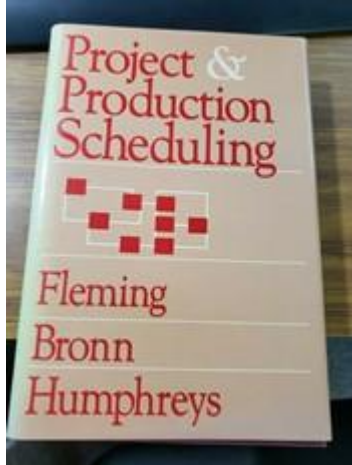


PM WORLD BOOK REVIEW ¹



Book Title: ***Project & Production Scheduling***
Author: **Quentin W. Fleming, John W. Bronn, and Gary C. Humphreys**
Publisher: Probus Publishing Company, Chicago
List Price: \$42.50, out of print, used \$4.00+
Format: Hard Cover, 272 pages
Publication Date: 1987 ISBN: 0-917253-63-9
Reviewer: **John William Jeter**
Review Date: June 2026

Introduction

There are some rare business books that are classics and timeless. My interest in this book was because I have worked in Operations/Manufacturing most of my working life. Production scheduling is a recurring key element of my work environment. In aerospace and defense, we work by contracts. The program management of those contracts fits in very well with the field of project management. This book offered to provide insight on tools that would apply to both areas of scheduling.

The book is not played out like a fictional story like so many modern business books or classics like The Goal. It is structured more like a textbook, but it is written and structured in a way that flows logically and reads in an engaging manner. The authors provide interesting historical context on why the techniques they promote are effective and enduring. Enduring and classic are two words I associate with the book after completing it.

A textbook written in 1987 would seem irrelevant in our fast moving world, but one ends up with the sense that these authors did in fact identify what are essential tools and a very effective method for combining those tools no matter what decade since 1987 for the project or production need. They offer predictions on how personal computers and software will impact scheduling and project management. Those positions are very interesting to read knowing how it really turned out since 1987. I never read or was exposed to a specific text just on scheduling.

¹ How to cite this work: Jeter, J.W. (2025). Project & Production Scheduling, book review, *PM World Journal*, Vol. XV, Issue VIII, August.

This book was a great choice, a classic in my view, and one of the most practical texts I have come across that augments the very tools I use at work and the guidance on scheduling techniques covered in the PMBOK guide.

Overview of Book's Structure

The book structure supports the emphasis on the use of effective, enduring techniques in an approach to scheduling projects that the authors call the alternative scheduling method. Those key elements are Work Breakdown Structures, Network Diagramming, Resource Analysis & Leveling, Gantt charts, and Milestone charts. In the 254 pages and thirteen chapters of the book, there is an entire chapter dedicated to the Gantt and Milestone charts. Network diagramming receives the most attention in the book with five chapters. Each network chapter builds upon the other. Among these chapters you can see how the overall techniques of logic diagramming following a precedence diagram format for planning, scheduling, and managing the critical path have evolved and endured.

There are seventy one figures (charts) in the first eleven chapters that are well placed to support the topic being discussed. Very few of the figures look like the formatting one would see in scheduling textbooks, training materials, or software programs today except for the Gantt chart, mapping the critical path, and the network diagramming chapter on developing schedules with figures showing Precedence Diagramming.

Throughout the book the author's provide a history of significant scheduling techniques. In addition to providing a history and an explanation of why some techniques endure, the authors explain the corresponding increasing and changing use of computers in project management and scheduling.

In the final chapters, the authors show the benefits of scheduling that accounts for resource analysis and leveling in an environment of recurring high volume and complex production environment such as aerospace. They offer predictions on how the evolution of computer software can automate recurring scheduling and provide management with the essential bottom line communication and reporting so that requirements can be met.

Highlights

From the beginning of the book, the authors break down that scheduling is part of a plan, the scheduling tools become effective communication tools, and the scheduling tools they cover are essential to management meeting requirements. Scheduling as a way to manage time is a part of the Triple Constraint of Technical Requirements (Quality), Cost (Resources), and Time. This is useful in understanding why there are needs for scheduling.

One of the most interesting figures occurs in the third chapter about the Relationship of Schedule Evolution and Computer Development. In this chart one sees just how enduring are the key scheduling techniques the authors emphasize. Gantt chart since 1917, Milestone charts since the 1920s, Critical Path and Precedence charts since 1957-62, and Work Breakdown Structures since 1965. One can imagine how tedious it was to update these scheduling methods manually without the advent of computer software which began broadly with scheduling with the advent of the personal computer in the 1980s.

The authors make it clear that to them the scheduling technique with the greatest potential in combination with computer software is network scheduling. With relative ease and accuracy, a schedule baseline can be established to manage the critical path. Resources can be analyzed and level loaded to optimize the critical path. Changes in any of the inputs can be made with the aid of computer software quickly and throughout the entire plan. What-if scenarios can be played out. Standardized reporting can be produced for project managers, stakeholders, and the customer to help monitor schedule. Scheduling tools such as Microsoft Project, JIRA, and Project Manager in use today by project manager professionals is evidence of the realization of many of their 1987 predictions. Other interconnected computer software systems, especially recurring scheduling, are Enterprise Resource Planning packages such as SAP that provide that resource analysis and leveling that the authors promote in their alternative scheduling method.

There is one paragraph in the twelfth chapter on Automated Scheduling devoted to the prediction of how Artificial Intelligence will impact scheduling. The aspects the authors predict AI will address are access to the experiences of a company being incorporated into schedules, complex error checking, and the extrapolation of current performance into future predictions. The timing though of when the authors predicted that AI impact is off by decades. They expected to see AI available as a management tool by the mid-1990s.

