

THE APPLICATION OF SIMIO SIMULATION AND SCHEDULING IN INDUSTRY 4.0

Renee Thiesing

Simio LLC
504 Beaver St.
Sewickley, PA 15143, USA

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.