

ABSTRACT

The old survey process in companies often faces obstacles such as delays in reporting, input errors, and unstructured documentation. To address these issues, this study aims to develop a digital survey system based on Census and Survey Processing System (*CSPro*) version 8.0.1. The development is carried out using an iterative incremental approach so that the system can be built gradually, modularly, and according to field requirements. The system is designed to replace conventional survey methods with an integrated digital approach.

The system utilizes components such as Data Dictionary, Form Designer, Application Logic, and *Action Invoker* for cameras and *GPS*. Testing was conducted on two *Android* devices (versions 14 and 15) through six functional scenarios, including application installation, data entry, distribution permit number (NIE) validation, visual documentation, and data synchronization to the *server* using *CSWeb*. Test results showed that all functions operated as designed. The synchronization process ran automatically with an upload time of less than three seconds, and files up to 2.5 MB were successfully sent without errors. Synchronization log analysis indicated stable two-way communication between the application and the *server*.

Based on these results, it can be concluded that *CSPro* version 8.0.1 can be effectively utilized to support digital survey activities in the company. The Iterative Incremental approach successfully drives efficient and adaptive system development. The system built enhances data accuracy, documentation, and survey reporting efficiency, and is suitable for implementation in large-scale operational activities.

Keywords: *CSPro*, digital survey, *Iterative Incremental*, *CSEntry*, *CSWeb*, data synchronization.