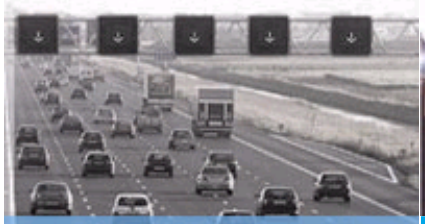

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AVL based Bus Priority at Traffic Signals: A Review and Case Study of Architectures

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Full text pdf

Abstract

Recent developments in technologies such as Automatic Vehicle Location (AVL) and advanced control systems have stimulated new interest in bus priority facilities using traffic signals. The use of AVL systems has generated opportunities for implementing flexible bus-specific priority strategies according to performance. The extent of the opportunities available depends very much on the architecture of a bus priority system, including the location(s) of intelligence determining the priority level and its implementation, and the method of priority request to the traffic signal. These aspects are important from the point of view of bus priority performance, communication requirements and the cost of the system.

This paper draws together and compares the various architectures currently being used for AVL-based bus priority, providing an overall review to supplement other papers which are usually concerned with individual systems. The paper reviews current bus priority systems used across Europe under five different architecture categories. The present bus priority architecture in London is then analysed in more detail as a case study. The paper concludes with a discussion of issues for this application, given the continuing advances in locations and communication technologies, and issues for the future.

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