ABSTRACT

The increasing mobility of toll road users demands easier access to information about important locations after exiting toll gates, such as restaurants, lodging, pharmacies, and other public facilities. However, general mapping applications such as Google Maps still have limitations in providing location information based on specific kilometer points or areas near toll exits. Users often need to search manually by typing the name or address of a location, which reduces efficiency and convenience while driving. Based on these issues, this study aims to design and develop a mobile-based location information application that provides structured data according to the kilometer point selected by the user. The development method used in this study is Prototype, which includes the stages of communication, quick plan/design, construction of prototype, evaluation, refinement, and final product. Location data were collected through direct observation in communication stage around toll road areas and processed into a structured database that can be accessed dynamically by users. The result of this study is an application that displays a list of toll road kilometers, location categories, and detailed information for each selected location. Based on testing using the Black Box method, all main functions of the application operated properly and met user requirements without functional errors. This application is expected to assist toll road users in obtaining location information more quickly, efficiently, and conveniently compared to existing general mapping applications.

Keywords : Location Information Application, Exit Gate Toll, Flutter, Prototype