

# Quantitative Measure for Discrete Event Supervisory Control 2008 9780387239033 Springer Science & Business Media, 2008 Asok Ray, Vir V. Phoha, Shashi Phoha 264 pages

Abstract Supervisory control of discrete-event systems with a global safety specification and with only local supervisors is a difficult problem. For global specifications the equivalent conditions for local control synthesis to equal global control synthesis may not be met. This paper formulates and solves a control synthesis problem for a generator with a global specification and with a combination of a coordinator and local controllers. Conditional controllability is proven to be an equivalent condition for the existence of such a coordinated controller. A procedure to compute the least restrictive Supervisory Control Theory (SCT) provides a tool to model and control human-engineered complex systems, such as computer networks, World Wide Web, identification and spread of malicious executables, and command, control, communication, and information systems. Although there are some excellent. Never before has there been a quantitative approach designed to optimize supervisory decision and control for discrete event systems. The text pioneers a formal system for supervision of human-engineered complex systems, to compare different supervisory models, thereby maximizing potential for achieving high performance. It offers exciting implications for both military and commercial engineering systems. Start by marking "Quantitative Measure for Discrete Event Supervisory Control" as Want to Read: Want to Read saving; Want to Read. Although there are some excellent monographs and books on SCT to control and diagnose discrete-event systems, the Supervisory Control Theory (SCT) provides a tool to model and control human-engineered complex systems, such as computer networks, World Wide Web, identification and spread of malicious executables, and command, control, communication, and information systems.