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The proposed framework and challenges towards smart city implementation
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Abstract
The recent increment of population in the urban areas requires well-operated and well-managed cities with lots of automation in various aspects of everyday life. The backbone of this smart city is the Internet-of-Things (IoT) technology. This paper outlines the fundamental idea of IoT, followed by its framework for successful smart city implementation. The deployment of a city-scale IoT infrastructure involves heterogeneity of devices (in terms of hardware, software interfaces, communication interfaces and data transmitted), poses new challenges in several aspects including interoperability and security. There are many review articles on smart city proposing various frameworks, each with its own focus area. However, how different domain areas are to be interconnected together, remained questionable. Due to sensible nature of data involved, privacy and security must be ensured, considering secure environment for users' personal data in transit and storage. These elements must be integrated into the smart city architecture. Additionally, with the increase demand for mobile applications, the issues of mobility and the optimization of resource management are another challenging part in smart city. These issues and several approaches to tackle each of them are also highlighted in brief. Finally, the enhanced framework for smart city considering the security and privacy issues has been proposed. © Content from this work may be used under the terms of the Creative Commons Attribution 3.0 licence.

Author Keywords
IoT; Smart city

Index Keywords
Data privacy, Digital storage, Smart city; City scale, Communication interface, Communications data, Different domains, Focus areas, Hardware/Software interfaces, Internet of things technologies, Mobile applications, Privacy and security, Urban areas; Internet of things

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