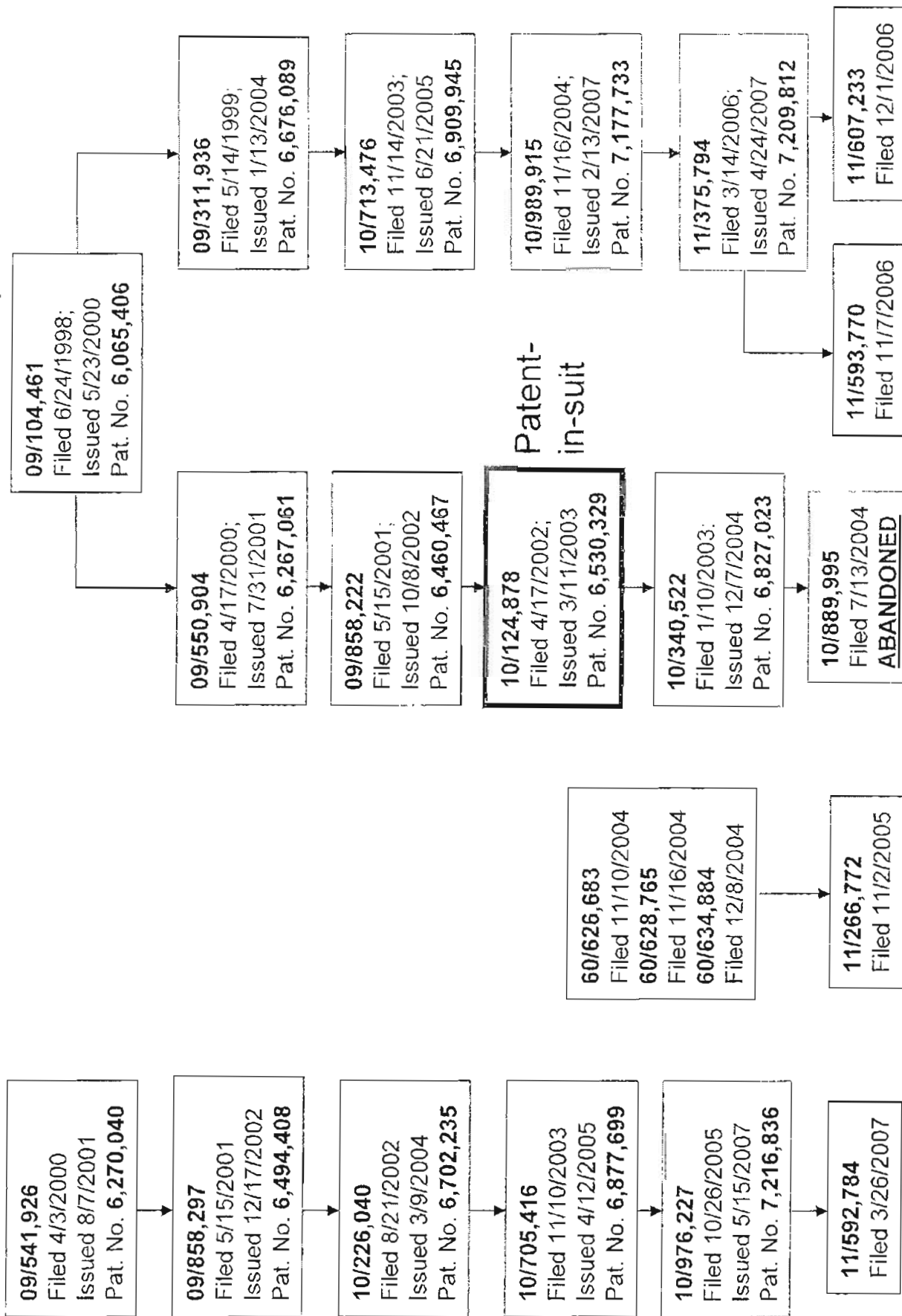


Hall Supplemental
Declaration
Exhibit A
(Part 2 of 3)

Appendix A

Katzer U.S. Patents & Applications

Patent applications, their continuation applications, and issued patents.



