INTISARI

Proses penentuan kelayakan lokasi *minimarket* waralaba di Kabupaten Sleman masih dilakukan secara manual dengan mendatangi Kantor Pertanahan dan Bappeda. Setelah proses pengajuan usulan lokasi, *franchisor* perlu menunggu hasil usulan lokasi diobservasi secara langsung oleh petugas yang berwenang. Namun, minimnya jumlah petugas yang melakukan observasi menyebabkan proses verifikasi kelayakan lokasi *minimarket* waralaba berjalan lambat. Disisi lain, franchisor ingin segera mengambil peluang usaha, sehingga sebagian besar franchisor langsung mendirikan *minimarket* waralaba tanpa mengindahkan aspek kelayakan lokasi yang termuat dalam peraturan perundang-undangan yang berlaku. Akibatnya, *minimarket* waralaba mulai menjamur di Kabupaten Sleman. Beberapa diantaranya tidak sesuai dengan tata guna lahan dan berjarak sangat dekat dengan pasar tradisional. Jika dibiarkan terus-menerus maka akan mengancam nasib perekonomian masyarakat lokal.

Penelitian ini bertujuan untuk mengembangkan SIG berbasis web untuk melakukan otomatisasi analisis spasial multikriteria yang mengkombinasikan metode *Analytic Hierarchy Process (AHP), Weighted Linear Combination (WLC)* dan *Overlays* menggunakan *framework opensource* yaitu OpenGeo Suite. Sehingga, memudahkan pemerintah yang berwenang, *franchisor* maupun masyarakat umum dalam menentukan kelayakan lokasi *minimarket* waralaba di Kabupaten Sleman. *Framework* OpenGeo Suite terdiri dari Quantum GIS sebagai media pengolahan data dan analisis spasial, PosgreSQL dengan extensi PostGIS sebagai basis data spasial, Geoserver sebagai MapServer serta GeoExplorer dengan *library* GeoExt dan GXP sebagai antar muka pada sisi *client*. Pengembangan SIG berbasis web menggunakan metode *waterfall* dengan bahasa pemrograman HTML, *Javascript, Servlet,* CSS dan *Python*. Metode *Black Box* digunakan untuk proses pengujian fungsionalitas perangkat lunak SIG berbasis web.

Hasil analisis spasial terhadap 195 lokasi *minimarket* waralaba yang ada di Kabupaten Sleman menunjukkan masih banyak *minimarket* waralaba yang tidak sesuai dengan kriteria kelayakan lokasi. Pendekatan *Value Focus* dalam kombinasi metode AHP, WLC dan Overlay menghasilkan 8.994 alternatif lokasi yang diklasifikasikan berdasarkan nilai *Digital Number (DN) lokasi* sebagai standar penentuan status kelayakan lokasi *minimarket* waralaba baru dengan rincian ; lokasi berstatus layak sebanyak 12 *spot*, berstatus cukup layak sebanyak 53 *spot*, berstatus kurang layak sebanyak 3.654 *spot*, berstatus tidak layak sebanyak 333 *spot* dan berstatus sangat tidak layak sebanyak 4.942 *spot*. WFS membantu proses otomatisasi analisis spasial dapat dieksekusi oleh sistem ketika *client* memberikan *request* berupa *click* pada spot usulan lokasi, kemudian *server* memberikan *respons* melalui protocol HTTP dengan menampilkan nilai DN dan status kelayakan lokasi *minimarket* waralaba baru. Rekomendasi lokasi *minimarket* waralaba baru terdapat pada Desa Wedomartani, Desa Trihanggo, Desa Banyuraden, Desa Trimulyo, Desa Sumberadi, Desa Bokoharjo, Desa Triharjo, Desa margomulyo, Desa Tirtoadi, Desa Minomartani dan Desa Ambarketawang. Hasil pengujian *Black Box* terhadap fungsionalitas SIG berbasis web memperoleh kesimpulan valid karena semua fitur dapat berjalan sesuai harapan.

Kata kunci : analisis spasial, AHP, WLC, SIG berbasis web, opensource

ABSTRACT

The process of determining the feasibility of mini-franchise locations in Sleman still done manually by the Office of Land and Planning Agency. After the proposal of the location, the franchisor needs to wait for the results of the proposed location directly observed by authorized personnel. However, the minimal number of the officer who made the observation causes the eligibility verification process minimarket franchise locations is slow. On the other hand, the franchisor wants to take immediate business opportunities, so most of the franchisor directly set up mini-franchise locations without regard to the feasibility aspects contained in the legislation in force. As a result, mini-franchise began mushrooming in Sleman. Some of them are not in accordance with the land use and is very close to the traditional market. If allowed to continue it will threaten the fate of the local community economy.

This research aims to develop a web-based GIS to perform spatial analysis automation that combines multiple criteria Analytic Hierarchy Process (AHP), Weighted Linear Combination (WLC) and Overlays using opensource framework that OpenGeo Suite. Thus, facilitate government authorities, the franchisor and the public in determining the feasibility of mini-franchise locations in Sleman. Framework OpenGeo Suite consists of Quantum GIS as a medium for data processing and spatial analysis, PosgreSQL with the extension PostGIS as a spatial database, as MapServer and GeoServer GeoExplorer with GeoExt library and GXP as the interface on the client side. The development of web-based GIS using waterfall method with the programming language HTML, Javascript, Servlet, CSS, and Python. Black Box method is used for testing the functionality of a web-based GIS software.

The results of the spatial analysis of the minimarket 195 franchise locations in Sleman Regency indicates more minimarket franchise that does not comply with the eligibility criteria location. Focus Value approach in combination AHP, WLC and Overlay produce 8994 alternative location and classify by Digital Number (DN) as the standard of determining eligibility status minimarket new franchise locations with details; Eligible locations as many as 12 spots, the status is quite decent as many as 53 spots, has a status of less worth as much as 3,654 spots, the status is not worth as much as 333 spot and status so not worth as much as 4942 spot. WFS assist in the automation of spatial analysis can be executed by the system when the client gives request form click on the spot proposed location, then the server responds via HTTP protocol to display the DN value and eligibility status minimarket new franchise locations. Recommendations minimarket new franchise locations scattered in 38 spot locations contained in Wedomartani, Trihanggo, Banyuraden, Trimulyo, Sumberadi, Bokoharjo, Triharjo, Margomulyo, Tirtoadi, Minomartani and Ambarketawang. Black Box testing results to the web-based GIS functionality to the conclusion valid for all the features work as expected.

Keywords: spatial analysis, AHP, WLC, GIS web-based, opensource