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INFORMATION LETTER and CONSENT FORM

Title of the study: Comparing System-Initiated Suggestions and Designer-Initiated Queries in AI-Assisted Puzzle Design

Principal Investigator (Supervisor): Dr. Nathan Sturtevant
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Invitation to Participate: We invite you to participate in this study about creating content for puzzle games, i.e., using a computer.

Purpose of the Study: The purpose of this study is to understand how different AI-assisted puzzle design tools affect people's design experiences and the puzzles they create. You will use two tools for designing Witness-style puzzles. In the game, [The Witness](#), players draw a non-self-crossing path along the grid lines of the puzzle. They start at one junction and end at a goal junction, while satisfying all puzzle constraints. For this study, we will provide a limited set of constraints and restrict puzzles to size 4x4. We are interested in how these tools affect your sense of control, ease, or frustration, design choices, and the puzzles you make. This study is not intended to evaluate your puzzle-solving or design ability; instead, we are evaluating the design tools. The results will help us build AI-supported creative tools that assist users while still allowing them to remain in control.

Participation: If you wish to participate in this study, you will be asked to design two Witness puzzles and take an 18-question survey. The study should take you less than an hour to complete. You do not have to answer any questions you do not want to, and you may stop by simply closing the window; no data will be collected. You may take your time with the study, but we expect most participants to spend 15 minutes completing the tutorials, 20 minutes designing the puzzles, and 5 minutes on the survey. After the survey, there is an optional activity for playing puzzles designed by other participants. The duration of the optional activity varies as the difficulty of the puzzles varies, but you may drop out at any point.

Benefits: There are no direct benefits to taking part in this study, outside of any fun you may have by designing and playing The Witness puzzle levels.

Risks: You may feel frustrated, which could lead to emotional stress. Because the study is more than 30 minutes, you may also feel mental fatigue.

Confidentiality and Anonymity: All study results will remain confidential. We will use only the study's results for this research. The only people who will have access to the research data are Dr. Nathan Sturtevant and the study team. Results will be published in a pooled (aggregate) format. Anonymity is guaranteed, as you are not asked to provide your name or any personal information.

Data Storage: The results will come from the surveys and logs based on how you played the levels. We will keep these public-key encrypted results on a password-protected server. The server belongs to the Department of Computing Science at the University of Alberta.

Compensation (or Reimbursement): There is no compensation for taking part in this study.

Voluntary Participation: You are under no obligation to take part, and if you choose to, you may refuse to answer questions that you do not want to answer. Should you choose to withdraw midway through the electronic survey, simply close the link, and no responses will be included. Given the anonymous nature of the survey, once you have submitted your responses, it will no longer be possible to withdraw them from the study.

Information about the Study Results: We will publish the study results in a conference paper. This paper will be made publicly available through the websites of the investigators.

Contact Information: If you have any questions about the research, now or later, please contact the researchers using the email addresses listed above.

If you have any questions regarding your rights as a research participant, you may contact the University of Alberta Research Ethics Office at ethics@ualberta.ca or (780)492-2615 and quote Ethics ID Pro00156658. This office is independent of the researchers.

Completion of the levels and submission of the survey means you consent to participate in this study.