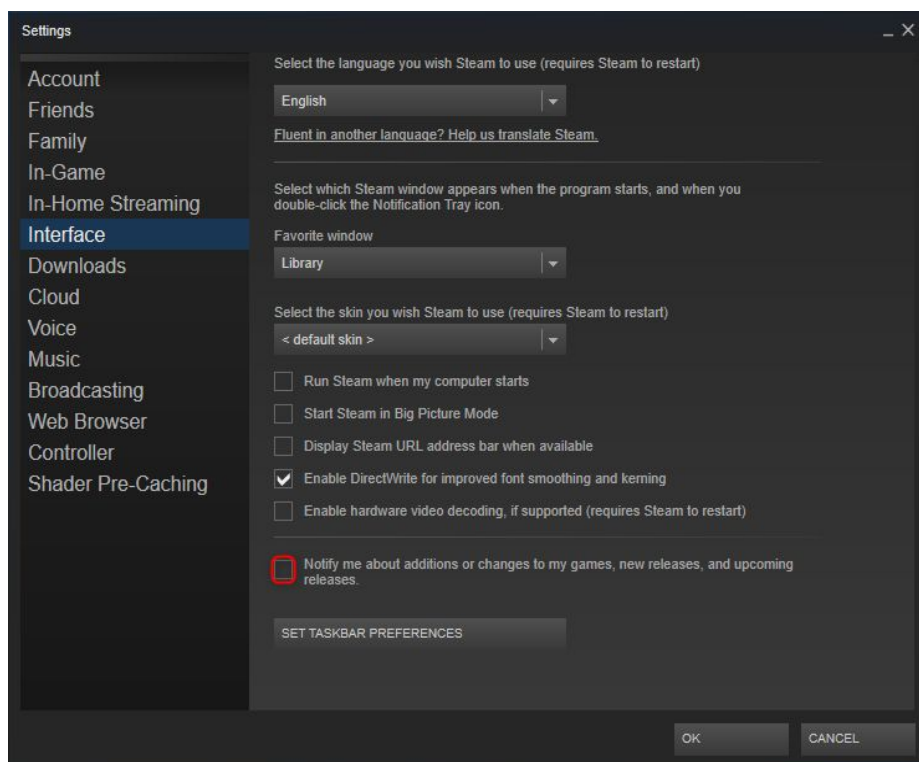
- Click on **In-Home Streaming** and **Disable** “*Enable streaming*”



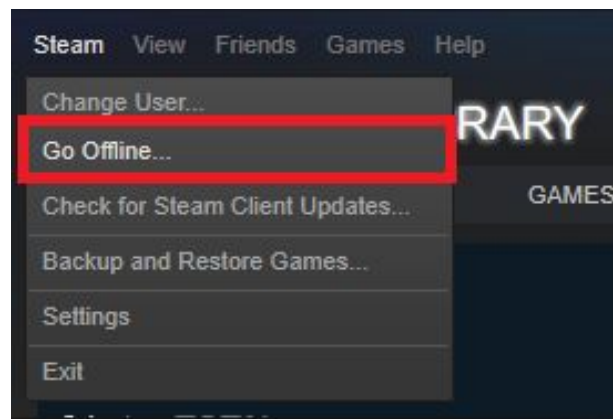
- Click on **Voice** and **Enable** “Use a push-to-talk key to transmit voice” and Select an unused button for this.



- Click on **Interface** and **Disable** “Notify me about additions or changes to my games, new releases, and upcoming releases.”



6. (Optional) Click on **Settings** from the **Steam** Menu and click on **Go Offline**.



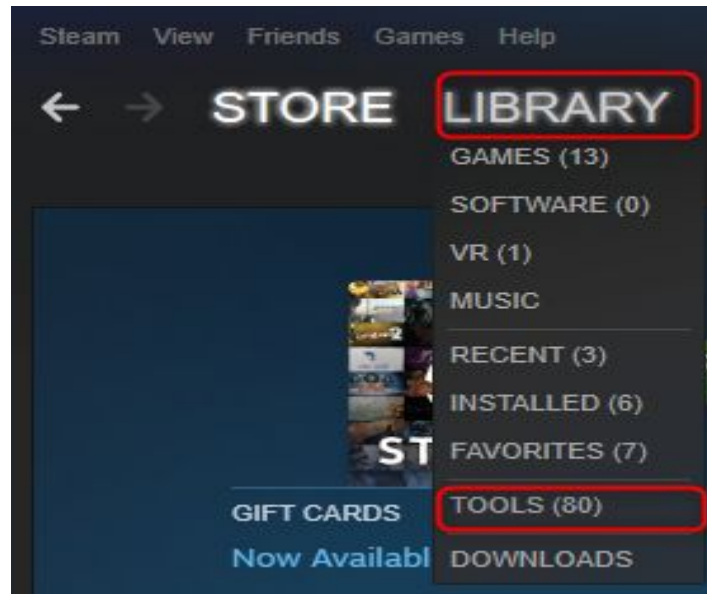
\*For use in the laboratory, it is recommended to operate Steam in offline mode.



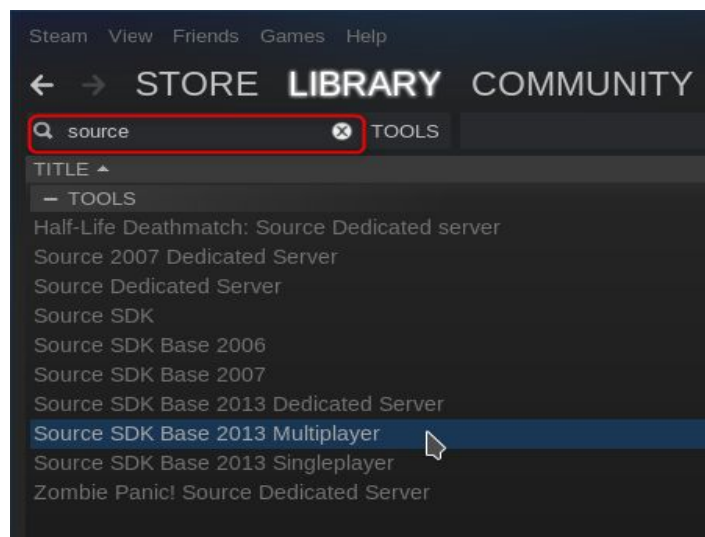
## 1.6.Installing Steam Tools

### 1.6.1.Installing Source SDK 2013 Multiplayer

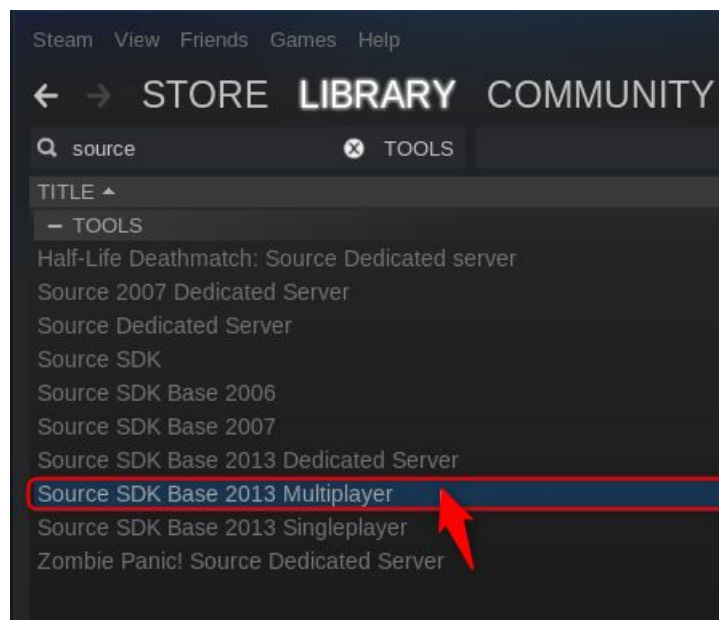
1. First, go to your Steam **LIBRARY** and select **TOOLS**



2. Write **source** on the **search bar** to find **Source SDK Base 2013 Multiplayer**



3. Double-click on **Source SDK Base 2013 Multiplayer**



4. Read over the dialog box and click **Download and Install /Next to continue**
5. Once Steam has finished downloading you can find the SDK from the Tools tab with the status **Ready to play**