Appendix B

<p>'945 patent</p> <p>1. A method of operating a digitally controlled model railroad comprising the steps of: (a) transmitting a first command from a first program to an interface through a first transport; (b) transmitting a second command from a second program to said interface through a second transport; (c) receiving said first command and said second command at said interface; (d) said interface queuing said first and second commands; (e) validating said first and second commands against permissible actions of said model railroad; and (f) said interface sending third and fourth commands representative of said first and second commands, respectively, for execution on said digitally controlled model railroad.</p>	<p>'773 patent</p> <p>1. A method of operating a digitally controlled model railroad comprising the steps of: (a) transmitting a first command from a first program to an interface through a first transport; (b) transmitting a second command from a second program to said interface through a second transport; (c) receiving said first command and said second command at said interface; (d) said interface queuing said first and second commands; (e) validating said first and second commands against permissible actions of said model railroad; and (f) said interface sending third and fourth commands representative of said first and second commands, respectively, for execution on said digitally controlled model railroad.</p>
<p>2. The method of claim 1, further comprising the steps of: (a) providing an acknowledgement to said first program in response to receiving said first command by said interface that said first command was successfully validated prior to validating said first command; and (b) providing an acknowledgement to said client program in response to receiving said second command by said interface that said second command was successfully validated prior to validating said second command.</p>	<p>2. The method of claim 1, further comprising the steps of: (a) providing an acknowledgement to said first program in response to receiving said first command by said interface that said first command was successfully validated prior to validating said first command; and (b) providing an acknowledgement to said client program in response to receiving said second command by said interface that said second command was successfully validated prior to validating said second command.</p>
<p>3. The method of claim 1, further comprising the steps of: (a) selectively sending said third command; and (b) selectively sending said fourth command.</p>	<p>3. The method of claim 1, further comprising the steps of: (a) selectively sending said third command; and (b) selectively sending said fourth command.</p>
<p>4. The method of claim 1, further comprising the step of receiving responses representative of the state of said digitally controlled model railroad and validating said responses regarding said interaction.</p>	<p>4. The method of claim 1, further comprising the step of receiving responses representative of the state of said digitally controlled model railroad and validating said responses regarding said interaction.</p>

-945 patent	-773 patent
<p>5. The method of claim 1 wherein said first and second commands relate to the speed of locomotives.</p>	<p>5. The method of claim 1 wherein said first and second commands relate to the speed of locomotives.</p>
<p>6. The method of claim 2, further comprising the step of updating said successful validation to at least one of said first and second client programs of at least one of said first and second commands with an indication that at least one of said first and second commands was unsuccessfully validated.</p>	<p>6. The method of claim 2, further comprising the step of updating said successful validation to at least one of said first and second client programs of at least one of said first and second commands with an indication that at least one of said first and second commands was unsuccessfully validated.</p>
<p>7. The method of claim 1, further comprising the step of updating a database of the state of said digitally controlled model railroad based upon said responses representative of said state of said digitally controlled model railroad.</p>	<p>7. The method of claim 1, further comprising the step of updating a database of the state of said digitally controlled model railroad based upon said responses representative of said state of said digitally controlled model railroad.</p>
<p>8. The method of claim 7 wherein said validation is performed by a dispatcher.</p>	<p>8. The method of claim 7 wherein said validation is performed by a dispatcher.</p>
<p>9. The method of claim 7 wherein said first command and said third command are the same command, and said second command and said fourth command are the same command.</p>	<p>9. The method of claim 7 wherein said first command and third command are the same command, and said second command and said fourth command are the same command.</p>
<p>10. A method of operating a digitally controlled model railroad comprising the steps of: (a) transmitting a first command from a first program to an interface through a first communications transport; (b) receiving said first command at said interface; (c) validating said first command against permissible actions regarding said model railroad; and (d) said interface selectively sending a second command representative of said first command for execution on said digitally controlled model railroad based upon information contained within at least one of said first and</p>	<p>10. A method of operating a digitally controlled model railroad comprising the steps of: (a) transmitting a first command from a first program to an interface through a first communications transport; (b) receiving said first command at said interface; (c) validating said first command against permissible actions regarding said model railroad; and (d) said interface selectively sending a second command representative of said first command for execution on said digitally controlled model railroad based upon information contained within at least one of said first and</p>

