

Spatial Analysis of Park and Ride Users' Dynamic Accessibility to Train Station: A Case Study in Perth

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Abstract : Accessibility analysis, examining people's ability to access facilities and destinations, is a fundamental assessment for transport planning, policy making, and social exclusion research. Dynamic accessibility which measures accessibility in real-time traffic environment has been an advanced accessibility indicator in transport research. It is also a useful indicator to help travelers to understand travel time daily variability, assists traffic engineers to monitor traffic congestions, and finally develop effective strategies in order to mitigate traffic congestions. This research involved real-time traffic information by collecting travel time data with 15-minute interval via the TomTom^{®} API. A framework for measuring dynamic accessibility was then developed based on the gravity theory and accessibility dichotomy theory through space and time interpolation. Finally, the dynamic accessibility can be derived at any given time and location under dynamic accessibility spatial analysis framework.

Keywords : dynamic accessibility, hot spot, transport research, TomTom[®] API

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