### 1.6.2.Installing Half-Life 2 (Optional)

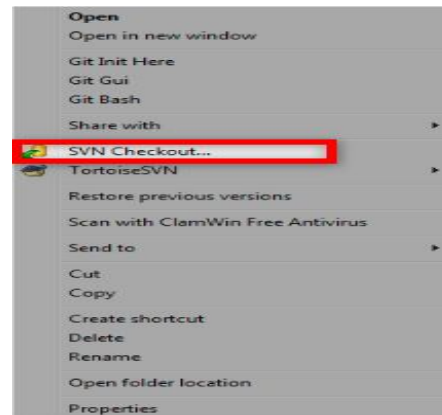
1. Visit <http://store.steampowered.com/> or launch the Steam client on your PC and visit the Store tab
2. Use the Search feature to find Half-Life 2, or use the links along the left-hand side of the Steam Store to find it
3. Add Half-Life 2 to your shopping cart
4. When you are finished adding Half-Life 2 to your cart, proceed to your cart by clicking the green link in the upper right hand corner. To checkout select either "Purchase for myself".
5. Log in to your Steam account
6. Continue through the checkout process to complete your transaction on Steam
7. When your transaction is complete you will have immediate access to Half-Life 2  
Launch the Steam client and go to your Library to begin your download. More information on installing Steam to access your games can be found [here](#)

## 1.7. Unpacking SourceMods Projekt

First, go to the folder `c:\Steam\SteamApps\sourcemods\` and choose one of the two next alternatives:

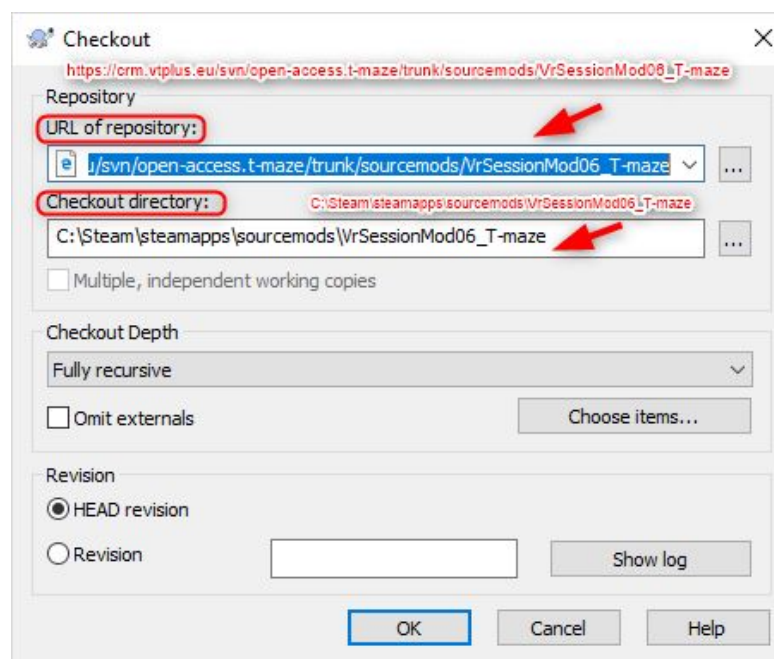
### 1.7.1. SVN Checkout

1. Click on the right mouse button and select **SVN Checkout**



2. In the **URL of repository** window, enter the **URL repository Path**

`https://crm.vtplus.eu/svn/open-access.t-maze/trunk/sourcemods/VrSessionMod06_T-maze`



3. In the **Checkout directory**, enter **the directory** and click on **OK**  
`C:\Steam\steamapps\sourcemods\VrSessionMod06_T-maze`
4. In the emergent window, insert **username** and **password** and click on **OK** again (if the password has not already been saved).
5. You may also have to accept a **server certificate**, preferably permanently.

## 1.7.2. Unzip

1. **Download** the .zip file from the URL  
[https://crm.vtplus.eu/svn/open-access.t-maze/trunk/sourcemods/VrSessionMod06\\_T-maze](https://crm.vtplus.eu/svn/open-access.t-maze/trunk/sourcemods/VrSessionMod06_T-maze)
2. **Unzip** the .zip file into **c:\Steam\SteamApps\sourcemods\**

### Unzip files in Windows 10

1. **Right click** on .zip file that you want to unzip (uncompress), and click on **Extract All** in context menu.
2. In *Extract Compressed (Zipped) Folders* dialog, **enter or browse** folder path where you want files to be extracted in this case is **c:\Steam\SteamApps\sourcemods\**
3. **Check** *Show extracted files when complete* checkbox to open extracted folder after zip extraction is complete.
4. Click on **Extract** button to start the extraction.

## 2.Installing CyberSession

### 2.1. Download CyberSession

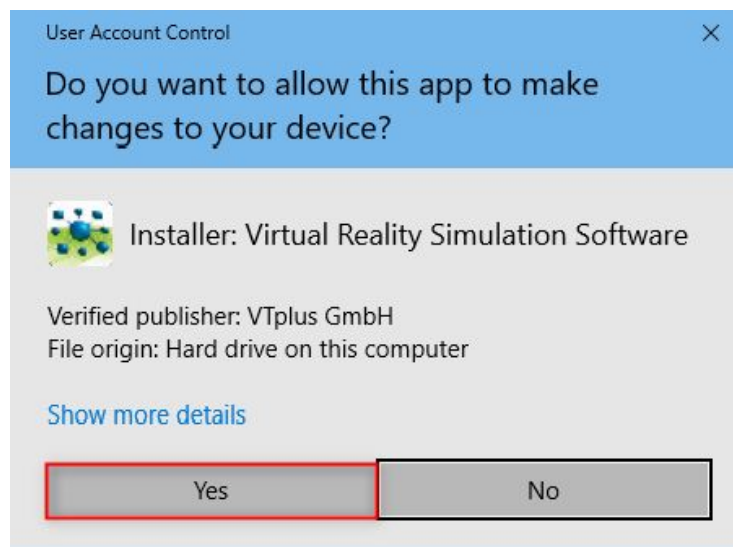
- Download the CS-Installer *CyberSession\_setup.exe* from the URL

<http://www.cybersession.info/wiki/index.php/Downloads#CyberSession>

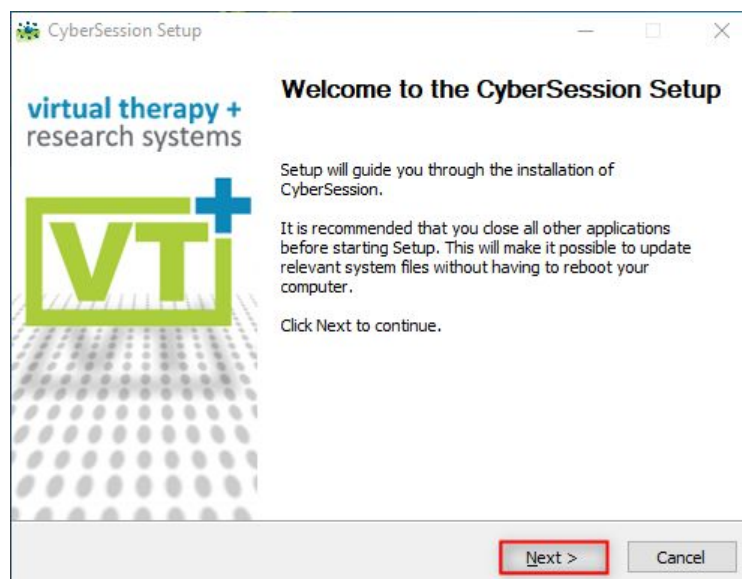


### 2.2. Installing CyberSession

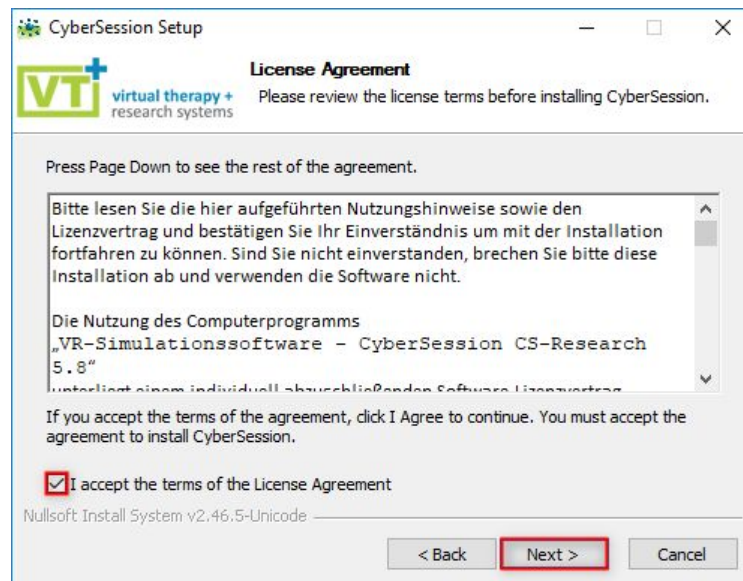
- Accept** the CS-installer.



