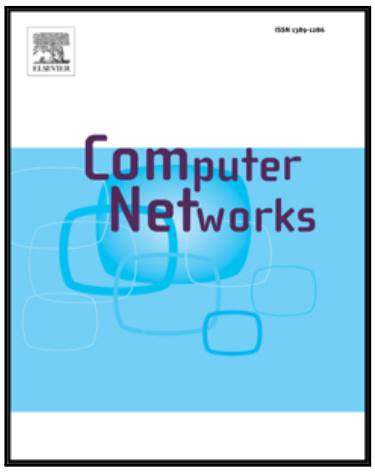

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Machine-to-Machine Communication: An Overview of Opportunities

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Abstract

The envisioned capability of machine devices to autonomously communicate in the future Internet of Things (IoT) has brought considerable attention to machine-to-machine (M2M) communication in recent years. This paradigm has applications in homes, safety, transport, health, and industry. As an active focus of research, there are interesting open questions on several of its aspects, which we aim to capture in this paper. Accompanied by an attempted classification of existing surveys on M2M, we propose a followable exposition on the challenges and open research opportunities that embrace the diverse facets of M2M.

Keywords: access problems, applications, challenges, home, mobile, open issues, standards, survey, taxonomy, technologies, M2M, MAC.

1. Introduction

Machine-to-Machine (M2M) communication is the autonomous interaction of a large number of machine devices to perform sensing, processing, and actuation activities without human intervention. These devices include meters in a smart grid, electronics and servers, and navigation sensors used for relaying information through a network. The main feature that sets M2M apart from other communication paradigms is the absence of human supervision [1, 2, 3, 4, 5]. The primary objective of M2M communication is to

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