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Keke Gai, Meikang Qiu, Zenggang Xiong, Meiqin Liu

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Privacy-Preserving Multi-Channel Communication in Edge-of-Things

Keke Gai[a], Meikang Qiu[b,c,*], Zenggang Xiong[b,**], Meiqin Liu[d]

[a]*School of Computer Science and Technology, Beijing Institute of Technology, Beijing, China, 100081.*
[b]*School of Computer Science and Information Technology, Hubei Engineering University, Hubei, 432000, China.*
[c]*Department of Electrical Engineering, Columbia University, New York City, NY 10027, USA.*
[d]*College of Electrical Engineering, Zhejiang University, Zhangzhou, 310027, China*

Abstract

Contemporary booming growth of the Internet-based techniques has risen a revolution of network-oriented applications. A connected environment further drives the amalgamation of various techniques, such as edge computing, cloud computing and *Internet-of-Things* (IoT). Privacy concerns have appeared throughout the process of data transmissions, some of which are caused by the low security communication protocols. In practice, high security protection protocols generally require a higher-level computing resource due to more computation workloads and communication manipulations. The implementation of high security communications is restricted when data size becomes large. This work focuses on the issue of the conflict between privacy protection and efficiency and proposes a new approach for providing higher-level security transmission using multi-channel communications. We implement experiment evaluations to examine the performance of the proposed approach.

Keywords: Privacy protection, Edge-of-Things, multi-channel communication, Internet-of-Things, timing constraint, smart computing

*Meikang Qiu (Corresponding Author): School of Computer Science and Information Technology, Hubei Engineering University, Hubei, 43200, China and the Department of Electrical Engineering, Columbia University, New York City, NY 10027, USA. E-mail: qiumeikang@yahoo.com

**Zenggang Xiong (Co-Corresponding author): School of Computer Science and Information Technology, Hubei Engineering University, Hubei, 43200, China, xzg@hbeu.edu.cn.

Email addresses: gaikeke@bit.edu.cn (Keke Gai), qiumeikang@yahoo.com (Meikang Qiu), xzg@hbeu.edu.cn (Zenggang Xiong), liumeiqin@zju.edu.cn (Meiqin Liu)

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