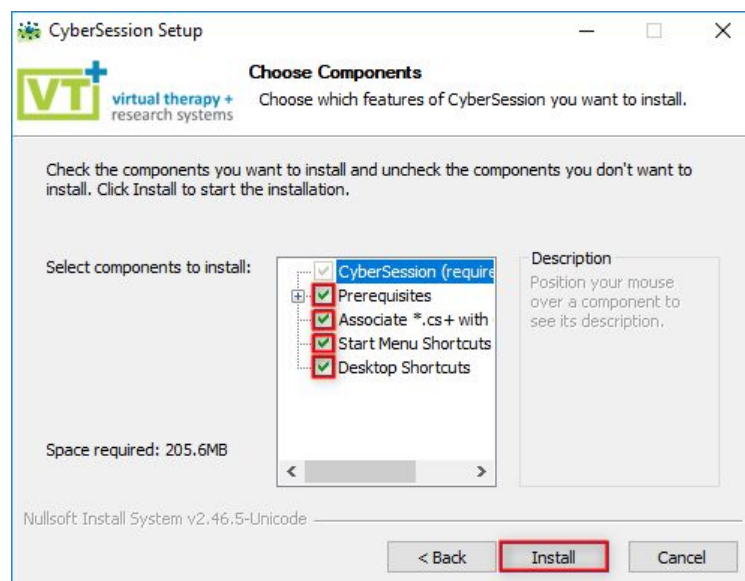
- Click on **Next** .



3. **Accept** the license and Click on **Next**.

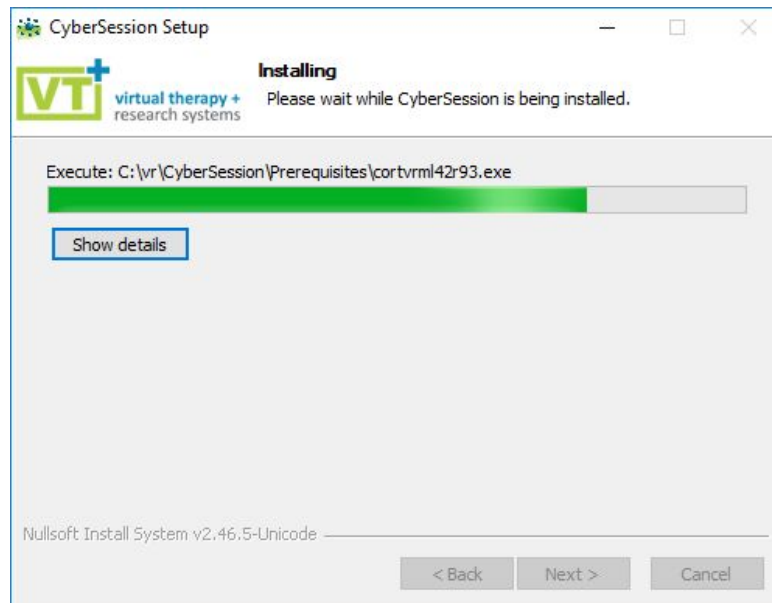


4. **Select** the necessary components and click on **Next**.

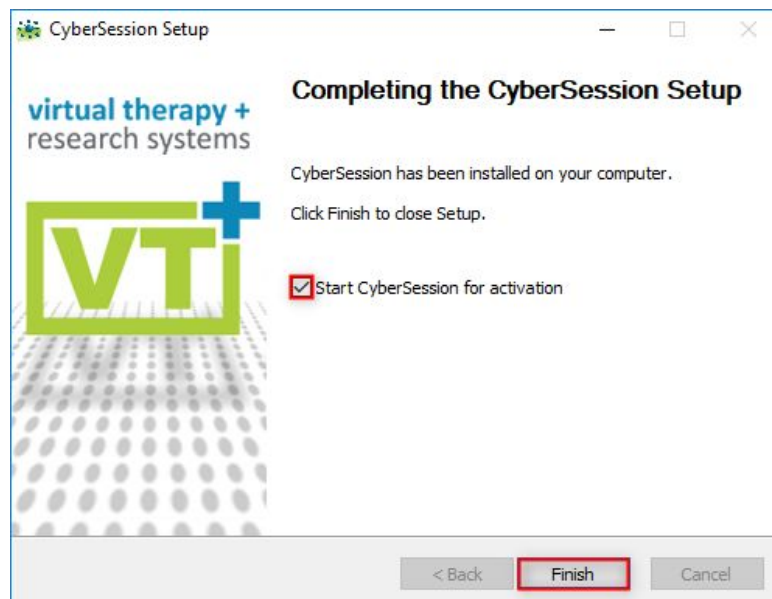




5. **Wait** until the installer has finished installing.



6. **Select** "Start CyberSession for activation" and **click on** complete.



## 2.3. Request for a license (for a member of an academic institution)

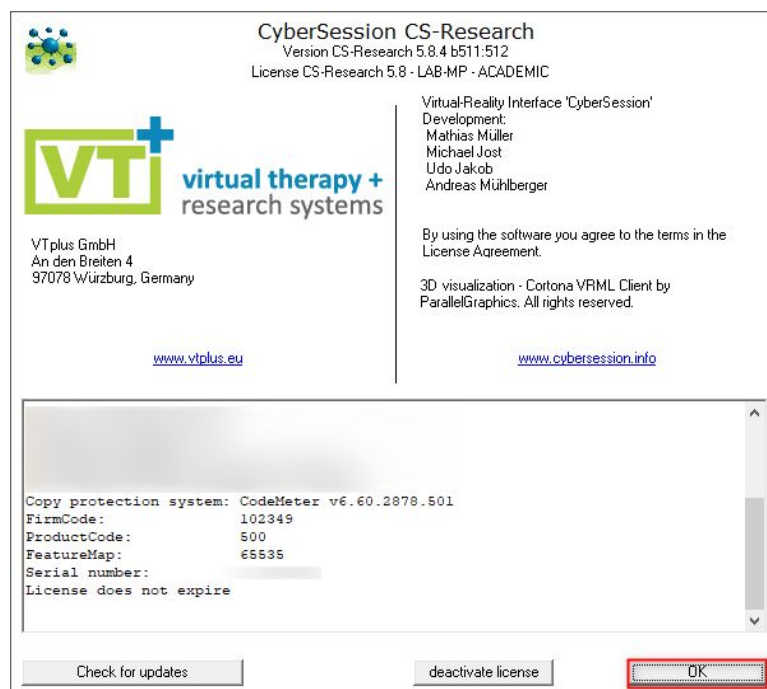
A license can be requested via eMail

[t-maze@cybersession.info](mailto:t-maze@cybersession.info)

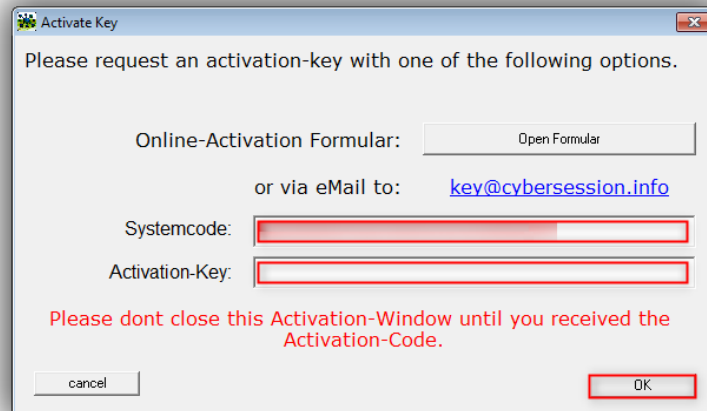
Please provide a proof of your academic affiliation

## 2.4. Activate a License

1. CyberSession must be activated on the first start. (To start CyberSession, a dongle must be attached or a network license must be available.)
2. The system code can be requested with the button "request activation key online" via web form stating your eMail address.
3. CyberSession should not be closed until the activation code is entered because a new system code will be generated the next time it starts up.
4. After entering the activation code, CyberSession launches and displays a control / status scene.
  - a new activation is only necessary for changes to the system (hardware, operating system).
  - CyberSession can be upgraded or reinstalled without new activation.
5. Info screen. Confirm with OK



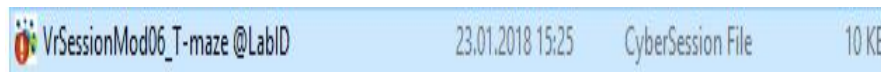
6. Insert your System code and activation key and click on OK



7. If at the start of the installer / CS-SETUP (CS\_setup.exe) a CS version is already installed, an update of the installation is offered in the existing CS directory.
8. In the case of a license extension or renewal, it is possible to extend the dongle license by updating the license.

