**Virtual Tunnel**

**1. Load the Maze**

For this experiment, load the VirtualTunnel.maze file by clicking *load maze* in MazeMaster.

If you want to create your own maze, start the Maze Designer by clicking on the button in the top panel. A maze should always have a starting point somewhere in the maze. Most often, a reward is also needed to start a new trial automatically. Textures for the walls can be added by clicking on the background, ceiling or floor buttons on the lower right corner in the texture section. By clicking you can select a texture, which should be a square shaped image file. If the maze is done, it should be named and saved by clicking on the save button. The Maze Designer can now be closed. The new maze has to be loaded by clicking on the load maze button in the top menu.

**2. Configure Input Device**

Go to *Windows*🡪*Input* Devices and select *Ball*.

There are two numbers indicating the IDs of the computer mice attached to the ball. One of the mice is for moving forward and backward and turning around. The other one is for moving sideward.

They can be set by clicking the set button next to the number panel and afterwards moving the mouse. This should be done for both computer mice separately, so that there are two different IDs for the two computer mice in the entry fields. After this is done close the window by clicking the save button.

**3. General Settings**

Either create a new configuration file for your settings, or load an existing one. For this example experiment, load the experiment *virtual tunnel* and task setting *navigation*.

**4. Set Maze settings**

Open the window *Windows*🡪*Maze Settings* in the top menu. Make sure, that *New Trial after Reward* is checked. Close the window by clicking *Save*.

**5. Trial Control Settings**

The settings should be adjusted automatically by loading the pre-settings.

Make sure that the *tracking* checkbutton is checked and select a recording frequency (e.g. 1 Hz).

*start trial directly* start trial directly, because a new trial should start automatically after reaching the reward zone. Enable the *supply reward* along with the duration of valve opening time.

Now by reaching the reward zone a small water droplet should be given with the time setting the amount of water is set.

**6. Start the Server**

The graphical engine is ready to start. Click on the connect button in the server control panel to automatically start the engine. The server status should change to online, after a few seconds. When this is the case, the experiment can be started by clicking the start block of trials button in the trial control panel.

Notes:

1. In case that the movement in the Maze does not follow the movement of the Ball, stop MazeMaster and reopen it. Check if the SquareMaze.maze is loaded. Go to Input Devices and validate that the mice IDs are the same as before (exit without saving). Check that the rest settings are as instructed without pressing the saving button and start the server.

Manual debug: Set mouseid1 and mouseid2 to zero in the config.ini.

Open MazeMaster set the Mice IDs.

Close MazeMaster and reopen it. Check that all the setting are correct **without pressing the save button!**

1. Wheel works fine!
2. Check the speed