ABSTRACT

The increasing number of motorized vehicles in Indonesia contributes to the high number of traffic accidents, most of which are caused by traffic violations. One solution that is starting to be developed is the electronic ticketing system. However, the existing system still faces various obstacles, such as late notification of violations, limited methods of paying fines, and an interface that does not support ease of use. On the other hand, several previous studies are still limited to manual reporting and recording functions, do not support the appeal process, are not directly connected to data from detection cameras, and do not involve evaluation of user experience. Based on these problems, this study aims to develop a frontend electronic ticketing information system that can be used by police officers and vehicle owners. The system was developed using the iterative incremental method in two iterations. The features built include violation validation, sending notifications via SMS, email, and WhatsApp, filing appeals, integrating violation data from cameras, and paying fines through a payment gateway. The evaluation was carried out using the Usability Testing (UT) method with the System Usability Scale (SUS) and Single Ease Question (SEQ) instruments. The test results show that in the second iteration the system obtained a SUS score of 90.13 for vehicle owners and 88.33 for police, which is included in the "excellent" category. The SEQ scores of 6.70 and 6.22 on a maximum scale of 7 indicate that the system is easy to use by both types of users. These results indicate that the developed system has met the needs of a good interface in supporting the process of digitally enforcing traffic violations.

Keywords—*electronic ticketing, frontend, iterative incremental, information system, usability testing*