Automatic Calculation Method for Rolling Stock Assignment Considering Splitting and Combining of Train

Satoshi KATO

Railway operating companies are required to prepare rolling stock assignment for each timetable revision. In some railway lines, splitting and combining of trains are often used to adjust transportation capacity flexibly. However, these operations are labor-intensive and time-consuming, reduction in the number of splitting and combining is desirable. In this paper, we propose a method for automatically creating rolling stock assignment which reduces the number of splitting and combining of trains using a mathematical optimization technology. Computational experimental results targeting real instances of several railway lines show that the proposed method is effective in terms of evaluation criteria.