In my work in a large aerospace and defense business, we just received access to CoPilot with the expectation that it can save time or automate some of the routine, mundane functions like personal calendar scheduling or summarizing meeting notes and emails. There is tremendous talk among subject matter experts in many fields of how AI usage is growing rapidly and will permanently change the work environment even in project management. This is why the focus in this book on proven, enduring techniques would seem to work well with AI in a balanced harmony.

Within the chapter on automated scheduling, the authors provide tips on evaluating and selecting software systems for scheduling. There is a paragraph citing the benefits in this assessment offered by the Project Management Institute. The authors cite the surveys and journals of the 5000 member worldwide professional association in 1987. PMI today is over 800,000 members in 200+ countries serving 5 million professionals with 300 chapters! It seems fair to say that PMI has grown much larger

and quicker than the number of available scheduling software programs over the same time period.

Highlights: What I liked!

Prior to reading this book, I had some knowledge of the history of the Gantt chart, but not the history of the other techniques covered that have endured for so long. I appreciated learning of the history of each technique along with reasons for why the methods are so effective and long-lasting. In my own work, I know that the baseline plan is broken down by Work Breakdown Structure as the lowest working level, that the critical path is determined and monitored, and that the overall production contract is governed by milestones. Like many people, I like to know the history and why when using methods or what drives our policies. In all my work training, PMP preparation, and MBA courses, I have not learned the history of these techniques until reading this book.

One might disregard a book written in 1987 as irrelevant, but I found all the topics covered further justify the enduring legacy of the highlighted scheduling techniques and provide validation for the alternate scheduling method the authors promote using five of the techniques. This book could be reissued in the current form with just some updates on the figures to match the outputs of current software, the addition of current scheduling software pros and cons, and provide more depth and predictions on the impact of AI. It would then still be a very useful scheduling textbook while being more relevant.

As I read this, I kept assessing how I use scheduling and computers in my current work in aerospace and defense manufacturing. There is, as the authors seem to hope for, still those who are essential in providing the “art,” of scheduling that no PC software or AI can replicate. However, I do see an over reliance on experience at work and a shying away from the work needed in detailed planning and scheduling. The authors make good arguments about the historical importance and effectiveness of the techniques they promote in conjunction with realistic examples of projects that demonstrate the need for rigorous scheduling to handle the complexities and variables of the effort. The final chapter about Scheduling and the Management Process struck me as using the very same analysis of management about the essential functions of management as I learned in my MBA coursework. Planning is the one function cited across the theorists. Scheduling directly supports planning. The authors make the case that experienced schedulers using network diagramming will identify the critical path that will let management monitor and complete the task.

In my career in Operations/Manufacturing with national businesses and conglomerates, I have seen multiple mergers and acquisitions. Business M&A's drive a necessity to reduce and consolidate the many softwares to fewer platforms that can be supported. So home grown programs have to be eliminated. In this sense then I do not think the variety and usage of PC software packages developed as much as the authors predicted. The evolution has gone more to cloud based and fewer, but

larger supported systems like MS Project. IT departments have limited resources and so the number of available software has to be limited and must be able to be supported. This can leave rigid systems like SAP in place that has limits on how businesses operations actually flow. I have and remain a participant in recurring meetings with stakeholders where we use MS Excel to create production schedules for the actual daily and weekly execution rather than using scheduling software. Nowhere in this text are the guiding principles and techniques of Lean Manufacturing or management methods like Earned Value Management discussed. These areas do affect me and impact how I approach scheduling.

Who might benefit from the Book

There is an appreciation of the need not just for scheduling outlined by the authors, but more specifically for the best scheduling tools that have enduring and beneficial outcomes. These techniques the authors promote are all in use and relevant today. The power of this book is getting a historical perspective on why these techniques are so essential and enduring. You get practical examples of how the tools are used.

There is a soundness to the authors' predictions of how computers will impact scheduling that has come true as well as the essential benefits of AI in scheduling that they foresee. Any Project Manager would gain useful knowledge from this book especially about the benefits of the precedence network diagramming technique. Those in production with recurring manufacturing will benefit from the discussion on first articles, master schedules, the important of the line of balance tool, resource leveling, and automated scheduling. Both project and production schedulers will appreciate the history of each technique and appreciate the power of these techniques simply from the decades of enduring usage.

Conclusion

The title of this book is direct, non-flashy, and not catchy. It does read though as a classic textbook offering a combination of scheduling tools in use over decades that you recognize as still in use and equally effective today in both environments; project and production scheduling. Computers have enhanced scheduling and will continue to do so as we move inevitably forward into the AI era. The ability to change inputs that cascades throughout a schedule is an awesome capability that gives schedulers and project managers back countless hours that can be used more effectively on other management tasks. Checking for errors is another essential feature of computer scheduling software.

There are still no better visual forms of communication of a schedule that lets multiple users see how the plan will be executed than Gantt charts, milestone charts, LOBs, and network diagrams. The critical path becomes evident and management can efficiently identify where, when, and by how many decisions need to be made to stay on the critical path. These three authors were each highly regarded and successful professionals in their field for decades. They use that combined experience to present

a clear, compelling text published in 1987 of the how to use the best and most enduring scheduling techniques for effective project and production scheduling that is still very relevant today.

For more about this book, go to: <https://www.allbookstores.com/Project-Production-Scheduling-Quentin-Fleming/9780917253638>

About the Reviewer



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John W. Jeter is a PMI member since 2022, an active member of the PMI Dallas, TX chapter, and a PMP certification holder since 2023. He works for Raytheon Technologies as an Operations Manager in Microelectronics. He earned an MBA from the University of Dallas and undergraduate degrees from Virginia Military Institute. He served in the U.S. Army Infantry as an officer and then has been in manufacturing/operations management ever since in Forest Products and now Aerospace & Defense industries.

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