Comments and Corrections

Corrections and Comments on "High-Accuracy Robot Indoor Localization Scheme Based on Robot Operating System Using Visible Light Positioning"

Babar Hussain , *Student Member, IEEE*, Johnny Cheng, Cong Qiu, *Member, IEEE*, and C. Patrick Yue , *Fellow, IEEE*

Abstract—**This paper presents critical amendments to the subject paper. The names of the authors are included here, who should have been credited in the subject paper for their contribution in designing the hardware, facilitating the system development, and constructing the testbed.**

Index Terms—**Visible light positioning (VLP), robot operating system (ROS), robot localization, high accuracy positioning, thresholding scheme, distributed framework.**

I. CORRECTIONS AND COMMENTS

THE authors of this paper designed, implemented, and verified the custom-made hardware based on ordinary white LED panel lights to support visible light positioning (VLP) with embedded Bluetooth Low Energy (BLE) for geofencing [2]–[5]. This hardware was used in the VLP system design and experimental testbed of [1], as shown in Fig. 5(a) of [1], and two demo setups shown in Fig. 7 of [1]. The hardware is based on an 18 Watt, 1600 lumen, and 17.5 cm wide circular white LED panel that is modulated using a universal visible light communication (VLC) modulator with a wide input voltage range of 5–50 V and maximum rated power of 50 Watts [2]. The light modulation frequency ranges from 1–8 kHz and can achieve optical camera communication distance of up to 4 meters [5], using the camera hardware of [1]. The hardware further consists of an embedded Bluetooth system-on-chip module (Dialog DA1458x) to provide wireless control through a smartphone application and a Bluetooth-based iBeacon for geofencing, with a wireless communication range of up to 10 meters [3], [4].

REFERENCES

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Babar Hussain and C. Patrick Yue are with the HKUST-Qualcomm Optical Wireless Lab, Integrated Circuit Design Center, Department of Electronic and Computer Engineering, the Hong Kong University of Science and Technology, and also with LiPHY Communications Limited, Hong Kong, Hong Kong (e-mail: bhussain@ust.hk; eepatrick@ust.hk).

Johnny Cheng is with the LiPHY Communications Limited, Hong Kong, Hong Kong (e-mail: johnny@liphy.io).

Cong Qiu is with the School of Electronic Communication Technology, Shenzhen Institute of Information Technology, Shenzhen 518172, China (e-mail: jeff@liphy.io).