Impact Assessment of Network Reliability with Route Information under Severe Weather

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Abstract

Climate change and severe weather impacts on transportation and infrastructure have become global and environmental issues in the whole world. All human and transportation infrastructure systems are affected by climate change. Taiwan was hit by Typhoon Morakot and it caused a flood disaster in August 2009. This research focuses on the weather assessment measures of network reliability under route information. Two indexes are proposed to examine network reliability under route information, including: connectivity reliability and travel time reliability. Numerical experiments are conducted based on a real traffic network, the Jiaxian network, to illustrate the impact assessment of network reliability.

Keyword：network reliability, severe weather, route information