This study compares the use of a keyboard and an Xbox 360 controller when playing Tetrinomicon.
Introduction Script

Thank you for agreeing to participate in this study. I have a brief questionnaire for you to fill out before we begin and I will have a second one afterwards. The study will be in two stages – on the Xbox and on the PC. On each I will ask you to look over the control scheme, play solo for 3 minutes to get a handle on the controls and then run a speed trial to see how fast you can clear out ten lines. After that, I will have you play a game against a live opponent. After either one game or five minutes, whichever is sooner, I will have you switch to the other apparatus and repeat the process.

I will observe you as you perform the single-player tasks, and would encourage you to think aloud, and note when you make mistakes. The better I understand what in these designs works and what doesn’t, the better the game can be.

Let me explain how the game works. Tetrinomicon is a multiplayer variant of Tetris. You create power-ups by clearing out multiple lines, and then collect the power-ups by clearing the lines that contain them. You can then elect to use the power-ups on yourself or your opponent. A player is eliminated under the same conditions as in regular Tetris, and the last player standing, wins.

For the purposes of this study, your power-up queues will be pre-populated with one instance of each power-up. Before you start the time trial, please look at each of the special blocks in your queue and try to guess what they do.

Again, I appreciate you participating in this study, and want to emphasize that if at any time you wish to stop, just say so. Do you have any questions?

I cannot emphasize this highly enough, please answer all the questions honestly, as you would for a complete stranger. Do not soften or change your answers or opinions based on the fact that we know each other.
Tasks.

1) From the main menu, find and look over the control scheme (controller for XBox, Keyboard for PC)

2) Once you feel ready, return to the main menu and host a local game. Without waiting for any other players, hit X to begin the game.

3) Play for three minutes to familiarize yourself with the control scheme.

4) Exit from that game, then create a new local game. As quickly as possible, clear ten lines. Feel free to use the special blocks, but note that they do not count towards the ten line goal.

5) Once you have cleared ten lines, exit to the main menu and host a local game. Wait for the other player to join and then hit X to begin.

6) As you play, try to note how often you make mistakes, what they are, and what can be improved in the game to prevent those mistakes from happening.

7) If anything does not behave as you think it should, say so as you play.
Metrics used: Two surveys were used, one taken before the play-test and one after. The first is used to assess the player’s level of experience with PC and console games. This information is useful for establishing what demographics are represented in the data.

The second, taken after playing, looks to get information about how learnable and usable each interface is, and what problems were encountered. While playing, I asked each participant to think aloud, and to note when they made mistakes.

This game is being developed for the Xbox 360, which has a digital distribution service for games that mandates that all games sold on their service have demos. This study seeks to measure Tetrinomicon’s approachability and how compelling the first few games would be in driving purchases.
The spreadsheets are attached, but what I consider the most important data is shown here.
Name ___________________________ (optional)  Pre-Game Questionnaire

Sex ________________________________
Age ________________________________

1) How much experience do you have using computers?
   1 3 5 7 9
   None Frequent use for several years

2) How much experience do you have with videogame consoles?
   1 3 5 7 9
   None Frequent use for several years

3) How often do you play games on computers?
   1 3 5 7 9
   Never Daily

4) How often do you play games on videogame consoles?
   1 3 5 7 9
   Never Daily

5) How much experience do you have playing Tetris or similar puzzle games (e.g. Bejeweled, Dr. Mario, Lumines)
   1 3 5 7 9
   None Frequent use for several years

6) How much experience do you have with multiplayer computer or console games?
   1 3 5 7 9
   None Frequent use for several years

7) Do you consider yourself an avid or expert gamer?
   1 3 5 7 9
   Not at all Yes, very much so.

8) If you choose to play games, what two genres do you play most? (circle two)
   RPG Action Fighter FPS Sports Racing Sim Puzzle Rhythm Other _______

9) How much do you spend on game related purchases annually? (estimate)
   ____________________________
Name _____________________________ (optional)   Post-Game Questionnaire

1) How much difficulty did you have learning the PC controls
1     3     5     7     9
None                                I still don’t know how they work

2) After the initial 3 min learning period, how frequently did you make mistakes (PC)
1     3     5     7     9
Never                               Almost constantly

3) How much difficulty did you have learning the XBox controls
1     3     5     7     9
None                                I still don’t know how they work

4) After the initial 3 min learning period, how frequently did you make mistakes (XBox)
1     3     5     7     9
Never                               Almost constantly

5) How well did the icons on each of the special blocks represent their functions?
1     3     5     7     9
Not at all                           No room for improvement, perfect.

6) How difficult was it to distinguish the various special blocks by color and icon?
1     3     5     7     9
Impossible                           Each was instantly recognizable

7) Which did you prefer? (circle one)   PC    XBOX

8) Why? ____________________________________________

________________________________________________________________________

9) What improvements would you suggest in each of the following (on favored platform)
   (write on back if necessary)
   Control Scheme.

   Special block representation/behavior

   Player interaction

   Targeting & queue system

10) Would you choose to buy this game for a platform you already owned?   Yes   No
10b) If yes, how much would you pay for it? _____________
10c) If no, why not?
Interpretation:

Obviously, this is a very small sample, but in the target demographic – people who frequently play computer or console games, the Xbox controller is preferred or at least equally rated vs. a keyboard. Two participants indicated that they thought the keyboard control scheme should be overhauled, but all felt positively on the Xbox control scheme, though one participant without much experience with consoles found the mechanics of the controller itself cumbersome compared with a keyboard.

Recommendations:
All of the participants had trouble with the targeting system, so it should be revamped. Two of them recommended putting in more aural feedback, which should be addressed by adding relevant sound effects and possibly visual feedback for game events as well. Interaction between players could be improved by informing both attackers and defenders when attacks occur. Adding voice-chat was also recommended.
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