

## The Research of the Game Interface Improvement Due to the Game Operation Dilemma of Player in the Side-Scrolling Shooting Game

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**Abstract :** The feature of a side-scrolling shooting game is facing the surrounding enemy and barraging in entire screen. The player will be in trouble when they are trying to do complicated operations because of the physical and system limitations of the joystick in the games. This study designed the prototype of a new type of arcade stick by focus group and assessed by the expert. By filtering the most representative, and build up the control system for the arcade stick, and testing time and bullets consumed in two experiments, try to prove it works in the game. Finally, the prototype of L-1 solves the dilemma of scroll shooting games when the player uses the arcade stick and improves the function of the arcade stick.

**Keywords :** arcade stick, joystick, user interface, 2D STG

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