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P3 Block: Privacy Preserved, Trusted Smart Parking Allotment for Future Vehicles of Tomorrow

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Publisher: Springer International Publishing

Published in: Computational Science and Its Applications – ICCSA 2020

Abstract

As the urbanization is advancing day by day and demand of vehicles is being increased (or cheaper cost of vehicles), it made increased number of vehicles over the road, which faces several issues like traffic accidents, finding a parking spot, etc. Finding a car park slot has become one of the residents' key pain points. The key reason behind this is the restricted provision of parking lots and the struggle to spot vacant parking space during peak times. To overcome this restriction, one solution is to create smart allocation of free spaces that are easier to locate and use (i.e., trusted and privacy preserved for user or driver). In this work, we provide privacy preserved parking allotment (as a smart solution) to users (or vehicle users) who are willing to pay more charges when they require parking slot near to their destination (or urgent need). In this work (called as P3 Block: Privacy Preserving parking using Blockchain 2.0), one useful and different approach we used as "Incentive based smart parking". People will get cashback or reward for alerting or spreading genuine information among users. Also, miner will be rewarded for verifying users. Incentive feature will attract more users, also more trust and reputation of specific service provider matter a lot in providing efficient parking slot to vehicle user. Today world is moving towards automation, so automation will be available in all possible applications like manufacturing, finance, retail, food supply management, transportation, home appliances, etc.