Simulation of High-Mix Low-Volume Circuit Card Assembly Process

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Abstract: The Printed Circuit Assembly (PCA) area at BAE Systems is defined as a high-mix low-volume shop and is experiencing an increase in volume of new products, staffing reductions, and inefficient product flows. To reduce the risk of late deliveries, our team was tasked with creating a simulation using Process Simulator, by ProModel, software to develop a thorough understanding of the process in order to locate bottlenecks, create recommendations to remove them, and develop a strategy for increasing efficiency in the product flow. At the moment we have defined the system and created a process flow map. We are now conducting an analysis of Work In Process (WIP) data and developing the current state simulation. The WIP data analysis and simulation outputs will be compared to determine locations of bottlenecks to target for process improvement.

Keywords: Printed Circuit Assembly, Work In Process, Simulation