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Appendix E - Study Consent Form

Project Title: Investigating limitations of virtual world (VW) building tools when used by participants with non-virtual design background

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From here on, the term “we”, and “our” refer to Min Kyu Jung, Jason Shields, and Dr. Celine Latulipe. “You” and “your” refer to the participant.

Please take the time to read this carefully and to ensure you understand all the information.

This consent page should give you the basic idea of what this research is about and what your participation will involve. This consent form is only part of the process of informed consent. You should keep a digital copy of this consent form for your records and reference, by saving it to your hard drive. If you would like more detail about something mentioned here, or information not included here, you should feel free to contact Min Kyu Jung (jungmk@myumanitoba.ca). You may also contact Jason Shields (jason.shields@umanitoba.ca) in the Interior Design Department or Min Kyu’s advisor, Dr. Latulipe at (celine.latulipe@umanitoba.ca).

The objective of this study is to investigate the technical and creative limitations of virtual world building tools (specifically Gather.Town Mapmaker and TILED). This investigation will be achieved by having users with non-virtual design backgrounds (users with physical design backgrounds like interior design and architecture but with no computer science or programming background) build virtual worlds with current virtual world building tools. We are investigating the functionalities of these virtual world building tools from the perspective of users with non-virtual backgrounds, as well as how said users debug when building virtual worlds. Our hope is to share our findings with researchers/designers of virtual world platforms and the wider virtual world community, including companies that provide virtual world platforms.

This study has six stages, as described in the following:

- Stage 1: You will be provided a shared Microsoft Word document, referred to as a diary. You will be asked to explore Gather.Town Mapmaker and TILED on your own and write your experiences related to self-learning these virtual world building tools in the shared

Microsoft Word document, over a period of up to one week. You must spend at least 1 hour on this part of the study.

- Stage 2 – 5: These stages will happen over a one-day in-person session on campus at the University of Manitoba.
 - Stage 2: You will complete a 5-minute background survey. Then you will be given a 60-minute hands-on tutorial of Gather.Town Mapmaker and TILED.
 - Stage 3: You will have a 60-minute practice session to build a virtual world based on provided specifications.
 - Stage 4: You will have a 60-minute session to design a virtual escape room on paper.
 - <Lunch break - lunch provided>
 - Stage 5: You will have up to three hours to build the virtual world escape room you designed in Stage 4, using Gather.Town Mapmaker and TILED.
- Stage 6: During the week after the one-day in-person session, you will be asked to participate in a 60-minute interview (online or in-person depending on your preference) to share your experiences of using virtual world building tools. You will be asked to meet Min Kyu Jung in Gather.Town. The interview will be audio recorded with Audacity.

Your participation of this study will be compensated under the following scheme:

- Flat CA\$20 via e-transfer after the submission of your diary in Stage 1 (minimum of 1 hour)
- CA\$100 via e-transfer for Stage 2, 3 and 4 at the beginning of Stage 2 (3 hours)
- CA\$100 via e-transfer for Stage 5 at the completion of Stage 5 (maximum of 3 hours)
- CA\$30 via e-transfer for Stage 6 at the start of the interview (1 hour)
- Participants who are not UofM students will be provided with a parking token for on campus parking for the day they participate in stages 2-5 at the beginning of Stage 2
- Participants will be provided lunch accordingly to their dietary/allergy restrictions

The data collected from this study will be the following:

- Consent form (which includes your consent, name and Interac email in which we can send compensation to)
- Your responses to the short background survey about your experiences designing physical spaces and any experience using virtual worlds
- Diary you completed in Stage 1
- Virtual worlds you built in Stages 3 and 5
- Photos of the virtual world escape room you designed on paper in Stage 4
- Screen recording of your virtual world building sessions in Stages 3 and 5
- Interview recording and transcription from Stage 6
- Email communications for scheduling and compensation

The diary from Stage 1, virtual world escape room design from Stage 4 and virtual worlds built in Stages 3 and 5 will not contain any identifiable information. The screen recording from Stage 5 will not contain any identifiable information as you will be asked to use a pseudonym when building in Gather.Town, and have the camera and microphone turned off. The voice recording from the Stage 6 interview will have identifiable information but will be destroyed as soon as it has been transcribed, which is two weeks from the interview date. Photos from Stage 4 and screen recordings from Stage 3 and 5 will not be included in the final reporting. Min Kyu Jung will be conducting the interviews alone and manually transcribing and anonymizing the transcripts for subsequent analysis. It is possible that direct quotes will be included in the final report. No names

or identifiers will accompany direct quotes. If direct quotes are used, pseudonyms will be used or “P1, an interior design student, said ...”. Participants will be scheduled for the one-day session on a one-day-one-participant basis. Thus, no two participants will participate in the study at the same time. This ensures the protection of your identity for participating in this user study.

