# Improving the immersion in Virtual Reality With real-time Avatar and Haptic feedback in a cricket simulation

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**Summary**

This article focuses on trying to increase a user's presence and immersion when playing a game of cricket. The study used an OSVR (Open Source Virtual Reality) headset which was modded to also use an Inter-Sense head tracker for less latency when tracking head movement. There was also a haptic feedback system built into the glove worn by the player which will vibrate when the game detects a collision. The game was played either with a joystick controller or with a wand controller, the latter of which can register hand movements. Players were instructed to first play the game on a monitor, then in virtual reality without motion tracking, then in virtual reality with motion tracking. Results showed that player performance improved when using the wand controller, and that presence was overall improved when playing with virtual reality.

## References

[1] "Improving the immersion in virtual reality with real-time avatar and haptic feedback in a cricket simulation.," *2017 IEEE International Symposium on Mixed and Augmented Reality (ISMAR-Adjunct), Mixed and Augmented Reality (ISMAR-Adjunct), 2017 IEEE International Symposium on, ISMAR-ADJUNCT*, p. 310, 2017.