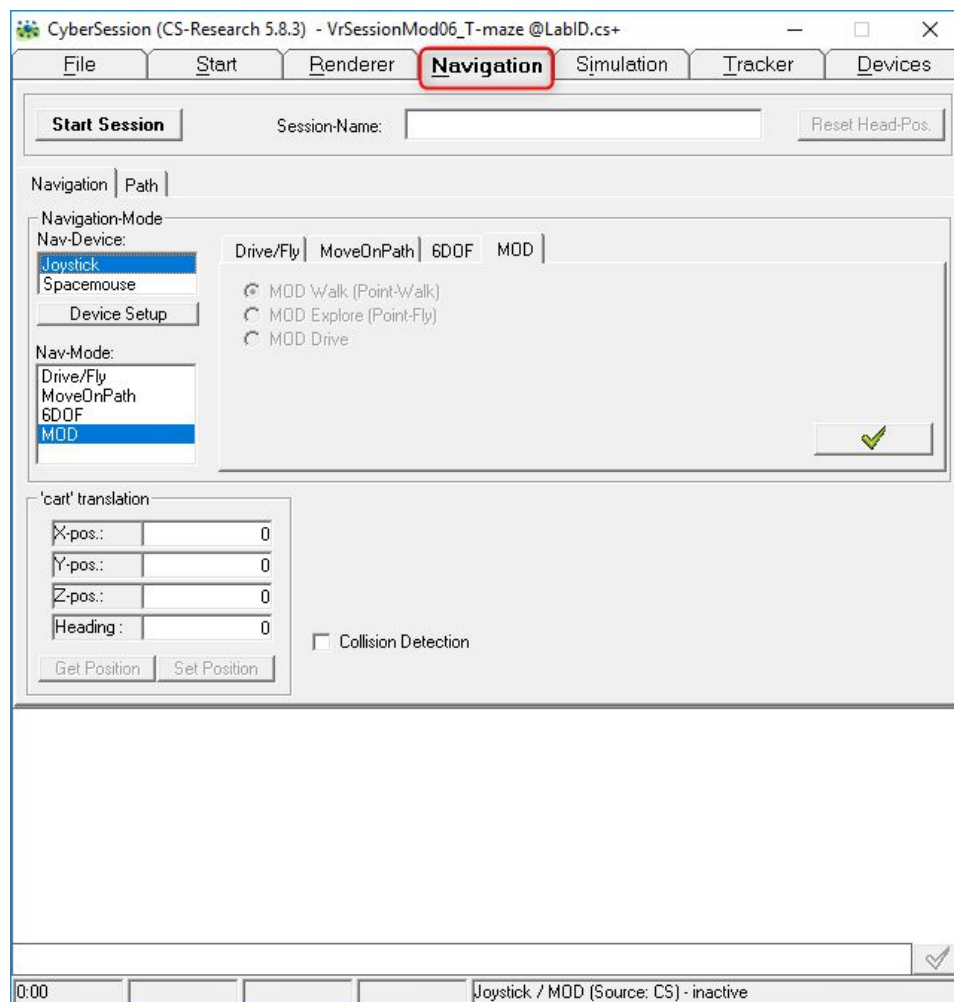
### 3. Project Configuration VrSessionMod06\_T-maze @LabID.cs+

1. **Make sure** the Joystick is connected
2. **Go to** the folder `v:\Steam\SteamApps\sourcemods\VrSessionMod06_T-maze\cfg\`
3. **Start** `VrSessionMod06_T-maze @LabID.cs+`

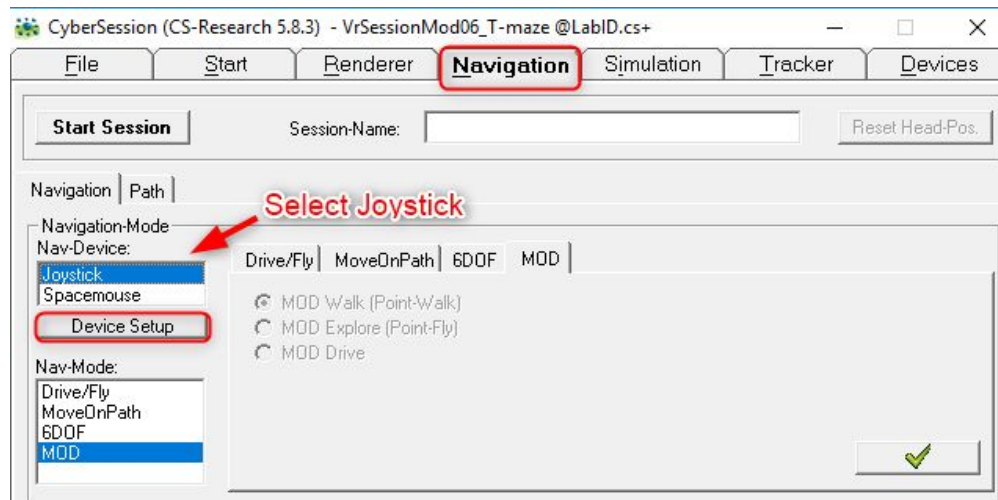


#### 3.1 Joystick Device Setup / Calibration

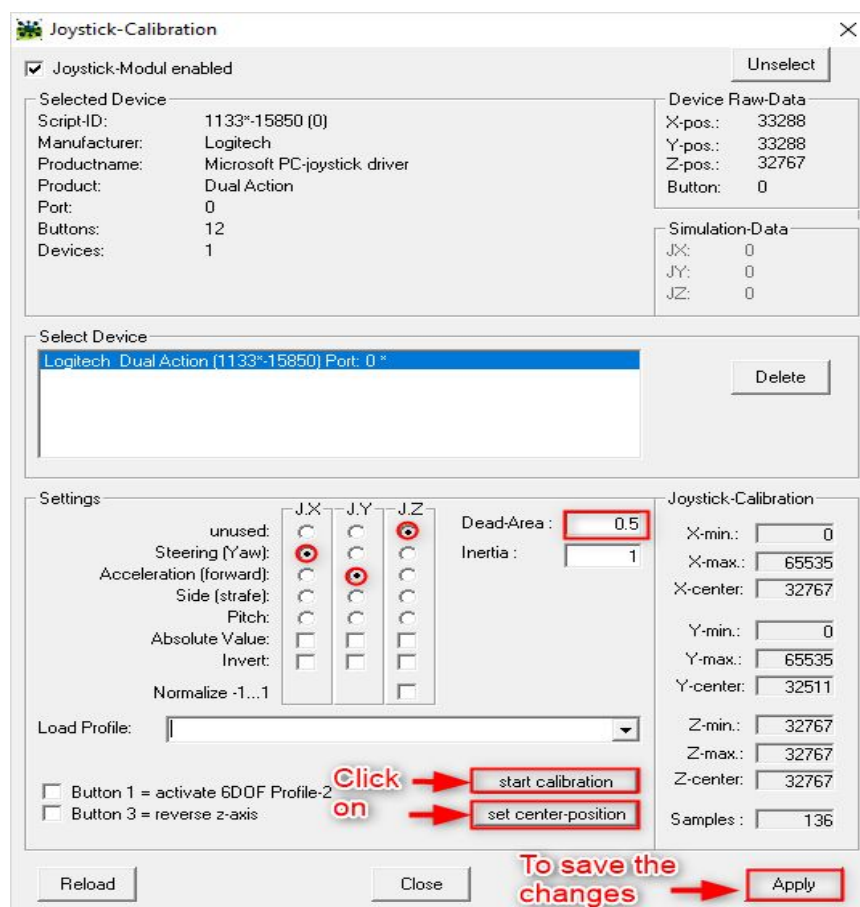
1. Click on **Navigation** from CyberSession (Cs-Research 5.8.3)