All data is stored on encrypted, and password protected drives in Microsoft Teams (OneDrive) with Min Kyu, Jason Shields and Dr. Celine Latulipe being the only people with access. Anything published will be clustered and unidentifiable. All data will be destroyed in December 2026.

Participation in this study is voluntary and if you agree to participate, you can withdraw your participation at any time. There is no penalty for withdrawing consent. You will have the opportunity to withdraw your data after participating in the study before August 2023 or two weeks after you completed the study, depending on which is later. To withdraw, you can email Min Kyu Jung directly or inform him during the study of your withdrawal. There is no penalty for choosing to not participate or withdrawing your data.

The following is the compensation scheme, should you withdraw, which will vary depending on the stage when the withdrawal occurred:

- Stage 1: If you withdraw prior to the diary submission, your compensation will be a flat CA\$20, regardless of the number of hours you’ve spent on your diary entry. You can withdraw by emailing Min Kyu Jung at jungmk@myumanitoba.ca.
- Stage 2 to Stage 3: You will be compensated \$100 at the beginning of Stage 2. Thus, you may withdraw anytime during the interview, with no impact on the paid compensation. Those eligible for parking tokens will be given at the beginning of Stage 2. The participant can use it, even if they withdraw. You can withdraw from the study by emailing Min Kyu Jung at jungmk@myumanitoba.ca before the start of Stage 2 or inform Min Kyu Jung directly during the day-long session.
- Stage 4 to Stage 5: You will be compensated \$100 at the end of Stage 5. You may withdraw anytime during the study, with no impact on the paid compensation. You can withdraw from the study by emailing Min Kyu Jung at jungmk@myumanitoba.ca before the start of Stage 2 or inform Min Kyu Jung directly during the day-long session.
- Stage 6: You will be compensated \$30 prior to the beginning of the interview. Thus, you may withdraw anytime during the interview, with no impact on the paid compensation. You can withdraw from the study by emailing Min Kyu Jung at jungmk@myumanitoba.ca before the start of Stage 6 or inform Min Kyu Jung directly during the interview.

The benefits of this research are:

After completing these investigations, we will have provided a better understanding of the technical and creative limitations of the current virtual world as well as how users with non-virtual design build virtual spaces. We hope these findings will help other researchers and companies working with virtual worlds when designing, building or improving virtual world building tools.

The direct benefit this study has to all participants is that they will have been introduced and taught how to use Gather.Town Mapmaker and TILED to build virtual worlds. This is an entry point for participants to explore other tools to build virtual worlds, which is a potential source of

income, as people with these skills work for companies that are contracted to build virtual worlds.

The indirect benefit to all participants is that they have an opportunity to voice their thoughts on Gather.Town and TILED and help us propose new ways of improving and designing virtual world building tools.

Risks of this research:

The risk to participants is minimal. Participants may encounter fatigue during the one-day in-person session. Participants may also experience self-imposed pressure in Stage 5 when building the virtual world escape room that they designed in Stage 4, even though it is not necessary for them to complete the escape room to complete their study participation.

A summary report of the research will be available on Dr. Latulipe's website (<https://celinelatulipe.net/investigating-how-users-with-physical-design-backgrounds-build-virtual-spaces>). The expected date of defense is August 2024 and so the report and thesis will be available before the end of December 2024.

By consenting to release your data for research purposes, you indicate that you have understood to your satisfaction the information regarding the research project. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. This research will be submitted as part of Min Kyu Jung's master's thesis and be available on MSpace. The results of this research may also be presented at future academic conferences and those papers which are accepted will also be available on the above listed websites.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.

This research has been approved by the Research Ethics Board at the University of Manitoba, Fort Garry campus. If you have any concerns or complaints about this project, you may contact any of the above-named persons or the Human Ethics Coordinator at 204-474-7122 or humanethics@umanitoba.ca. You should feel free to keep a digital copy of this consent form for your records and reference, by saving it to your hard drive.