

Title: Trust Management and Reputation Systems in Mobile Participatory Sensing Applications

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Abstract

Participatory sensing is an emerging paradigm in which citizens everywhere voluntarily use their mobile phones to capture and share sensed data from their surrounding environment in order to monitor and analyze some phenomena (e.g., weather, road traffic, pollution). Interest in participatory sensing systems has arisen from their low deployment cost. However, relying on citizens who share their contributions arises many challenges. Participants can disrupt the participatory system by contributing corrupted, fabricated, or erroneous data. Consequently, monitoring participants' behaviors in order to estimate their honesty is an essential need. This enables to evaluate the veracity and accuracy of participants' contributions and therefore to build robust and reliable systems. Recently, several trust and reputation systems have been proposed to trace participants' behaviors in these systems. We study and analyze existing trust systems in participatory sensing applications. Then, we draw the main lines of a research agenda concerning trust management in participatory sensing systems.

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