SMART PARKING SYSTEM (SPARKS)

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Public parking facilities is a crucial component of transportation system as it provides site accessibility to other public areas and facilities such as banks, shops, restaurants and other activity centers. Even more so in Malaysia, where an efficient public transportation system is lacking, thus making usage of private vehicle a necessity in reaching destinations. Issues relating to parking facilities therefore is a matter of public importance, not only due to its importance to transportation system, but also its wider implication towards land use and economic development. With the number of private vehicles continue to grow, it is expected that issues such as insufficient parking spaces among others, will become worse in the future. In addition, through interviews with parking operator and observation, it is found that the current operation is heavily reliant on manual processes, especially during vehicle parking inspection and back-end operation (data entry etc.). Furthermore, inconveniences during parking and notice payment process is also one of major factor that leads towards public dissatisfaction. Therefore, the concept of Smart Parking System (SPARKS) is proposed, with the aim to improve the operation and public satisfaction of public parking facilities. SPARKS is a comprehensive digital platform in managing public parking facilities, utilize RFID technology and comprise of parking management dashboard, digital scanning devices, digital parking payment system and smartphones application. By utilizing digital platform in the operation, it will reduce labour-intensive tasks and provide real-time monitoring of operation. In addition to that, via smartphones application, it will provide a user-friendly parking payment system that support digital payment methods, thus providing convenience to user. The elimination of parking coupon meanwhile promotes sustainable environment. The potential of SPARKS can be further enhanced as it can also be used as vehicle identification system by other authorities.

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