

## **Out-Coming Burden in PLUS Highway Network: A Case Study for 2013 Network**

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### **ABSTRACT**

Malaysia now heading to be the develop country and the trade activities are very important to help the industries growing. The study on the development of PLUS highway is crucial since there is higher demand from industry for efficient road transportation. If the road and highway have better interconnection network and efficient services and facilities, it will help to increase the economic growth and give benefits to the people and state. Thus, the government can draw up a development plan for the people effectively for the future. The out-coming traffic burden for each toll plaza along PLUS highway will be studied. The dynamic network can be seen in the linkage of all toll plazas in this highway. The purpose of this study is to learn about highway network in terms of the out-coming traffic burden exit from the each toll plazas along PLUS highway. The network topology of PLUS highway will be filtered by using the forest of all possible minimum spanning trees. The traffic burden will be represented by the number of cars passing through the corresponding till plaza. The filtered network can be explained briefly by using the centrality measures. The centrality measures used are degree centrality, betweenness centrality, closeness centrality and eigenvector centrality. If these four measurements have the same role, an overall centrality will be proposed. Some suggestions and recommendations will be delivered to PLUS highway in order to improve their management, facilities, services and safety based on the results.