## 2. Select **Joystick** and Click on **Device Setup**

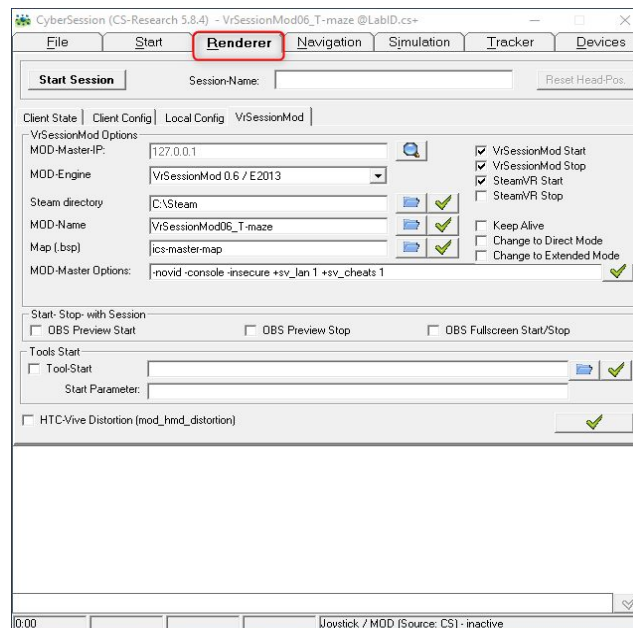


## 3. Inside the submenu **Joystick-Calibration**, select the **following configuration**, click on **Apply** and **Close** the window:





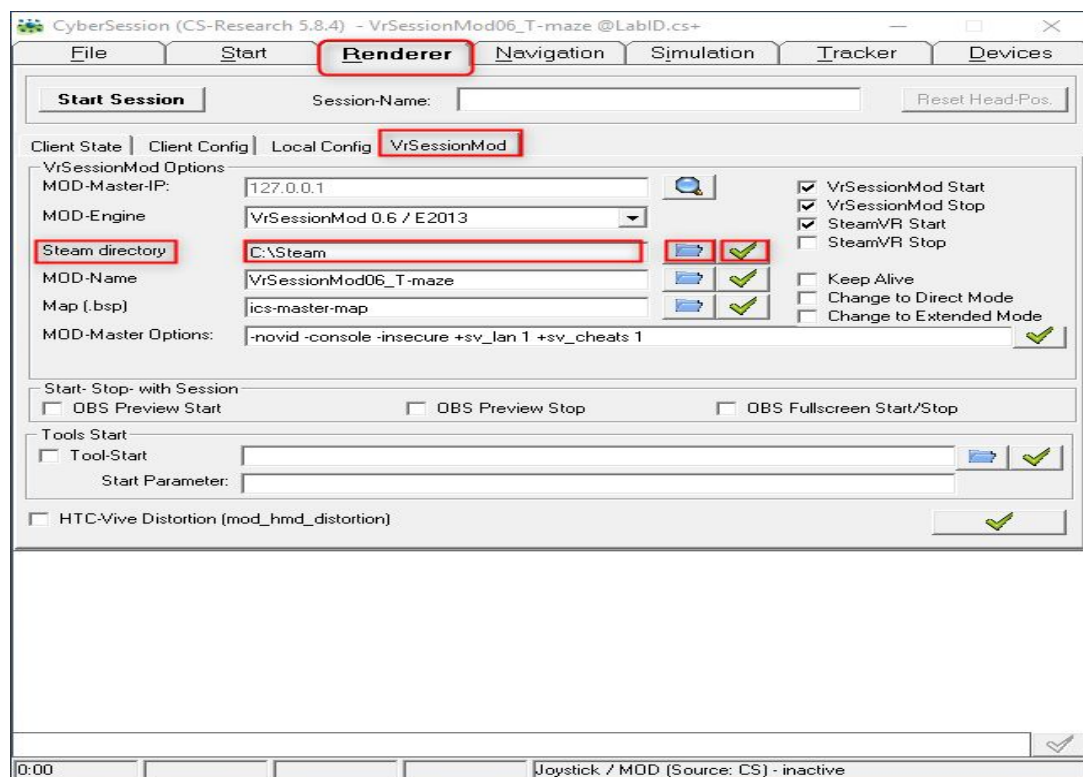
## 3.2 Optional: configure Steam Installation Path

1. Click on **Renderer** from CyberSession (Cs-Research 5.8.3) and select the next configuration.



### 3.2.1 Steam directory configuration

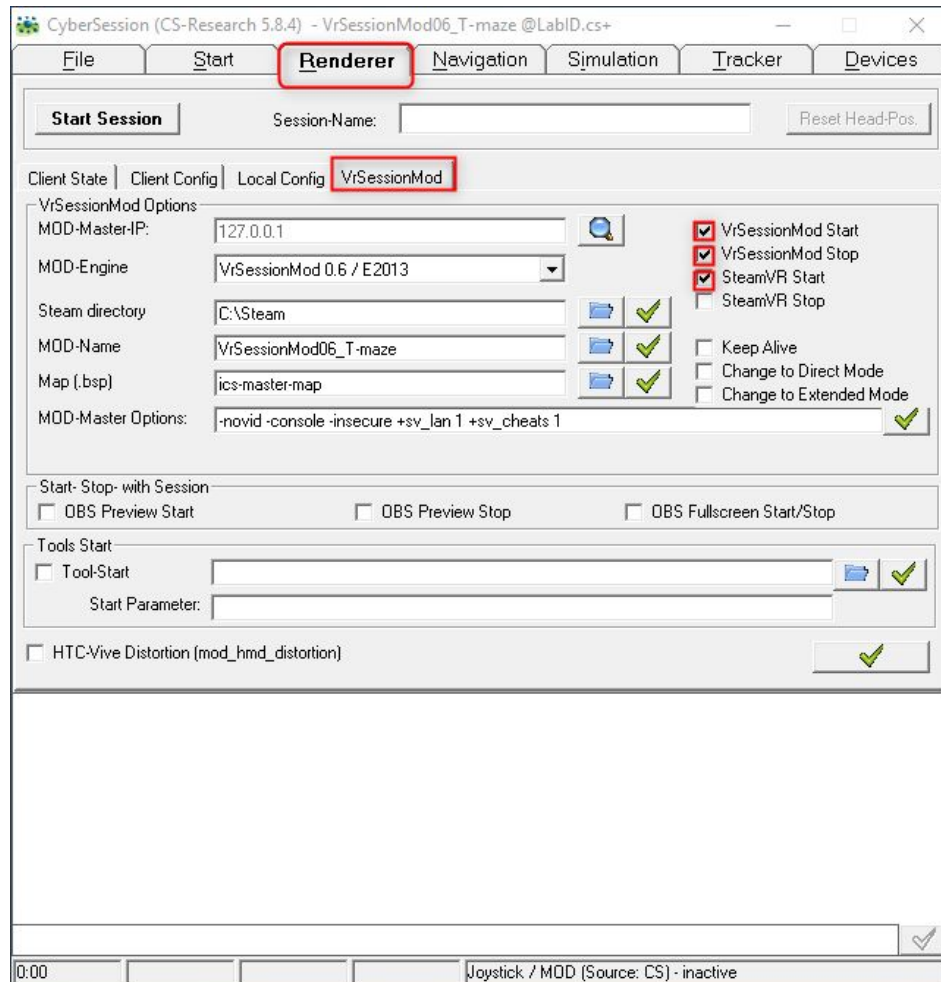
1. Inside the submenu **VrSessionMod**, Click on the folder icon  to **Change** the Steam directory, select your Steam folder and to save the changes Click on **apply** .





