

MODEL VALIDATION: WITH RESPECT TO THE USER

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PANEL OBJECTIVE

The objective of this panel is to discuss model validation with respect to the user. Each of the panelists will make a presentation to be followed with a discussion which includes the audience.

ABSTRACTS OF PANELISTS

Saul I. Gass:

The utility of a simulation model to a specific user depends on the user's ability to interpret available model documentation into a "measure" of model confidence. We shall review an approach to the obtaining of such a measure and the distinct, but interrelated roles of the user and analyst.

Robert G. Sargent:

A summary of the use of hypothesis testing and confidence intervals for validating models of observable systems will be presented. The presentation will include topics such as model accuracies, cost of data collection, model user's risk, model builder's risk, and acceptable validity range.

J. William Schmidt:

In my view validation is the process of determining whether or not the system model describes the behavior of the system modeled with fidelity adequate for effective use of the model for its intended purpose(s). At best, a model is only an approximate representation of the reality described

by the model. Hence an attempt to describe system behavior through a model carries with it the implicit assumption that at least minimal discrepancy between model and system behavior is tolerable with respect to the intended purpose of the model. The discrepancy between model and system behavior is usually referred to as model error (a more descriptive reference would be model errors since errors may exist in many dimensions). The process of validation may then be viewed as the attempt to determine the magnitude of model error and whether or not the error exhibited by the model falls within limits which will permit effective use of the model.