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Editorial Note on Internet of Underwater Things

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Editorial

IoUT would make it possible for a network of autonomous underwater vehicles (AUV) to communicate with one another, gather data, and send it to command posts above the surface at ordinary internet speeds. The data can be utilized for a wide range of tasks, including the surveying of accidents and shipwrecks, the early detection of tsunamis, the monitoring of animal health, and the development of interactive real-time aquatic education, archaeological expeditions, and ecological monitoring applications, in addition to the efficient management of our planet's resources. Sports, assisted navigation, location awareness, environmental monitoring (such as monitoring of water quality, water pollution, water pressure, or water temperature), water-based disasters (such as tsunami or nuclear accident), defence systems (such as surveillance systems or submarine detection), and several other applications have demonstrated the viability of IoUT [1].

Despite playing a crucial role in enabling underwater communication, IoUT systems still face difficulties because of their unreliable transmission medium, unstable radio signals, limited range, low bandwidth, inborn noise, low transmission rate, slow propagation speed, node mobility, low resources, and limited battery capacity. Channel modelling, optimal routing, security, privacy, communication overhead, congestion control, packet error rate, packet latency, energy usage, etc. are all impacted by these difficulties. Channel modelling, optimal routing, security, privacy, communication overhead, congestion control, packet error rate, packet latency, energy usage, etc. are all impacted by these difficulties. As a result, many researchers from all over the world are working on IoUT-based systems to make them effective, deployable, and affordable [2].

The system enables underwater communication, self- or other-localization, navigation to locations of interest, and position-based content display for divers. A specialised network protocol facilitates divers' location and offers safe and dependable communication amongst dives. Our system was created by utilising the SUNSET Software Defined Communication Stack (S-SDCS) framework, as well as its networking and modular design. In our presentation, we highlight the adaptability and efficiency of our system in enabling divers and surface operators to securely and reliably interact utilising underwater tablets and acoustic networking across a simulated underwater network environment. Through a cutting-edge application interface, the navigation and acoustic tracking of divers will also be displayed [3].

The Internet of Underwater Things (IoUT) aims to connect our seas, streams, and lakes digitally and to build a global network of intelligent, interconnected underwater items. IoT devices currently number at 9 billion (smartphones, tablets, and laptops excluded) and are expected to reach 30 billion by 2020. We are missing out on connecting underwater while there are ambitious terrestrial programmes like Google's Project Loon and Facebook's Aquila drone that attempt to digitally connect every rural and remote part of the land. Three-quarters of the planet is covered with oceans and lakes. It makes perfect sense for engineers and scientists to expand the Internet of Things into the oceans [4].

Although the IoUT and its ground-based counterpart (IoT) share many technical characteristics, such as structure and function, they also differ greatly in terms of computing power, energy resources, and communication/telecommunication environments. Technical topics in the realm of IoUT will be covered in depth in order to solve these gaps between the IoT and IoUT. These consist of the underwater sensors and equipment as well as the underwater communications. The IoT and IoUT ecosystems generate vast volumes of data by connecting an expanding number of machines and devices to the Internet. Big data is the colloquial term for this large amount of data. The IoT generates a lot of big data, which is likely the most pervasive data type in the modern world. Big data is now produced by a number of technology ecosystems. Due to the anticipated increase in Internet-connected devices from the current 30 billion to over 50 billion, this is also expected to rise [5].

Conflict of Interest

None.

References

1. Wang, Qubeijian. "On connectivity of uav-assisted data acquisition for underwater internet of things." *IEEE Internet Things J* 7 (2020): 5371-5385.
2. Lan, Hualin. "Acoustical observation with multiple wave gliders for internet of underwater things." IEEE *Internet Things J* 8 (2020): 2814-2825.
3. Feng, Liangbing. "Pheromone based alternative route planning." *Digit Commun Netw* 2 (2016): 151-158.
4. Gbadamosi, Omoniyi Ajoke. "Design of a Modified Dijkstra's Algorithm for finding alternate routes for shortest-path problems with huge costs." *Inter Conf Mathem Comp Eng Comp Sci* (ICMCECS) IEEE (2020): 1-6.
5. Zheng, Tao, Yanqiang Xu and Da Zheng. "AGV path planning based on improved A-star algorithm." IEEE 3rd *Adv Infor Manag Commun Elect Auto Cont Conf* (IMCEC) (2019):1534-1538.

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