Simulator Manual

Introduction:

The simulator is specifically tailored for individuals who use data to train a smart device which is used to practice mindful yoga at home. It's important to note that this simulator is not intended to be the final product used by home yogis, but rather a tool to assist the trainers in evaluating the effectiveness of specific parts of home yogis' workout, such as yoga, meditation, or tracking their heart rate to ensure stability throughout their workout.

The simulator is comprised of four main sections that facilitate its functionality. The first part, labeled as "Mode," is located at the top of the simulator and contains four buttons arranged from left to right: Yoga, Meditation, Heart Rate, and Reminder. The first three buttons represent the three specific areas of mindful yoga practice that yogis usually focus on, while the "Reminder" mode is designed to help home yogis maintain their regular practice. The second section, known as "Focus Mode", is situated in the middle of the simulator and comprises four buttons that correspond to the four different areas of focus that yogis may choose to concentrate on during their practice, including yoga, meditation, heart rate, and reminder modes. The third part is located below the "Focus Mode" and is used to control the experiment stream, including starting, pausing, and stopping the experiment. Lastly, the fourth section is situated at the bottom of the simulator and includes two sliders. The first slider, known as the control gain slider, is used to adjust the volume of all sounds on the simulator, while the second slider, referred to as the cutoff frequency slider, is used to modify the cutoff Glide.

How to use the simulator:

The first step is to introduce participants to the purpose of the simulator, after which they will be guided through the various training modes. During this initial stage, participants will have the opportunity to listen to all the sounds that represent the different modes of mindful yoga that they practice. They will also be able to adjust the volume level for their comfort and listen to the sounds as many times as they wish. To access the sounds, the trainer will simply need to click on the corresponding button. Furthermore, the Glide slider and cutoff glide at the bottom section of the simulator can be adjusted to modify the desired output sound. Once participants are familiarized with all the sounds, they will be required to select the focusing mode that they want the system to notify them of all the details. The trainer will then click on the corresponding button labeled with the focusing mode on the "focus mode" section as per the participant's selection. After selecting the focus mode, participants can start the experiments at any time and evaluate the tasks available to them. Once they have gathered all the necessary materials and are ready to begin, the person conducting the training simply clicks on the "START EVENT STREAM" button to initiate the training. Additionally, the volume can be modified at any time upon the request of the participants. Overall, this process ensures a smooth and efficient training experience for all participants.

How to experience all the different scenarios?

To ensure that participants get the most out of the training, they will have the option to select a specific focusing mode to receive detailed sonification during the training. This feature will allow

participants to listen to more details on specific events, depending on their preference and needs. For instance, some participants may only want to receive details on the correct yoga posture because that's what they want to focus on during their yoga practice. Others may want to focus more on their breath during meditation, and therefore prefer to receive more detailed sonification on their breathing pattern. These different scenarios for each participant will help trainers collect more accurate data on how sonification affects them. It's also worth noting that the selection can be changed during the experiments, allowing participants to adjust their focus as needed.

How does data modify the sounds?

The sound that the participants hear will be modified based on the data from different objects and focusing modes. There are two types of sounds that the participants will be introduced to during the training. The first type of sound represents the objects in the simulation which are yoga, meditation, heart rate and reminder sounds, and the participants will hear it whenever the event occurs. By selecting the desired focusing level, the participants will hear additional information after the sound. Within the selected focusing mode, the participants will hear a sound that represents the type of event and then hear a brief message providing more details about the practice. Moreover, in the heart rate mode, an alert sound will be played if the participant's heart rate falls outside the normal range of 60 to 100 beats per minute. This sound acts as a sonification message to notify the user of any abnormal situations that require attention.

JSON File

To prevent users from consciously waiting for events, the JSON file contains all events randomly designed in the order of mindful yoga practice, from yoga to meditation. This design aims to accurately reflect real-life situations and gather the most reliable data possible. The total time of the event has been set to 10 minutes, ensuring that there is enough time to cover all evaluation tasks.