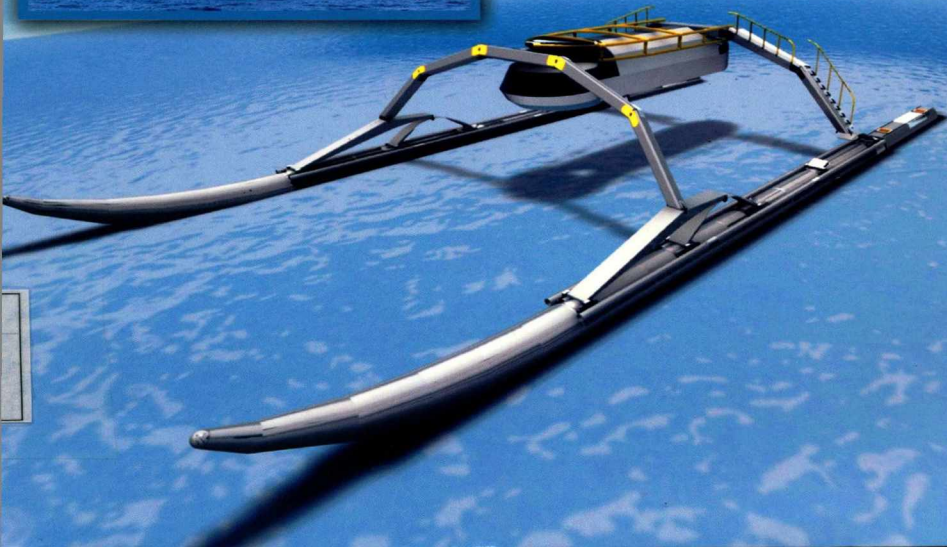




Autodesk[®] Inventor[®] 2013



L. Scott Hansen



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Southern Utah University





AUTODESK® INVENTOR® 2013

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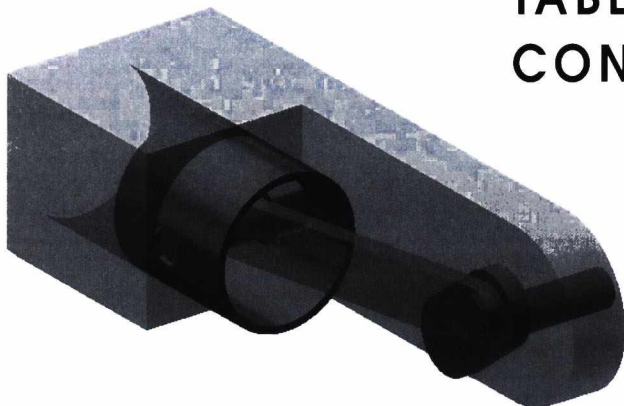
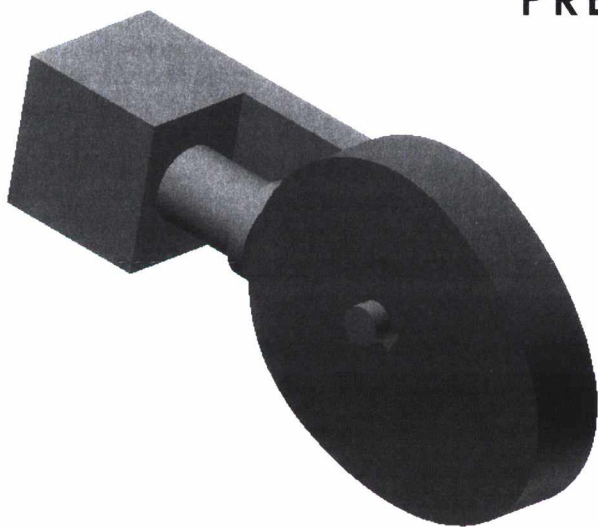


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PREFACE



ABOUT THIS BOOK

The philosophy behind this book is that learning computerized drafting programs is best accomplished by emphasizing the application of the tools rather than spending time on the theoretical principles underpinning engineering graphics and computer-aided design. Students also seem to learn more quickly and retain information and skills better if they are actually creating something with the software program. The driving force behind the entire presentation in this book is “learning by doing.”

The instructional format of this book centers on making sure that students learn by doing and that students can learn from this book on their own. In fact, this is one thing that differentiates my book from others: the emphasis on being able to use the book for self-study. The presentation of Inventor is structured so that the no previous knowledge of using any CAD program is required. My belief is that Inventor is mastered best by concentrating on applying the program to create different types of solid models, starting simply and then using the power of the program to progressively create more complex solid models. The Drawing Activities at the end of each chapter are more complex iterations of the part developed by each chapter’s objectives.

Because CAD programs are highly visual, there are more graphical illustrations showing how to use the program than there are verbal instructions. This reinforces the “learn by doing” philosophy since a student can see exactly what the program shows, and then step through progressive commands to implement the required operations. Rather than using a verbal description of the command, a screen capture of each command is replicated. This book’s emphasis is on providing the screen captures of the program’s commands to develop the skills needed for the creation of models and parts that are illustrated in the book. The screen captures have also been enhanced with small arrows to point out exactly what is most important in each screen capture.

Learning by doing requires Drawing Activities that reinforce each chapter’s objectives. All Part/Model exercises that form the core of each chapter begin simply and build up in level of complexity throughout the text as the student’s skills with the program improve. Those skills are reinforced and improved through the end of chapter problems. The Chapter Problems have been carefully developed to complement the skills taught in the part/model detailed in the chapter objectives.

It has been my experience that the “learn by doing” model produces faster mastery of computer-aided drafting programs than comparable lecture modes where the commands are explained and then the students are expected to implement those commands. I have found that students are eager to take over “driving the program” and if they have the correct roadmap, they quickly pick up how to operate the program and progress quickly. My hope is that you will find equal success in using this book in your Autodesk Inventor courses. I welcome your feedback and if you need specific on-site Inventor training, please contact me at hansens@suu.edu.

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I would like to thank my wife Linda, my son Jordan and daughter Morgan for their constant support and understanding while I was writing this book. I spent quite a few evenings away from them working late into the night to complete it. I also want to thank my father, Leo Hansen and mother Sherrell Hansen for their support and encouragement. I also want to thank Dr. Clair Hill for giving me my first teaching experience, which has opened many doors for me and enhanced my life and career.

I would like to acknowledge the valuable comments and suggestions of the following individuals who reviewed the manuscript for this text: Eduardo Chan, San Jose State University; William A. Ross, Purdue University; and U. Sunday Tim, Iowa State University.

INSTRUCTOR RESOURCES

Instructors will find solutions to the Chapter Problems at the textbook website: www.mhhe.com/hansen

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