

# THE ROCKET COMPANY

## by Patrick Stiennon and David Hoerr

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This richly illustrated book is a fictionalized account of the challenges faced by a group of seven investors and their engineering team in developing a low-cost, reusable, Earth-to-orbit launch vehicle. The marketing, regulatory and technical problems are explored, making it an excellent and readable introduction to the technical aspects and challenges facing today's designers, entrepreneurs, regulators, legislators, and investors.

The business model presented includes numerous timely scenarios and ideas:

- Considering a reusable launch vehicle as a product, which has a different market and better cash flow, than the market for launch services
- Using clever engineering to solve the problem of an economical reusable launch vehicle with existing technology
- Greatly increasing the "supply" of launch capacity, with a reusable vehicle that has low marginal costs per flight, is necessary to drive down the cost of launch to low Earth orbit
- Using modifications of the same basic vehicle to gain access to the inner solar system at reasonable cost.

The increased dedication by both private individuals and government institutions to solving the problem of low-cost, reusable launch vehicles makes this book necessary reading for all those involved in developing solutions. The Rocket Company provides a point of departure for building a consensus on how to take the process through to low cost access to orbit – and beyond.

#### **About the Author:**

Patrick J. G. Stiennon is an experienced aerospace engineer and patent attorney at Stiennon & Stiennon, Madison, Wisconsin. He is a Senior Member of AIAA

David M. Hoerr is an aerospace consultant and a lecturer in Engineering Mechanics and Astronautics at the University of Wisconsin - Madison. He is a Senior Member of AIAA.

Doug Birkholz is an award-winning industrial designer and principal at Inspire Design Group LLC, a product design firm based in Middleton, Wisconsin.

#### Here's what the reviewers are saying:

Next to direct participation, there is no better way to understand an industry than to read a book about real business cases; there is no better way to understand the aerospace engineering process than to read a design case study of an aircraft development. Since we don't have any factual case studies of reusable launch vehicle developments to learn from, the next best thing is The Rocket Company. Combining the challenges of financing and regulatory affairs with the details of vehicle engineering and flight test, The Rocket Company will stand us in good stead until the authors can write a similar history of the first real commercial reusable space launch project.--Gary Hudson

Nearly every chapter contains a wealth of information about various aspects of RLV design and development, as well as economic and regulatory concerns. The authors know the material well: both worked on a number of launch vehicle projects for companies as varied as Lockheed and Pacific American Launch Systems. They're not afraid to delve deep into technical details and minutiae to explain why a particular design approach has been chosen.-- Jeff Foust, Editor and publisher of The Space Review.

The Rocket Company is an interesting work. It is sort of fiction, but the veil is thin, with no contrived drama or gratuitous romantic angle plastered on top of it. It is more like a lecture or business plan, but presented in an entertaining way that had me looking forward to each chapter release.

Written by professionals that have been around the block a couple times, there are elements and details present that even well-intentioned writers of hard science fiction would never have captured. I might argue over a couple little specific points, but the work stands up. I sometimes use it as shorthand now -- A boosted SSTO, like in The Rocket Company. --John Carmack

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