Transit network timetabling and vehicle assignment for regulating authorities

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Résumé en anglais	In the literature on transit planning, network timetabling and vehicle scheduling are usually treated as separate problems. In this paper, we focus on combining important features of these two steps and propose a simultaneous solution approach to redefine timetables with the objective of bringing improvements to both quality of service and vehicle costs incurred. This includes the objectives of quantity and quality of the transfers proposed, evenness of the line headways, fleet size and length of the deadheads. The model proposed for this simultaneous approach is adapted to the problem faced by regulating authorities, encouraging intermodality and taking into account a variety of practical features. We introduce an optimization procedure based on Iterated Local Search and present computational experiments carried out on data from a large existing transit network, showing substantial improvements in both quality of service and level of resources compared to the current practice.
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Liens

[1] http://okina.univ-angers.fr/publications?f[author]=7507
[2] http://okina.univ-angers.fr/jinkao.hao/publications

[3] http://okina.univ-angers.fr/publications?f[keyword]=8745
[4] http://okina.univ-angers.fr/publications?f[keyword]=8746
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