



System Simulation by Recursive Feedback: Coupling a Set of Stand-Alone Subsystem Simulations

By D. D. Nixon

BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 202 pages. Dimensions: 9.7in. x 7.4in. x 0.4in. Conventional construction of digital dynamic system simulations often involves collecting differential equations that model each subsystem, arranging them to a standard form, and obtaining their numerical solution as a single coupled, total-system simultaneous set. Simulation by numerical coupling of independent stand-alone subsimulations is a fundamentally different approach that is attractive because, among other things, the architecture naturally facilitates high fidelity, broad scope, and discipline independence. Recursive feedback is defined and discussed as a candidate approach to multidiscipline dynamic system simulation by numerical coupling of self-contained, single-discipline subsystem simulations. A satellite motion example containing three subsystems (orbit dynamics, attitude dynamics, and aerodynamics) has been defined and constructed using this approach. Conventional solution methods are used in the subsystem simulations. Distributed and centralized implementations of coupling have been considered. Numerical results are evaluated by direct comparison with a standard total-system, simultaneous-solution approach. This item ships from La Vergne, TN. Paperback.



[READ ONLINE](#)
[5.76 MB]

Reviews

This composed publication is fantastic. This is certainly for all those who state that there was not a well worth reading through. You will not truly feel monotony at whenever you want of your respective time (that's what catalogs are for regarding when you ask me).

-- Prof. Mark Ratke Jr.

This ebook can be worth a read, and superior to other. Yes, it is actually perform, nonetheless an amazing and interesting literature. Your daily life period will probably be convert as soon as you comprehensive reading this article ebook.

-- Elisha O'Conner II