Optimal Time Slot Assignment Problem for

an SS/TDMA system

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Abstract

This paper considers a Time Slot Assignment Problem (TSAP) for SS/TDMA

systems. The problem is expressed as an integer programming problem. A

solution algorithm based on the branch-and-price method is exploited. However,

the problem is found as an NP-Complete problem though. In the algorithm, a

column generation procedure is incorporated. The column generation procedure is

developed by use of the min-cost flow network theory. Computational results

show that the algorithm works well for medium size problem instances in

reasonable time.