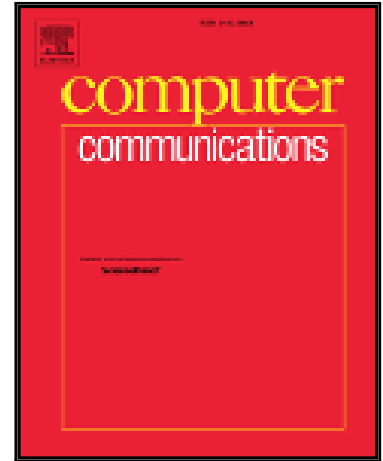


Accepted Manuscript

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PII: S0140-3664(16)30595-3
DOI: [10.1016/j.comcom.2016.11.006](https://doi.org/10.1016/j.comcom.2016.11.006)
Reference: COMCOM 5409



To appear in: *Computer Communications*

Received date: 7 March 2016
Revised date: 16 November 2016
Accepted date: 18 November 2016

Please cite this article as: Zhifei Mao, Yuming Jiang, Geyong Min, Supeng Leng, Xiaolong Jin, Kun Yang, Mobile Social Networks: Design Requirements, Architecture, and State-of-the-Art Technology, *Computer Communications* (2016), doi: [10.1016/j.comcom.2016.11.006](https://doi.org/10.1016/j.comcom.2016.11.006)

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Mobile Social Networks: Design Requirements, Architecture, and State-of-the-Art Technology

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Abstract

Mobile social networks (MSNs) are new systems for people to share content, communicate, and interact. Such networks combine social computing and mobile networking techniques to help in community detection, information dissemination, privacy preservation, etc. In this paper, we summarize the characteristics of MSNs and outline several requirements that should be taken into consideration during its design. A functional reference architecture of MSNs is introduced, and the building blocks of MSNs are described. We classify the literature falling under MSNs according to the building blocks of the architecture, and provide a detailed survey of MSNs. Finally, we present a discussion on the possible future development of MSNs.

Keywords: mobile networks, social networks, network architecture, survey

1. Introduction

The explosive evolution of information and communication technologies has helped people of similar interests or backgrounds to connect and interact with each other using online social networks (OSNs) such as Facebook, Twitter, and LinkedIn. Nowadays, social networking services are increasingly accessed via mobile devices, thus rendering a new research field in mobile social networking. A mobile social network (MSN) is a social network overlaying one or several types of mobile networks. A social tie in the social network may correspond to several physical connections in the underlying mobile networks. It is a social networking platform that allows users to converse, share information, and form communities.

Several interesting research and development results about MSNs have been reported in previous studies. Most of them, however, focus on user applications running on mobile devices and pay little attention to the underlying mobile communication networks. These studies only address specific features of mobile

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