

## How to Improve Immersiveness in Virtual Reality Through Advanced Sense of Presence: A Literature Review

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**Abstract :** People are constantly surprised at how real and immersive virtual reality (VR) is, even though the technology is still rudimentary, and we are only scratching the surface of its possibilities. Therefore, this literature review built a body of knowledge of existing technology that can be used to improve immersiveness in VR. For this paper, "Sense of Presence (SoP)" was chosen as the terminology to describe immersiveness in VR. Eight studies that tested VR technologies were identified. Many other studies were included to back up the incentives behind these technologies. VR technologies include vibration, airflow, thermal components, EMS, and quadcopters. Study results from selected papers were analyzed, compared, and generally positive. Seven studies had positive results, and only one had negative results. Vibration is the most effective option to improve SoP.

**Keywords :** virtual reality, sense of presence, self-awareness, literature review

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