

Effective Risk Management: Some Keys to Success, Second Edition

by **Edmund H. Conrow**, America Institute of Aeronautics and Astronautics, 2003, ISBN: 1-56347-581-2

Reviewed by Dr. Lawrence D. Pohlmann, Strategics Consulting, pohlmann@incose.org

"It is incumbent on the seller to understand the buyer's need for risk management . . . and to accurately and carefully communicate this information to the buyer."

The Second Edition. In my review of the first edition (INCOSE *INSIGHT*, Volume 4 Issue 3, pp. 49-50), I recommended that a quickly released second edition was needed to make the book a more user-friendly resource. I am pleased to report that this has been done. Key features of the second edition include:

- A greatly expanded table of contents that facilitates finding and re-finding specific guidance
- An expanded index
- A new "implementation guidelines" section in chapter 2 that provides guidance on using the book more effectively
- More than 450 new risk management (RM) "tips" or lessons learned; totaling over 700, including the 250 from the first edition, in a wide range of categories. (The book now stands at 554 pages, versus the 338 in the first edition.)
- A new appendix that addresses issues on the definition of risk management.

The Author. Dr. Edmund H. Conrow is an independent management and technical consultant located in California. His practice is focused on RM, management strategy, cost as independent variable, engineering design analysis, and technology assessment. He is an Associate Fellow of AIAA.

RM Tips. The book provides more than 700 lessons learned and clearly stated "tips and traps" that can help practitioners successfully implement an appropriate RM process. These tips are based on Conrow's extensive experience working on a wide vari-

ety of projects. Numerous examples are provided to help the reader evaluate the "health" of an existing risk management process and develop and implement improvements as warranted. The book deals extensively with:

- RM process sophistication and disciplined implementation
- Both qualitative and quantitative methods and issues
- A large variety of risk analysis techniques
- Technical and organizational issues
- Integration of RM into larger SE and program management processes.

Each tip is presented in boldface after a brief explanation and rationale. Many tip sections include discussion of examples. I would encourage users of the book to read each bold-face tip—or conclusion—first, and then go back and read and reread the supporting material.

Should You Buy It? This book is an advanced, journeyman's reference

Understanding Complexity: Thought and Behavior

by **John N. Warfield**

AJAR Publishing Company, 2002
ISBN 9716962-0-9-6, US\$39.00

Reviewed by Jack Ring, jack@jackring.com

In the practice of systems engineering complexity is like the weather. Everyone talks about it but no one does much about it. John Warfield has. In "Understanding Complexity: Thought and Behavior" he describes a field tested system (more than a method) for identifying the essential characteristics that a problem suppression system must exhibit, thus the essential characteristics of a project system capable of initializing the problem suppression system. He calls this system the Work Program of Complexity (WPOC).

on RM, and will be useful to anyone with major RM responsibilities. If you extensively involved with RM, or if you aspire to become the program or company expert on RM, get this book.

Availability. This 554-page book lists for \$79.95 at AIAA (\$59.95 for AIAA members). Amazon has the same price. Quantity discounts are available from the publisher (see the Conrow web site).

Additional Information. Conrow discusses his book further in an e-interview that is available at www.incose.org/se-int. Conrow's web site is at www.risk-services.com.

In Closing. The greatly expanded content and added usability features have effectively transformed the second edition into an advanced risk management handbook – a handbook that will be a repeatedly useful resource for any large, complex program.

"The best time to enhance the risk management process is at the beginning of a program phase, not later in the phase when unanticipated problems may appear . . ."

The WPOC is a multi-step process that (a) clarifies the variety and complexity extant in the problem situation (including the inevitable conflicts in stakeholder view and goals) and (b) generates and filters out potential solution options. Part of the WPOC is the Interpretive Structural Modeling (ISM) method documented in 1994 with Roxana Cardenas in the "Handbook of Interactive Management" (Iowa State University Press).

The WPOC is not a prescription for how to do systems engineering. It is a description of how to turn complicated situations into complex ones then navigate the complexity so that the rest of systems engineering can be done. It applies not only at the