

Book Review

Young, Ralph R. (2001). *Effective Requirements Practices*. Addison-Wesley.

“The requirements provide the basis for all of the follow-on development work....
Determine the real requirements.”

Young’s book is a potentially useful resource and reference for engineers and managers involved with the many aspects of the requirements process over the entire life cycle of a project. Young presumes to focus on ten *Effective Requirements Practices*. However, most of his thinking and discussions are equally applicable to the larger issues of systems engineering and program management.

An unstated premise of the book is that program management, systems engineering, and “requirements engineering”, to use Young’s term are inextricably interrelated. He is in effect saying that all three of these must be done sufficiently well for a project to be successful.

The Author. *Ralph R. Young* is the Director of Software Engineering, Systems and Process Engineering, at Litton PRC, Inc., a provider of information technology and systems-based solutions. He leads PRC’s Requirements Working Group, teaches courses on requirements processes, and consults on requirements engineering and process improvement. He is a member of the INCOSE Washington Metropolitan Area chapter.

A Systems and Software Perspective. Young’s book is targeted primarily, but not exclusively, to the systems and software engineering community. He uses the phrase “systems and software” quite frequently. Many of his citations are from the software engineering literature.

His discussions can easily be viewed as more broadly applicable. The book is a useful resource for a wider range of contexts — and experience levels. The guidance and recommendations can be useful to early practitioners through senior managers, and they are readily applicable in project contexts that are not software centric or intensive. (I assume that there still are some of these types of projects.)

The Structure. The book focuses on ten “Effective Requirements Practices”, devoting a chapter to each. These are wrapped with an introductory chapter and a closing chapter. The later “provides suggestions concerning how to proceed”, including several checklists to help users identify issues, activities, and priorities.

Supporting elements include frequent footnotes, many url citations, a glossary, an extensive bibliography, and author and subject indexes. Additional details on content are available at amazon.com.

Ten Effective Requirements Practices. Young’s recommended practices include:

1. Commit to the approach.
2. Establish and utilize a joint team to be responsible for the requirements
3. Define the *real* customer needs
4. Use a requirements process and continually improve it.
5. Iterate the system requirements and the system architecture repeatedly
6. Use a mechanism to maintain project communication
7. Select familiar methods and maintain a set of work products
8. Perform requirements verification and validation.
9. Provide an effective mechanism to accommodate changes
10. Perform the development effort using known familiar proven industry, organizational, and project best practices.

The “Define the *real* customer needs” chapter is downloadable in pdf format from the publisher (start at www.awl.com/cseng/).

Requirements “Engineering”. An important theme of the book is that requirements themselves must be “engineered”. They don’t just happen. Assembling them is not easy. Getting them right is even harder. But when they are right systems development is easier — and more likely to succeed.

Content and Style. The organization and layout of the book are reader friendly. Young’s discussions are readable and action oriented. The general tone is that of a competent and friendly mentor. Jargon is avoided. He strives to provide guidance that is well-founded, understandable, and practical.

His guidance is also extensive. In light of the number and variety of suggestions, I would be very hesitant to attempt to use all of his suggestions. It would be overwhelming, inappropriate, and very likely impossible in most organizational contexts. The best use of his guidance, as I presume he intended, is to help us think.

Pitfalls. Several chapters contain a section on practice specific pitfalls — and some suggested ways to deal with these “stumbling blocks”. These are useful.

Key References and Suggested Readings. Young is obviously an avid reader. He includes with each chapter a well chosen and annotated set of key references and suggested readings. Academicians and aficionados — and anyone else who wants to dig deeper — will love it.

Paper + Bits = Great! An accompanying CD-ROM includes many of the checklists and templates, the elements which Young considers to be a “set of reusable assets and artifacts for implementing...” his recommended practices. I agree!

This CD-included approach is especially appropriate for our information age. I would like to see more authors and publishers use this approach.

Availability. This 400 page paper back book, including the CD, lists for \$39.95 at Amazon and other sources. Quantity discounts are available from the publisher.

In Conclusion. Young has done an admirable job of finding, citing, summarizing, integrating, distilling, and interpreting a large body of relevant requirements process related literature. His treatments of issues have both diversity and depth — a characteristic that is both a weakness and a great strength of the book.

This book is not a concise recipe. Rather it is a rich and thought provoking compendium of information, guidance, and best practices on requirements related processes.

“The requirements process is a full life cycle systems engineering process. It requires special effort and practices....”

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