ABSTRACT

Intelligent Transportation Systems (ITS) applications in public transportation have allowed for automated data collection, which is particularly useful for planning and operations. While technological advancement of ITS has so far been extensive, their usage for developing relevant planning and operational tools is rather limited. Research on planning and operations of public transportation systems has not widely investigated the potential of combining optimization models with data originating from ITS. Such applications, which could benefit from such an approach include route planning, scheduling and resource allocation in real time. In this context, this paper investigates and critically discusses potential models and methodologies in public transport planning and operations, which can benefit from ITS data, highlights their potential and identifies possible research paths on that area. The overview of literature collectively points to a series of common challenges faced by transportation professionals and underlines the need for better decision support tools for ITS data.

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