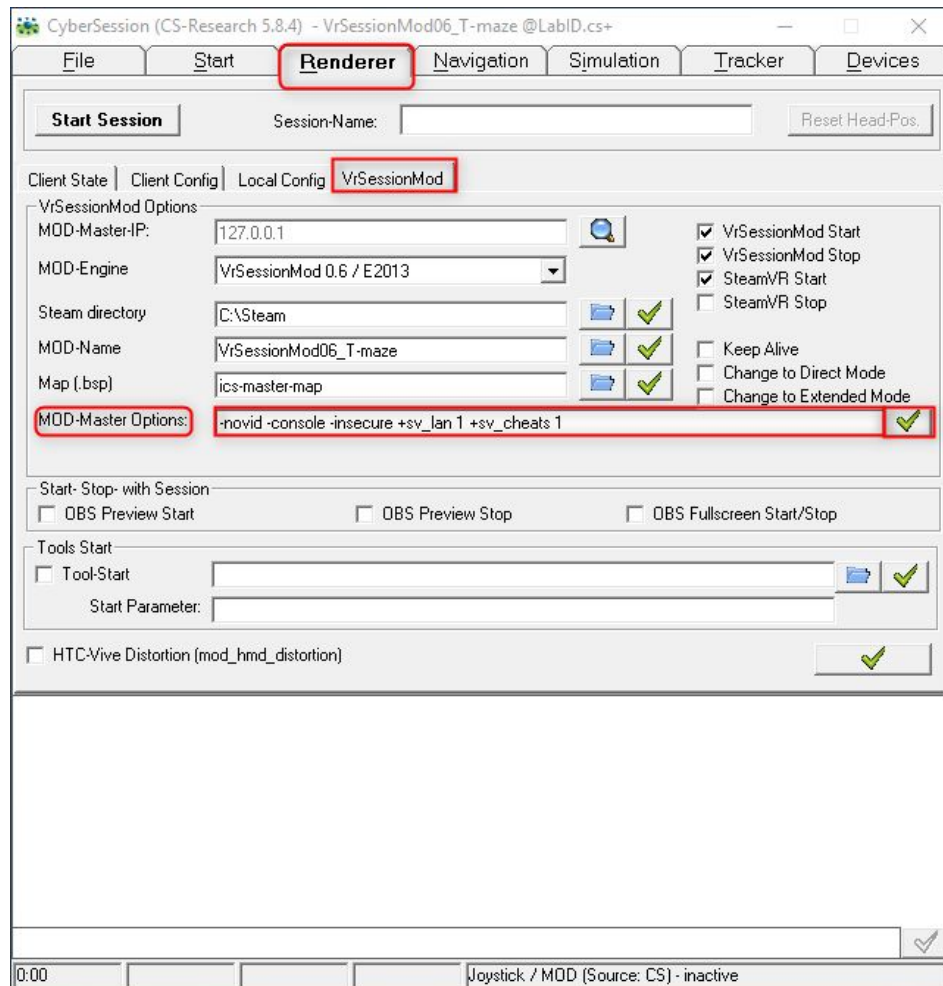
### 3.2.2 Start-Options configuration

1. Inside the submenu **VrSessionMod**, click on VrSessionMod Start, VrSessionMod Stop and SteamVR start .



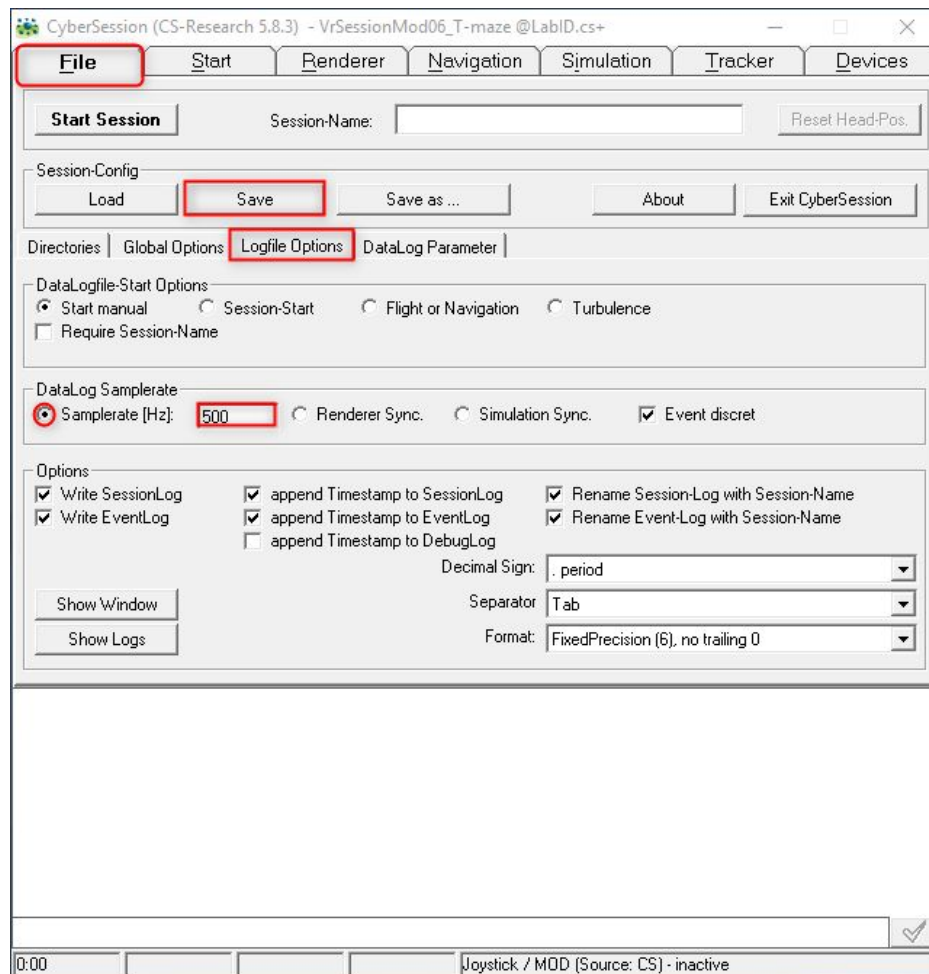
### 3.2.3 MOD Cmdline-Options configuration

1. Inside the submenu **VrSessionMod**, write inside MOD-Master Options, the next configuration: **-novid -console -insecure +sv\_cheats 1** and to save the changes Click on **apply** ✓ .



### 3.2.4 Logfile Options configuration

1. **Click on the submenu **Logfile Options**** from **File** , into **DataLog Samplerate** options **select Samplerate [Hz]** , **Change Samplerate [Hz]** to 500Hz and click on **Save**.

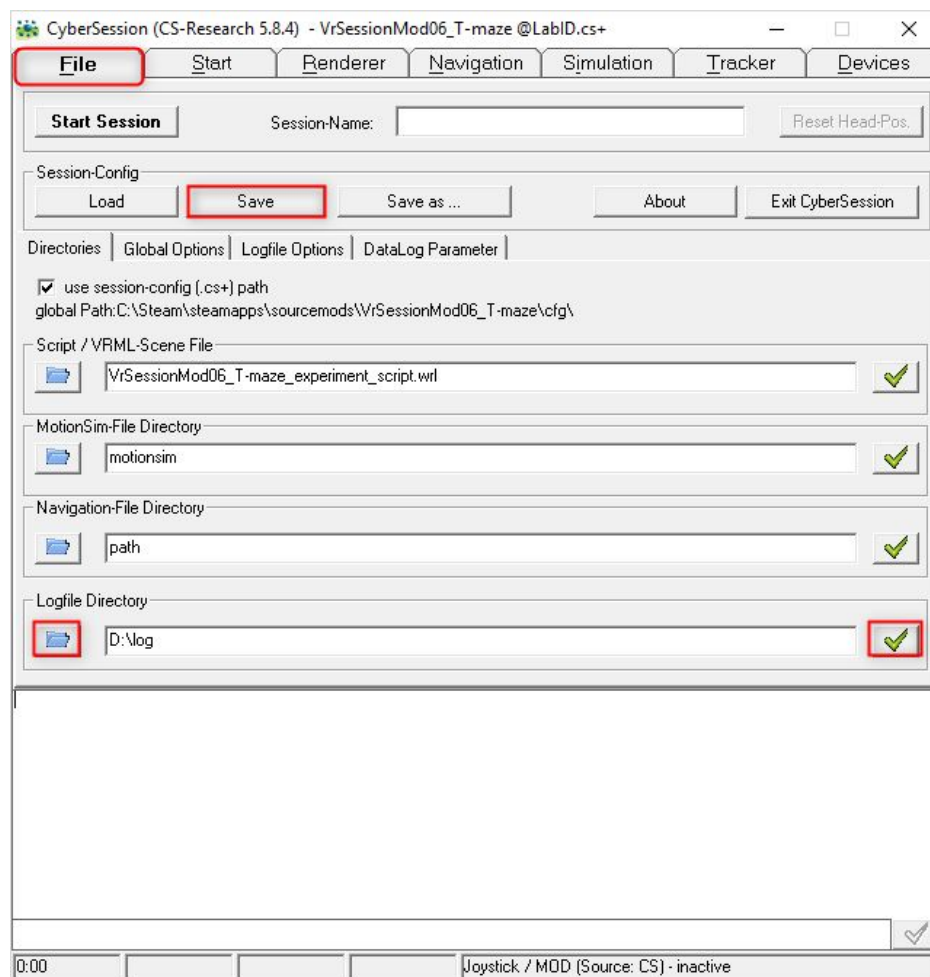


### 3.3 Save the modified CyberSession Experiment Configuration

1. Click on **File** from CyberSession (Cs-Research 5.8.3) and **Click on** the folder icon to **Change** the Log File Directory to Data-Drive or Data-Saving-Folder (e.g.: D:\log or \*) to save the changes Click on **apply** ✓ and **save**.

