JOHN A. HOSCHETTE

THE ENGINEER'S CAREER GUIDE

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PREFACE

The most often asked question from attendees of my career workshops is, "When are you going to write another book and include this new career material?" This feedback has provided the inspiration to write this second book, knowing the material is time tested, it works, and people are using the guidance to accelerate and enhance their careers.

In this book, I have improved and added significantly more career material over my previous book *Career Advancement and Survival for Engineers* published in 1994. The career tips and guidance in this book now span the entire life of an engineer. Helpful career advice is provided for a recently graduated engineer, a mid-life engineer, a senior engineer, and even for those engineers soon retiring.

This book makes an excellent career reference book for engineers to drawupon when they need advice on career planning, encounter career challenges, need to recover from a setback or job loss, want a promotion or raise, or want to know how to deal with difficult work situations, coworkers, and managers.

The book has been divided into 10 separate parts each covering a different aspect of an engineer's career. Part 1 of the book deals with successful career planning. How take control and develop a career plan that leads to success as well as career strategies, making a job change, having a career discussion with your boss or mentors, how to get out of dead-end jobs, careers that have reached a plateau, what new graduates should be doing to successfully transition to industry, and finally, retirement planning.

Part 2 addresses company structures, organizations, and barriers impacting your career. Here I discuss the possible career paths open to engineers when working for small companies or in large corporations and the special challenges engineers face in order to receive a promotion. In Part 3, determining the criteria by which you are measured and what it takes to get better performance ratings is presented.

Part 4 addresses improving your performance on the job and standing out from your peers. Here we explore the engineering process and provide tips for better designs, team skills, generating career advancing ideas, and key aspects for obtaining a raise or promotion. Part 5 addresses dealing with

difficult people at work including your boss. Part 6 presents strategies and tips for finding a new job including resume and cover letter writing as well as interviewing tips.

Part 7 offers tips and guidelines for returning for further education as well as how to keep your skills updated through lifelong learning. Part 8 covers the basics of financial planning for engineers and Part 9 is about fast tracking. Finally, in Part 10, tips and advice are given for those who are considering becoming a consulting engineer.

I have also received very positive feedback on the material in this book from international engineering organizations. The material allows foreign engineers to better understand how engineers in the United States think and how US companies operate.

In addition, the response from the Human Resources departments has been very positive of my material since it helps them understand how engineers are thinking. It provides an excellent book for them to refer to when they need to help or provide career guidance for engineers.

My engineering career has spanned over 35 years working for world class organizations such as Northrop, Honeywell, Loral, Alliant Tech Systems, and Lockheed Martin. I have worked on the East coast, in the Midwest, and on the West coast. My experiences have been similar at all these companies and locations when it comes to career advancement for engineers. The material presented in this book is generic in nature and can be applied at any company or in any region of the United States as well as other professions. I have had a very rewarding and successful career both technically and in my relationships.

On the technical side of my career, my helmet-mounted sight and display designs are flying in our nation's helicopters. They allow our troops to protect this nation and have also been highlighted in Hollywood movies. I have worked on the ring laser gyroscopes and inertial navigators that are guiding the jet aircraft we travel on as well as weapons that protect our nation. I have worked with the nation's most brilliant scientists at MIT, Lincoln Labs, and Stanford, developing and transferring technology to industry. I have held the position of project lead for infrared (heat) camera systems that are currently helping our troops, Homeland Security, policemen, and firemen protect and save lives. I have worked on the THAAD missile system that is the only missile capable of flying both inside and outside the atmosphere. I have been asked to teach and lecture at several prominent universities.

On the people-side, I have been able to help thousands of engineers with their careers. I have given career guidance seminars in nearly every state and at major engineering universities. I have published over 60 papers in trade journals, newspapers, and conference proceedings. I have been a director of engineering with the responsibility of campus recruiting, interviewing and hiring, career development programs for employees, approving raises and promotions, layoffs, and conducting hundreds of employee evaluations. This

experience has given me wonderful insight into both the business and human aspects of career advancement.

This book allows the reader to draw upon the career advice and tips that I have assembled over my lifetime with input from universities, company executives, successful engineers, and human resource departments. The book is designed to help the engineer deal with career issues throughout their engineering career lifetime. I hope my advice assists you in achieving the career you dream of and I welcome feedback from my readers; I may be reached at j.hoschette@ieee.org.

JOHN A. HOSCHETTE

Minneapolis, MN

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I would first like to thank my wife Linda for her unwavering encouragement and support in writing this book. She is the most loving, caring, and wonderful partner. She is a fantastic mother who has always made our family the top priority. She is amazingly talented and has the gift to inspire beyond belief, which I have drawn upon throughout our life together. It is because of her support, sacrifices, and inspiration that I once again have been able to write another book. Linda-Lue, thank you for supporting my career and my dream to help engineers with their careers.

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I would also like to thank the Evans Scholars Foundation which allowed me the opportunity to become an engineer and attend graduate school.

J. A. H.

ABOUT THE AUTHOR

John Hoschette is a Technical Director with Lockheed Martin in Eagan, Minnesota working in the Tactical Avionics group. His work encompasses developing the next generation of super mission computers for the F-35, F-36, and F-22 jet fighter aircraft. His area of technical expertise is optical data networking. Over the past 34 years John's career has covered such areas as developing infrared sensors for night vision, laser sensors for weapons, helmet-mounted displays, and optical fiber channel networks.

John has experience in all aspects of an engineer's career. This experience covers designing, testing, and fielding of advanced electronics, as well as twenty years of managerial experience. In his management role he has been responsible for the career development of employees, employee appraisals, recruiting, hiring, campus recruiting, and downsizing. John has held an executive staff position at Lockheed Martin, Sunnyvale, California assisting in the career development and management of approximately 5,000 engineers at this campus. John is a certified Master Black Belt in Six Sigma. The previous Fortune 100 companies John was employed with include Honeywell, Northrop, Alliant Tech Systems, and Loral spanning from the East to West coast.

John holds BSEE and MSEE degrees from the University of Minnesota as well as a Business Administration Certificate. John has been an adjunct professor at Santa Clara University and the Gordon Institute of Tufts University for almost a decade. In addition he has been a guest speaker for many universities including University of Arizona, Brown University, Georgia Tech, University of Massachusetts—Amherst, University of Minnesota, Stanford University, and University of California—Berkeley. As a member of the National Speakers Association, John has presented the keynote address for engineering conventions such as Sensor's and societies such as IEEE, SWE, NSPE, SME.

John is a senior member of IEEE and has served the IEEE organization in various leadership positions. He has held such positions as the Vice Chair of the Career Maintenance and Development Committee under IEEE-USA. He is a strong supporter of the IEEE PACE organization and has conducted many

workshops for them throughout the United States. He has notably received a Citation of Honor Award by IEEE-USA.

John has published over 60 articles dealing with engineering career development. Special feature article have appeared in *Today's Engineer* and *Spectrum Magazine*. John continues to consult for many companies, universities, and engineering organizations.

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