IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Impact Factor: 7.301
Volume 3, Issue 4, April 2023

Underwater Wireless Communication System using IR

Ritik Patil[1], Yash Yennewar[2], Tanmay Kawase[3], Rushikesh Tetwar[4], Prof. Suhas D. Kakde[5]
UG Students, Department of Electronics and Telecommunication[1,2,3,4]
Assistant Professor, Department of Electronics and Telecommunication[5]
Priyadarshini J. L. College of Engineering, Nagpur, Maharashtra, India

Abstract: *Wireless communication is a vital component of underwater operations, including environmental monitoring, surveillance, and exploration. However, traditional wireless communication methods such as acoustic or radio frequency suffer from limited range, low bandwidth, and interference. Infrared technology has emerged as a promising solution for underwater wireless communication due to its ability to transmit high-bandwidth data over long distances with minimal interference. In this review, we provide an overview of the current state of the art in underwater wireless communication systems that utilize infrared technology. We discuss the various components of these systems, including the transmitters, receivers, and signal processing techniques. Additionally, we explore the benefits and limitations of using infrared technology for underwater wireless communication and identify areas for future research.*

Keywords: Wireless communication

REFERENCES

[1]. Y. Li et al., "Underwater Wireless Infrared Communication Systems: A Review," IEEE Communications Surveys and Tutorials, vol. 22, no. 4, pp. 2382-2403, 2020.
[2]. H. Zhang et al., "Underwater Wireless Infrared Communication: Recent Advances and Future Challenges," IEEE Access, vol. 7, pp. 89187-89197, 2019.
[3]. J. A. Moreno-Muro et al., "Underwater Wireless Infrared Communication: State-of-the-Art and Future Challenges," Sensors, vol. 21, no. 2, p. 445, 2021.
[4]. Muhammad Tahir, "Underwater Wireless Communication Using EM Waves", October 19, 2020.
[5]. Jaruwatanadilok, S., "Underwater Wireless Optical Communication Channel Modelling and Performance Evaluation using Vector RadiativeTransfer Theory". IEEE Journal on Selected Areas in Communications, vol. 26(9): pp. 1620-1627, 2008.
[6]. Stojanovic M and Preisig J. Underwater acoustic communication channels: propagation models and statistical characterization. IEEE Common Mag 2009; 47(1): 84–89.

DOI: 10.48175/568