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HOT: Higher Order Tetris, Experts' Subgoals and Activities

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Abstract

For Tetris, clearing 4 lines at once (a "Tetris") results in 7.5 times as many points as clearing one line four times. Getting a Tetris requires a solid block of filled cells, 9 columns wide and 4 rows high. That block leaves vacant one column. If an I-beam appears, all 4 rows can be cleared. Finalists at the Classic Tetris World Championships have an explicit subgoal structure not seen in lesser players. Among the 32 competitors, the 4 finalists are those who are most adept at maintaining or preparing the board for a Tetris by executing one of these subgoals, as needed. We present a video-based analysis which compares the proportion of time spent on each activity between those eliminated on the first tournament round and those who survive to the final round.