

Automated Identification of Errors in Cadastral Database Leveraging Concept of Consistency between Plot-register and Cadastral Database

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SUMMARY

Cadastral (parcel) databases developed by digitizing analogue (hardcopy) maps are susceptible to errors, particularly when parts of the source analogue maps are illegible due to prolonged use. Manual identification of these errors can be accomplished through careful comparison of scanned analogue maps and cadastral databases alongside comparison of cadastral database with field-book (first register of parcels when initial cadastral survey is done) and plot-register (register of parcel subdivision and consolidation). However, this approach is a cumbersome and time-consuming procedure, often leading to failure in competition of such initiatives. Previous research conducted by the author presented theoretical basis for automatically identifying errors in cadastral database leveraging the concept of consistency between plot-register and cadastral database. Building on the concept of consistency between plot-register and cadastral database, practical implementation was performed, developing algorithms and programs to identify errors of various types in cadastral databases. This research successfully demonstrates automatic approach to identify errors in cadastral database with minimal user intervention.

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