"**Faster Construction Projects with CPM Scheduling**"
by Murray B. Woolf, PMP , McGraw-Hill publisher 2007.

A Book Review by Ron Winter, PSP
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Mr. Woolf's fist book has drawn a lot of interest (now in its second year in print.) ENR Magazine published a glowing review of the book. Quite a few suggested reading lists cite this book, including the PSP Certification review list. I wondered why I had not seen a review of this work by a scheduling peer. I know Murray and have attended a presentation of this book at an earlier AACEi annual meeting. Having spent an entire year reading this book, I felt that if I didn't review it then perhaps no one was going to do so.

To be honest, I do not know what Murray Woolf's book is really about. My problem stems from the most notable aspect of this book; exceptionally bad editing. This sole fact is the reason that it took me a year to read this book. I had to keep putting the book down after a few minutes because my head hurt from the effort of making sense of the contents. Later I would pick-up where I stopped, only to discover even more twists and confusion. To confirm my impression, I recently asked a collogue of mine what he though of this book. Without any prompting on my part, this fellow Scheduler said, "Reading the book made me dizzy and I had to keep putting it down."

As an example of this lack of linear though, the book often digresses in mid-thought, interrupting itself. One such passage occurs on page 309 where the author states, "*There is, then, the Unknown-unknown condition, which must always be expressed in the singular for if we can distinguish more than one then each would be a known-unknown.*"

Murray Woolf is a very intelligent person and he has a lot of new concepts and information to present. In fact, he has so much information to reveal that every time he gets past introducing the new concepts and terminology, he promises to explain everything in another, yet unpublished book. Time and time again, we traveled down yet another 'rabbit hole' only to find a dead-end and a personal invite to visit again, soon.

The quality of the editing in this book is even more puzzling when one considers the amount of effort that went into it. There was a Sponsoring Editor, an Editorial Editor, a Project Manager, an Acquisitions Coordinator, a Copy Editor, a Proofreader, an Indexer, plus 13 others who are acknowledged in the book as contributors. Didn't even one of them ever ask, "What is this book about?"

The book is not about 'Faster Construction Projects.' We don't even understand the reason for the title until we reach page 363 in the Epilogue. There we read, "*Admittedly, Part 2 takes a detour from the main purpose of this book, that being to explore ways of creating better Project Schedules that in turn will lead to faster flowing projects.*" (The Part 2 "detour" is 90 pages long.) Unfortunately, this is not what the book is about because the book does not actually tell us how to create better schedules. Instead we get dozens of new theories and literally hundreds of new terms and a promise that the next couple of books will explain how everything fits together.

I thought that perhaps a better understanding of the book would come by focusing on the intended reader. On page 259, Murray Woolf says, "*Finally a word to my respected colleagues: please keep in mind the intended readership for this book. It is not being written for the 20-year veteran Practitioner but is instead aimed at those tasked with creating a Project Schedule who have not had years of experience or training.*" If this were true, then why spend 7 pages discussing the merits of ADM over PDM? Why the 11-page Forward by Jim O'Brien explaining his insights to the history of Scheduling and how he never said that we should go back to ADM? Why the creation (or new definitions) of over 200 new terms because the old ones "have more than one meaning?"

The Epilogue gives us another glimpse into the answer to the question. On page 355, Murray Woolf states, "*Early on in the development of this book, I made a bold decision: to use this book as the platform for a verbal campaign intended to stimulate debate, provoke thought, and encourage action, to be a catalyst for the types of radical changes that our Practice urgently demands, if we are to survive at all.*" With the demand for construction Schedulers at a frenzied, all-time high, I don't think we face "extinction." The rest of that quote serves to reasonably describe the author's intent for publishing this book.

After explaining how the scheduling profession is at the brink of catastrophe and extinction, this book introduces three new branches of CPM theory, "The New Scheduling Practice Paradigm," "Dilemma Control," and "Momentology." The New Scheduling Practice Paradigm includes new scheduling specializations, positions, deliverables, and roles. Momentology is separate from Momentum Theory, which is separate from Momentum Science, which leads us to Applied Momentum. This in, turn introduces three major innovations, Discrete Activity Float, Relationship-Duration Definitions, and Additional Measures of Criticality. After hundreds of new terms, proofs without data, analogies, and testimonials we find that we still don't know how to apply any of the above to our scheduling practice. It turns out, all of this will be revealed in Mr. Woolf's next couple of books.

