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## Systems Modeling & Req. Spec.

"Using ECSAM, an embedded computer systems analysis and modeling method, systems are described by two complementary models: a conceptual model and a design model. The conceptual model helps in the comprehension of the physical phenomena on which the system is based. Its main purpose is to support the conceptual, behavioral, and performance analyses of the system. The design model represents the actual structure and behavior of the system and supports the design process.

"ECSAM has been developed incrementally since 1980 by coauthor Jonah Z. Lavi and his team at Israel Aircraft Industries. In 1983, the development of the ECSAM generic model of computer-based systems led to a stimulating cooperation with Prof. David Harel of the Weizmann Institute of Science, resulting in the development of the Statecharts formalism and the subsequent development of Statemate (a computer-aided systems and software engineering tool) by I-Logix.

"ECSAM supports the needs of system acquirers and users, as well as those of system developers, in the systematic codevelopment of operational systems requirements. The validity, usability, and effectiveness of the method have been proven in the analysis and specification of numerous large, complex aerospace systems. During recent years, the method was extended considerably by the authors to support the analysis of behavioral black-box models of systems and to allow systematic derivation of operational scenarios and associated system requirements."

—from the preface

### About the Authors



Jonah Z. Lavi, the lead developer of ECSAM, consults and teaches industrial and university courses in the modeling and requirements specification of computer-based systems. Currently, he chairs the Working Group on Education and Training of the IEEE Computer Society ECBS Technical Committee.

Joseph Kudish is an independent consultant specializing in systems and software engineering and in the appraisal and improvement of technical and management processes. Mr. Kudish has researched, developed, taught, and implemented ECSAM in industrial projects since 1989.



FORTHCOMING

# Systems Modeling & Requirements Specification

The ECSAM Method for  
Computer-Based Systems Analysis and Modeling

by Jonah Z. Lavi and Joseph Kudish

ISBN: 0-932633-45-5 ©2003 est. 368 pages softcover  
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