\*Change Log File "Logfile Directory" if possible to a data drive (e.g. d:\logfiles\t-maze1) so that the log-data is not saved within the project-runtime directory.

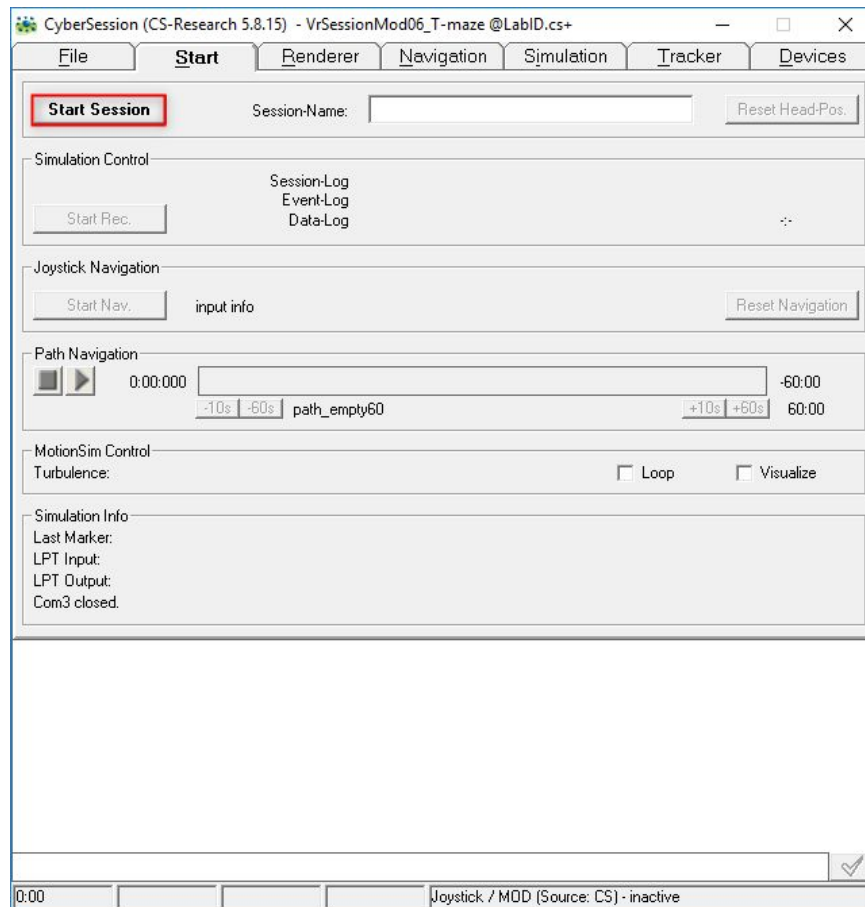
Or Save as... *VrSessionMod06\_T-maze @YourLab.cs+* (within the Project cfg directory!)



### 3.4 Inserting the code of the test person

### 3.5 Start-Session

1. **Click on start session** to initiate a new session.



## 4. Modification

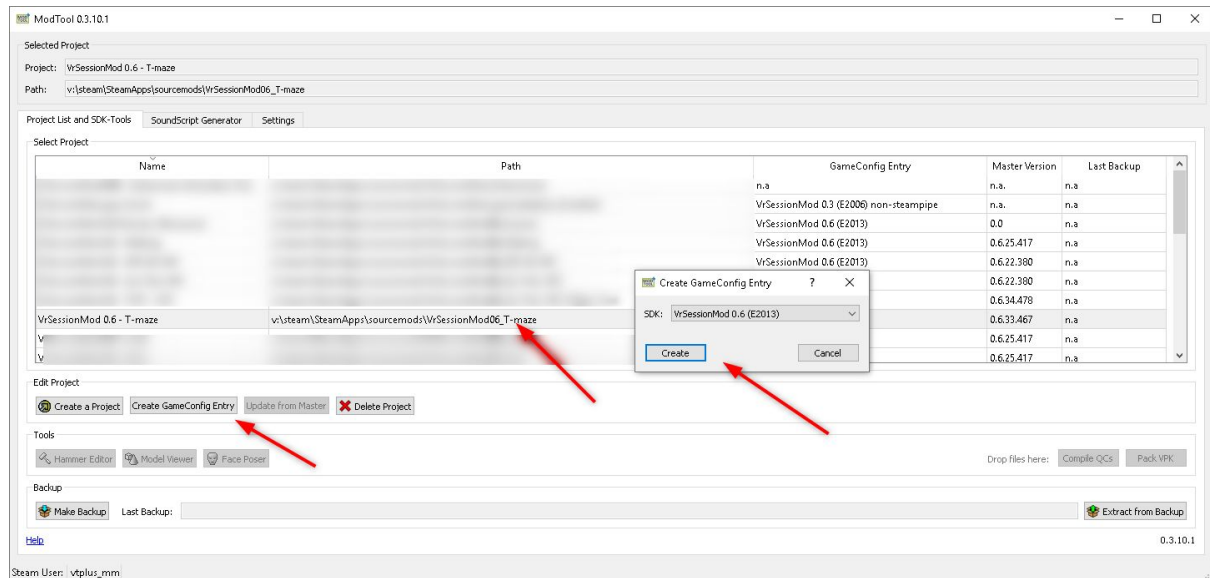
### 4.1 Installing Mod Tool

Download: <http://update.cybersession.info/mod/ModTool.zip>

Install a Helper Tool to use the Source Engine SDK Tools:

<https://www.cybersession.info/wiki/index.php?title=Mod-Tool>

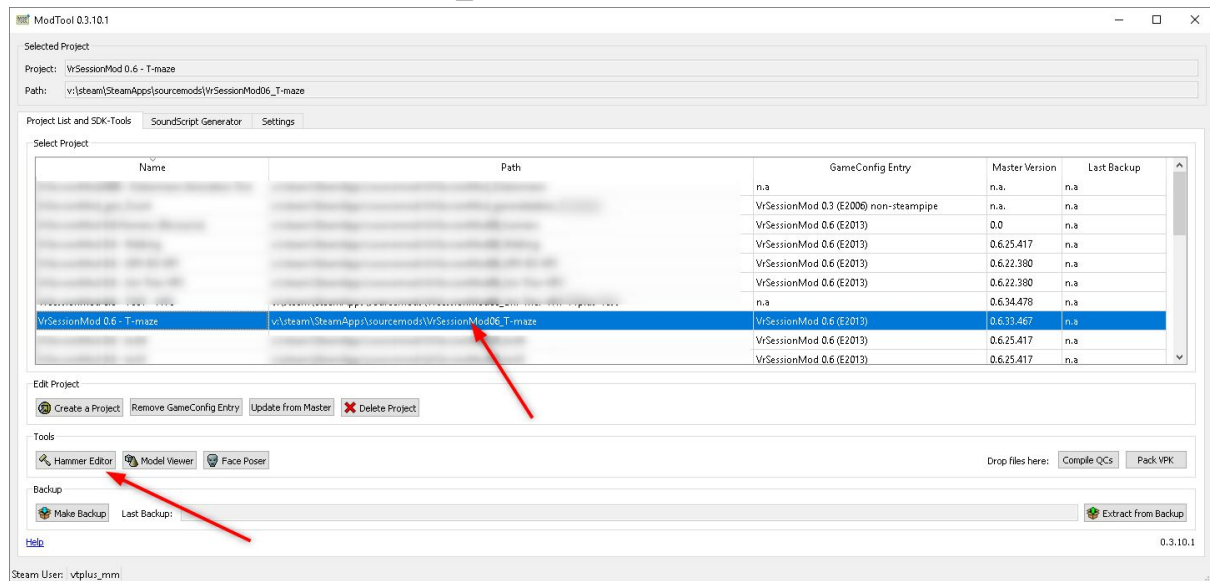
Use the Mod-Tool to create a GameConfig Entry for VrSessionMod 0.6 T-maze