But this overlooks the major feature of this book; atrocious editing. Editing so 'bad to the bone,' that they should use this as a textbook for a college course in editing. Editing so horrid that it makes the reader wonder if some unremembered

accident has left the reader with the ability to understand individual words, just not their meaning when combined into sentences.

On page 308, Murray Woolf quotes himself. The book keeps using obscure and jargon-laden terms that it admits will be defined later, checklists tell us to consider brand-new issues that are not explained in this book (but will be in later books.) Chapters keep referring to information that will be presented in later chapters. In Chapter 11, page 209 we read, "*we learn that activity-tenure surprises might be offset by adding a DCF (Duration Confidence Factor, see Chapter 16) to the Scope-Limited Definition estimate.*"[underlines added] It is almost like the science fiction book, Hyperion where the nemesis moves backward in time as we move forward in time so it knows more in the past that it later does in the future.

The book complains about people misusing common scheduling terms and then admits that the book is doing this same thing as on page 343 where it says, "*The Seven M's of Momentum Management. (Please indulge me as I substitute a few common terms for less used ones, in order to derive the seven M's).*"

Faster Schedules delivers inconsistent advice. First the book advises readers to not cost-load execution schedules. Then on page 346, the book indicates that you should cost load schedules to 'force' the contractor to perform.

There are dozens of cases of unsupported statistics. The entire "Science of Momentology" is based upon an extensive study of a mass of schedules that were unfortunately lost by Mr. Woolf during a move. In Chapter 15, Murray Woolf asserts without proof that, "*80 percent of a project's delays occur during the first 20 percent of the project life cycle.*" Since a large number of projects don't even get an approved Baseline Schedule until 20% of the project is complete, this would imply that we really shouldn't even bother to schedule at all.

Although this book took years to write, certain sections have an unfinished feel to them. For instance in the Glossary, 227 definitions are presented (most of them newly coined by the author) and every one of them is proceeded with the word, "**Clarification**" in bold print; all 227 times. The reason for this odd addition is made clear in the introduction to the Glossary where the author states, "*Please note that Meaning Clarifications are not the same as definitions, per se, as I have not taken the time to wordsmith each Clarification with focused attention on the many possible nuances of meaning in each combination or choice of words.* I just do not understand how much 'wordsmithing' one must do to define the word, "P3" for instance.

Mr. Woolf has a different attitude toward construction scheduling than I have. I disagree with the statement on page 254, "*Contractors diligently look for opportunities to parlay design deficiencies and owner last-minute wishes onto 'extras'.*" The average contractor is not out to maximize their schedule claim

potential; they like building things - not fighting.   On page 253, the book states, "*Execution Schedulers and Project Managers who are concerned with the legal and contractual implications of Schedule Extraction Reports often (perhaps <u>routinely</u>) find it necessary to alter Project Schedule content (durations, logic, settings, and more) in order to 'protect' their business interests.*" I also feel that most Owners of projects are not trying to take advantage of contractors.

Raw illogic also pops-up now and then. On page 257, Murray Woolf includes this introduction to Chapter 13, Concerning Schedule Development; "*Further in this chapter, under the heading 'Logic Development Session,' I identify a step called "Defining Subnets." It is at that point in my description of a typical logic development session that you would expect to read about Work Breakdown Structure (WBS.) Since it is noticeable by its feeble treatment there, perhaps a few words here are appropriate.*" The book then goes on to talk about the WBS. Like our backward-traveling Hyperion nemesis, we know what failings we will have in the future, so it is left to us to correct that problem now in the present, which is quickly becoming the past.

In the end, this review is not just about editorial blunders. The content <u>does</u> serve its stated purpose of stimulating debate and provoking thought. There is another whole book buried inside this book yearning to be free. I am glad that I read every word in this tortured tome, even if it took me a year to do so.

In summation, there is a lot to like and learn from in **Faster Construction Projects with CPM Scheduling**. There is also a lot to disagree with. There is even more that simply confuses. New practitioners to the scheduling field should be barred from reading this book just as we do not allow minors to drink alcohol. Their experience levels are not rooted firmly enough to resist the destructive effects of this wild ride.