# Minizing talent cost and operating cost in film prodction

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Abstrak

Budgeting is one of the most critical issues in film production. This study addresses a cost minimization issue in scene arrangement and talent scheduling, where are latter refers to the determination of a shooting sequence so as to minimize the total holding cost of all actors and actresses. This paper generalized the talent scheduling model by incorporating the constraints of daily operating capacity, which confines the total duration of scenes arranged within each single shooting day. The operating cost of shooting days is also introduced. The cost structure of the studied problem comprises the total retention cost of the actors and actresses, and the total operating cost of the active work days. In this paper, we use the next fit (NF) algorithm and the first fit decreasing (FFD) algorithm to allocate scenes to work days so as to provide initial solution for further improvements. Dynamic programming, interated local search, and tabu search are adopted to constitute the second-phase improvement procedures. We conduct a series of computational experiments to examine the performance of the proposed solution approaches.