Using FlexSim to Construct the Simulation Model for Paper Bag Making Machine

Chia-Lin Lu  
Graduate student, Graduate Institute of Industrial Management  
Southern Taiwan University  

Jen-Shiang Chen  
Professor, Department of Business Administration  
Far East University  

Yu-Shuang Yang  
Research Assistant, Department of Business Administration  
Far East University  

Wei-Yu Hu  
Project Manager, Quanta Storage Information Club  
Research Assistant, Department of Business Administration  
Far East University  

Bo-Ying Lai  
Graduate student, Department of Innovation and Entrepreneurship Management  
Far East University  

Abstract  
This article discusses the order scheduling in paper bag making machine. The paper bag making machine is a bottleneck of the paper bag making process. Long setup times and many setup operations are needed for the paper bag making machine. These setup operations include: (1) change the ink, (2) change the layout of printed page, (3) change the number of paper-rolls, (4) anti-slip setting, (5) glue setting, (6) punching setting, (7) adjust the width, (8) adjust the thickness, (9) pocket type setting, and (10) pilot run. This study employs the simulation software FlexSim to simulate the production of the paper bag making machine. Two dispatching rules, including least bags first and earliest due date, are used to assign the order to the paper bag making machine. The performance measure is mean tardiness of all orders. Simulation results reveal that the earliest due date is better than least bags first.

Keywords: simulation, scheduling, paper bag making machine