

ABSTRACT

With immense increase in population over the past few years, globalization and urbanization has increased manifold. With this increase, many advancements have also been made in various sectors. The entire world is being introduced with the concept of smart cities comprising of smart homes, smart grids, smart schools, etc. Smart vehicles are also being introduced on the horizon. With the introduction of smartness, new communication technologies and methods are also introduced. Traditionally, centralized systems are used for data sharing and data storage. However, these systems exhibit a number of problems like single point of failure, increased costs, lack of trust, etc. To tackle these problems, decentralized systems are introduced. In this thesis, the mechanism for charging of vehicles in a decentralized manner is proposed. The charging of vehicles is done using blockchain technology, which is a decentralized technology and exhibits a number of fascinating features like trustability, anonymity, security, etc. The transaction cost, execution cost, SoC, and other parameters are also discussed in this thesis. Moreover, this thesis also presents some future directions at the end.