THE APPLICATION OF SIMIO SIMULATION AND SCHEDULING IN INDUSTRY 4.0

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ABSTRACT

Simulation has traditionally been applied in system design projects where the basic objective is to evaluate alternatives and predict and improve the long-term system performance. In this role, simulation has become a standard business tool with many documented success stories. Beyond these traditional system design applications, simulation can also play a powerful role in scheduling by predicting and improving the short-term performance of a system. In the manufacturing context, the major new trend is towards digitally connected factories that introduce a number of unique requirements which traditional simulation tools do not address. Simio has been designed from the ground up with a focus on both traditional applications as well as advanced scheduling, with the basic idea that a single Simio model can serve both purposes. In this paper we will focus on the application of Simio simulation and scheduling in the Industry 4.0 environment.