Jumpark bah! ©: utilizing smart city infrastructure in Parking management system for Kota Kinabalu smart city

ABSTRACT

Kota Kinabalu (KK) is one of the pilot cities to implement smart city infrastructure in Malaysia. Given this privilege, lots of apps are needed to enable the city folks taking advantage of the highspeed bandwidth infrastructure. One of it is moving towards smart environment and smart government through supporting the green environment and cashless payment system for parking purposes. This paper describes the effort on the development of an apps, JumPark Bah! as an alternative to the current coupon-based parking system handled by the local authorities, Kota Kinabalu City Hall (KKCH). The current approach is quite cumbersome for KK city folks as they need to have a valid parking coupon displayed on the dashboard to park their car around KK city area. They must be able to correctly estimate the parking time or else summon will be issued if the parking time is exceeded. As for the KKCH, they need to assign many parking attendants for checking and validating the parking session. Thus, JumPark Bah! has been proposed as an alternative solution for KKCH by utilizing the concept of cashless payment parking system and is able to minimize the above-mentioned issues. The apps consist of a mobile application (for citizen and parking attendant) and the web-based system (for admin, i.e., KKCH). The web-based system allows the authority to monitor the fees, generate a report and even updates the user through announcement and news functionality. Based on the user evaluation using System Usability Scale (SUS), it has been found that JumPark Bah! has achieved 71.06% score which exceed the 68% score for good usability target.