An Algorithm for the Train Stop Planning Problem

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When an accident happens in a railway line, each train running in the line should be stopped at an appropriate location. It is a difficult task for a staff to determine the locations of train stop in a moment because there are a lot of such constrains that a local train should not block the following express train. We call this problem a train stop planning problem. In this paper, we introduce an algorithm with a Petri net model to locate stopping trains appropriately. Several numerical experiments with actual data have shown that the algorithm can work effectively to find a practical solution to the problem.