Virtual SILCTON (Spatial Intelligence and Learning Center Test of Navigation)

1. Technical Requirements

   Please ensure that your computer has the proper technical specifications and equipment. As a rule of thumb, if your computer was purchased in the past two years, you should have no trouble running the virtual environment.
   - If you are using a laptop, please plug in a two or three button mouse. No track pads please.
   - Windows 7 or above, or OSX 10.6 or above.
   - At least 2GB of RAM and/or a dedicated Graphics Processing Unit.
   - Mozilla Firefox, latest update.

   Before beginning the experiment, please install the Unity Web Player for your OS, and then restart your computer. You may need to edit the security setting of your computer to allow to open downloads from the internet.

2. Startup

   Navigate to this website using Mozilla Firefox:
   http://spactial.ci.northwestern.edu/study/753798630

   Under Participant ID, input your first name and click on "Take Test with Mouse"

3. Introduction and Consent

   Please read and accept or decline the informed consent form to proceed with the experiment.

4. Self-Report Questionnaire (SBSOD)

   Please respond to these questions honestly. When finished with each page, please click "I'm finished."

5. Virtual Silcton Learning Phase

   OVERVIEW:

   Welcome to Virtual Silcton. The OBJECTIVE is to walk on the paths in the virtual world and learn the NAMES AND LOCATIONS of each building as it relates to the other buildings. You will take four walks in total. The GOAL is to use this information in two activities at the end of this exercise. It is important to note that SILCton can be anywhere on Earth.

   The first simulation is the first of four routes you will learn. Along each of the first two routes (this one, and the next one) you will learn four buildings; eight buildings total. Each building is indicated by a gem hovering above the path and

adjacent to a sign that will tell you the name of the building. Routes 1 and 2 each have 4 buildings that you must learn the names and locations of. Routes 2 and 3 provide an opportunity to explore the environment from different perspectives.

HOW TO MOVE:

To begin the experiment, left click anywhere inside the virtual world. You can _MOVE_ using the arrow keys on the keyboard (OR the WASD keys). You can _LOOK_ by pointing the mouse. The mouse and the arrow keys can be used separately and/or together to create precise movement through the experiment (e.g., to turn right, try moving forward with the keyboard while simultaneously moving the mouse to your right). If at any time you cannot move, click anywhere inside the virtual world. Please take some time to familiarize yourself with the controls. When you are familiar with the controls, navigate back to the start.

Please remember to **continue gathering information in regards to the names and locations of the buildings as you walk along the paths.**

When you are ready, follow the arrows on the road. Take as much time as you like. You must stay along the path indicated by the arrows but you may walk in either direction. You must proceed from the beginning of each route ("start") to the end of each route ("finish") and back to the beginning ("start"). **Please walk all the way to the end, turn around and walk back to start. Clicking on "I am Finished" at this juncture will not automatically turn you around.** When you get back to the beginning, click on "I am Finished" and the second route will automatically load.

6. Onsite Pointing Task

   You are now located next to one of the eight buildings that you have learned (under the diamond). In the center of the screen you should see a cross-hair. Note that you can move the cross-hair around in a full circle, but you cannot move forward or backward. Familiarize yourself with the controls (mouse) and identify the building that you are next to. At the top of the screen you will see the name of one of the other buildings that you have learned. Point the cross-hair at what you perceive to be the front door of the named building and click once to indicate your answer. Please be sure to click only once. If the prompt at the top of the screen does not change immediately, wait a couple of seconds.

7. Map Arrangement Task

   For this task, you will construct a map of the environment you have learned. The box onscreen represents a bird's-eye view of the virtual environment. Below this, you see birds-eye images of the 8 buildings you learned. Scrolling over each of these will display a picture of the front view of the building. The box above the buildings represents the entire virtual environment you have been exploring. Your

task is to drag and drop each of these building to the part of the box where you believe it to be located in the virtual world. Use the entire space. In other words, buildings at the edge of the virtual world will be near the edge of the box. However, ensure that NONE of the buildings are outside of the box. The positions of these buildings will NOT be recorded.

Thank you for participating in our study!