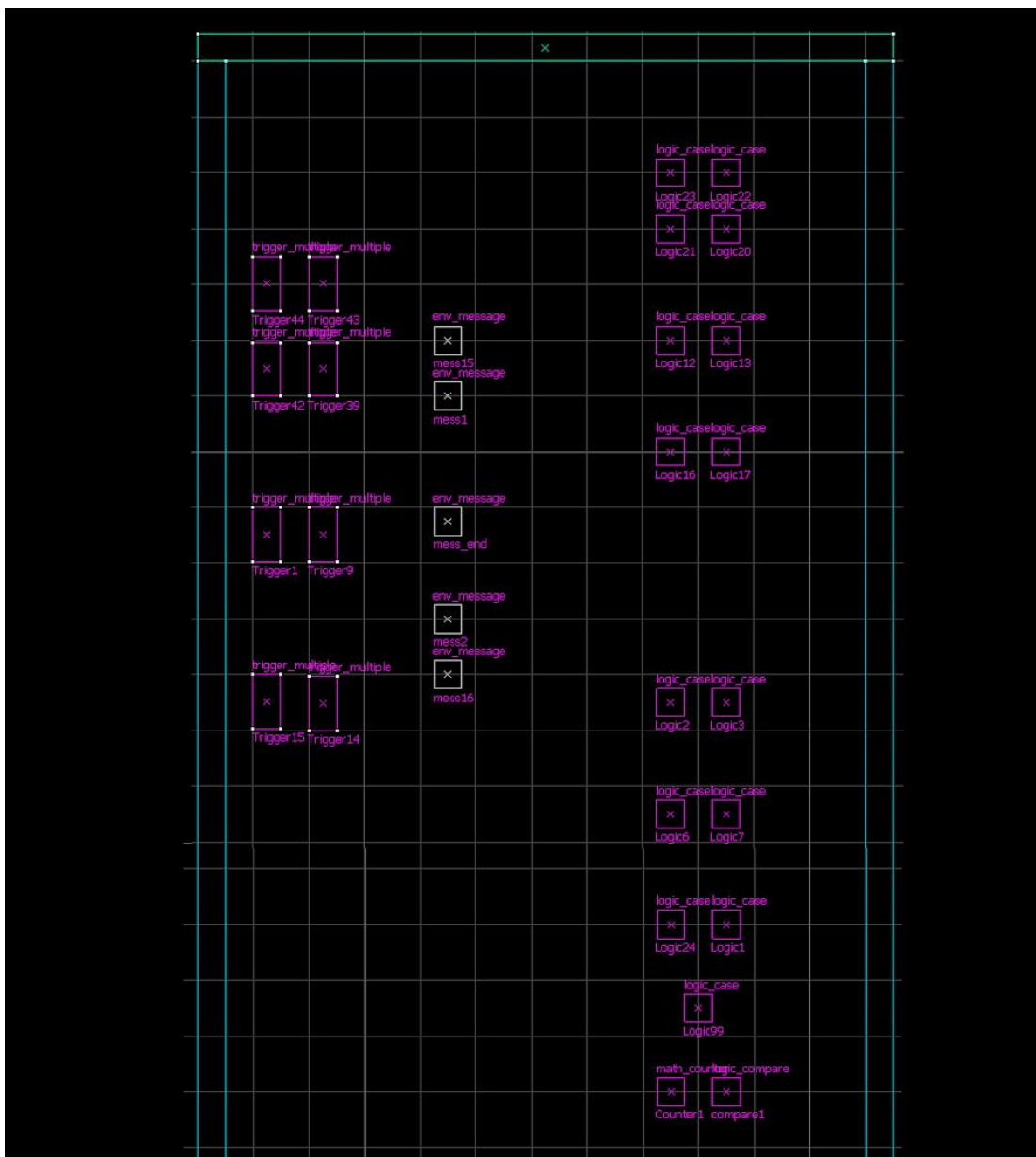
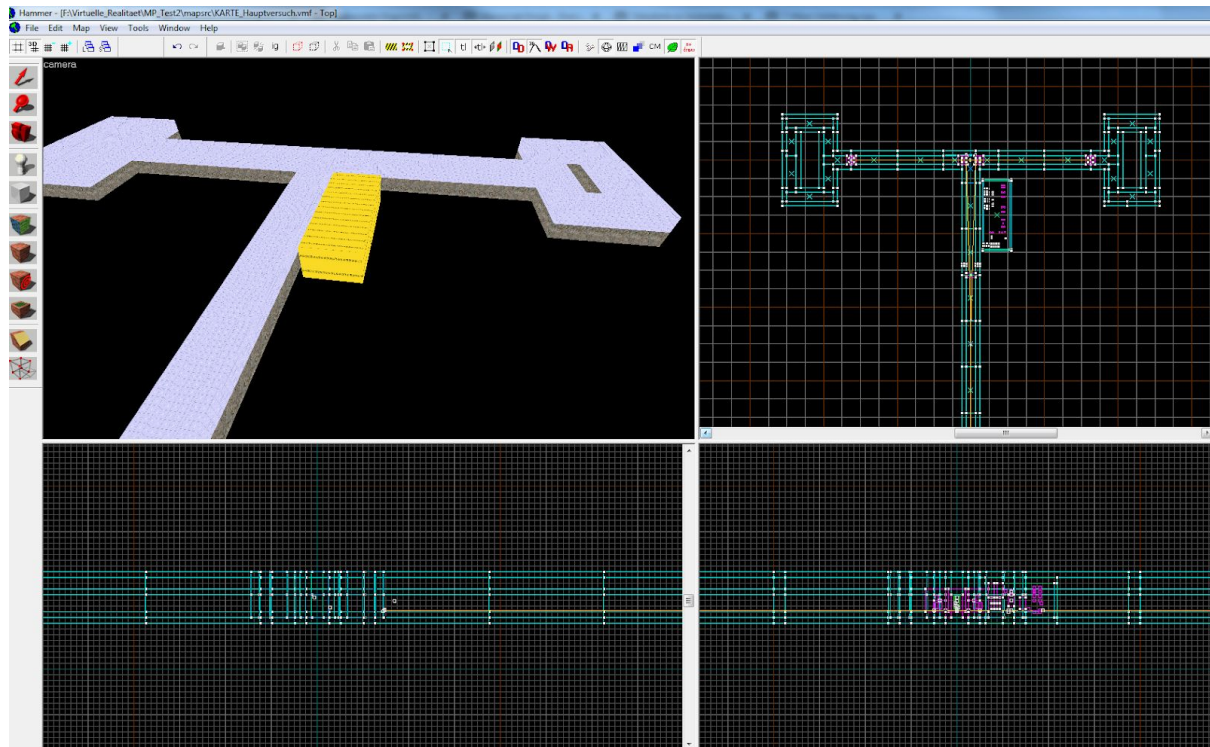
### 4.3 Hammer

Use the Hammer Tool to modify the virtual environments from:

sourcemods\VrSessionMod06\_T-maze\mapsrc\\*.vmf



## 4.2 Screenshot Logic-Entity-Room





## 5. Paradigma Setup

1. Modify paths: `Versuchsbatch_Haupt_VR.bat`
  - a. Create Link on Desktop
2. Modify CyberSession Configuration
  - a. Navigation -> Input Device + Joystick-Calibration
  - b. DataLog -> Joystick
  - c. Save Session-Configuration (cs+)
  - d. Create Link on Desktop from:  
`\sourcemods\VrSessionMod06_T-maze\cfg\VrSessionMod06_T-maze @LabID.cs+`
3. Modify Fragenfiles: Insert .png of questions with names FolieX.png

## 6. Paradigm Test

### 6.1 Trainings-Batch Skript

- Run: `CyberSession VrSessionMod06_T-maze @LabID.cs+LINK`
  - Start-Session (to start vr data-acquisition)
- Run: `Versuchsbatch_Haupt_VR.bat-LINK`
  - Enter subject code and session-number
  - Note that the participants logfiles are not identified by the vp number but the date and time
  - Note that the rating files are also only identified by the date and time