

Expert System for Priority Treatment of Public Transport at Signalised Intersections

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ABSTRACT

This paper explains the expert system used to help professionals in the Public Transport and Traffic Engineering fields to implement priority treatment for public transport at signalised intersections.

Most of the techniques available to give priority treatment for public transport have the minimisation of travel time as its main purpose.

Besides those common techniques which treat road infrastructure, there are a number of others which are used at signalised intersections. Those techniques are: cycle time or phase changes (for fixed cycle time), public transport priority by selective detection (for non-fixed cycle time), and exemption for public transport from bans on turning. However, criteria for decision making to choose the best technique is not very well treated.

Those three techniques have some different details. For example, the use of extension, recall, hurry-call or combinations for those possibilities are also incorporated.

The expert system helps professionals to choose the best treatment for each different intersection in order to achieve two possible purposes: public transport passenger delay minimisation, or public transport passenger delay minimisation without increasing of delay for private transport users.

Those techniques could be useful whether developed or developing countries due to congestion problems and, for developing countries due to increasing demand for public transport.