Accepted Manuscript

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PII: S0167-739X(16)30310-7
DOI: http://dx.doi.org/10.1016/j.future.2016.09.013
Reference: FUTURE 3163

To appear in: *Future Generation Computer Systems*

Received date: 14 April 2016
Revised date: 31 August 2016
Accepted date: 21 September 2016

Please cite this article as: E. Luo, Q. Liu, J.H. Abawajy, G. Wang, Privacy-preserving multi-hop profile-matching protocol for proximity mobile social networks, *Future Generation Computer Systems* (2016), http://dx.doi.org/10.1016/j.future.2016.09.013

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ACCEPTED MANUSCRIPT

Privacy-Preserving Multi-Hop Profile-Matching Protocol for Proximity Mobile Social Networks

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Abstract

Proximity-based mobile social networks (PMSNs) enable users to easily discover and foster social interactions with others through user-profile matching. The user profiles in PMSNs contain sensitive personal information and an occasionally leak will violate people's privacy. Hence, it is major concern. In this paper, we propose a privacy-preserving multi-hop profile-matching protocol for PMSNs. The proposed protocol allows users to customize their own matching preference and to make the matching results more precise. Unlike the state-of-the-art profile matching approaches that focus only within a single-hop, the proposed approach makes profile matching within several hops. Moreover, analysis of the security and performance indicates that the proposed protocol achieves secure

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[1]This work is supported in part by the National Natural Science Foundation of China under Grant Numbers 61632009, 61272151, 61472451 and 61402161, High Level Talents Program of Higher Education in Guangdong Province under Funding Support Number 2016ZJ01, the Hunan Provincial Natural Science Foundation of China under grant number 2015JJ3046, the Hunan Provincial Education Department of China under grant number 2015C0589(110351018002). The Fundamental Research Funds for the Central Universities of Central South University(2016zzts060). Key discipline for computer application and technology of Hunan University of Science and Engineering.

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