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The Analysis of Simulation Experiments

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Abstract

Simulation experiments are experiments performed with a mathematical model over time. The steps to be followed in a simulation study include problem formulation, setting objectives, model building, data collection, coding, verification, validation, experimental design, production runs and analysis, and simulation report. Simulation experiments permit: (a) evaluation of estimates of one or more of the performance measures of the system under study, (b) evaluation of operating performance of a system prior to its implementation, (c) comparison of various operational alternatives of a real system without perturbing the system, (d) comparison of alterative system designs on the basis of some performance measures, and (e) time compression or expansion so thst timely policy decisions and/or detailed system evolution can be made without ambiguity. This paper focuses on various aspects that improve the analysis of simulation experiments.

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