<p>'945 patent second commands.</p>	<p>'773 patent second commands.</p>
<p>11. The method of claim 10, further comprising the steps of: (a) transmitting a third command from a second program to said interface through a second communications transport; (b) receiving said third command at said interface; (c) validating said third command against permissible actions regarding said model railroad; and (d) said interface selectively sending a fourth command representative of said third command for execution on said digitally controlled model railroad based upon information contained within at least one of said third and fourth commands.</p>	<p>11. The method of claim 10, further comprising the steps of: (a) transmitting a third command from a second program to said interface through a second communications transport; (b) receiving said third command at said interface; (c) validating said third command against permissible actions regarding said model railroad; and (d) said interface selectively sending a fourth command representative of said third command for execution on said digitally controlled model railroad based upon information contained within at least one of said third and fourth commands.</p>
<p>12. The method of claim 11 wherein said first communications transport is at least one of a COM interface and a DCOM interface.</p>	<p>12. The method of claim 11 wherein said first communications transport is at least one of a COM interface and a DCOM interface.</p>
<p>13. The method of claim 11 wherein said first communications transport and said second communications transport are DCOM interfaces.</p>	<p>13. The method of claim 11 wherein said first communications transport and said second communications transport are DCOM interfaces.</p>
<p>14. The method of claim 10 wherein said first program and said interface are operating on the same computer.</p>	<p>14. The method of claim 10 wherein said first program and said interface are operating on the same computer.</p>
<p>15. The method of claim 11 wherein said first program, said second program, and said interface are all operating on different computers.</p>	<p>15. The method of claim 11 wherein said first program, said second program, and said interface are all operating on different computers.</p>
<p>16. The method of claim 10, further comprising the step of providing an acknowledgement to said first program in response</p>	<p>16. The method of claim 10, further comprising the step of providing an acknowledgement to said first program in response to</p>

<p>'945 patent</p> <p>to receiving said first command by said interface prior to validating said first command.</p>	<p>'773 patent</p> <p>receiving said first command by said interface prior to validating said first command.</p>
<p>17. The method of claim 10, further comprising the step of receiving responses representative of the state of said digitally controlled model railroad and validating said responses regarding said interaction.</p>	<p>17. The method of claim 10, further comprising the step of receiving responses representative of the state of said digitally controlled model railroad and validating said responses regarding said interaction.</p>
<p>18. The method of claim 17, further comprising the step of comparing said responses to previous commands to determine which said previous commands it corresponds with.</p>	<p>18. The method of claim 17, further comprising the step of comparing said responses to previous commands to determine which said previous commands it corresponds with.</p>
<p>19. The method of claim 10, further comprising the step of updating validation of said first command.</p>	<p>19. The method of claim 10, further comprising the step of updating validation of said first command.</p>
<p>20. The method of claim 19, further comprising the step of updating a database of the state of said digitally controlled model railroad based upon responses representative of said state of said digitally controlled model railroad.</p>	<p>20. The method of claim 19, further comprising the step of updating a database of the state of said digitally controlled model railroad based upon responses representative of said state of said digitally controlled model railroad.</p>
<p>21. The method of claim 20, further comprising the step of updating said successful validation to said first program in response to receiving said first command by said interface together with state information from said database related to said first command.</p>	<p>21. The method of claim 20, further comprising the step of updating said successful validation to said first program in response to receiving said first command by said interface together with state information from said database related to said first command.</p>
<p>22. The method of claim 10 wherein said interface communicates in an asynchronous manner with said first program while communicating in a synchronous manner with command stations.</p>	<p>22. The method of claim 10 wherein said interface communicates in an asynchronous manner with said first program while communicating in a synchronous manner with command stations.</p>

<p>'945 patent</p> <p>23. A method of operating a digitally controlled model railroad comprising the steps of: (a) transmitting a first command from a first program to an interface through a first communications transport; (b) transmitting a second command from a second program to said interface through a second communications transport; (c) receiving said first command at said interface; (d) receiving said second command at said interface; (e) validating said first and second commands against permissible actions of said model railroad; and (f) said interface sending a third and fourth command representative of said first command and said second command, respectively, for execution on said digitally controlled model railroad.</p> <p>24. The method of claim 23 wherein said interface communicates in an asynchronous manner with said first and second programs.</p> <p>25. The method of claim 23 wherein said first communications transport is at least one of a COM interface and a DCOM interface.</p> <p>26. The method of claim 23 wherein said first communications transport and said second communications transport are DCOM interfaces.</p> <p>27. The method of claim 23 wherein said first program and said interface are operating on the same computer.</p> <p>28. The method of claim 23 wherein said first program, said second program, and said interface are all operating on different computers.</p>	<p>'773 patent</p> <p>23. A method of operating a digitally controlled model railroad comprising the steps of: (a) transmitting a first command from a first program to an interface through a first communications transport; (b) transmitting a second command from a second program to said interface through a second communications transport; (c) receiving said first command at said interface; (d) receiving said second command at said interface; (e) validating said first and second commands against permissible actions of said model railroad; and (f) said interface sending a third and fourth command representative of said first command and said second command, respectively, for execution on said digitally controlled model railroad.</p> <p>24. The method of claim 23 wherein said interface communicates in an asynchronous manner with said first and second programs.</p> <p>25. The method of claim 23 wherein said first communications transport is at least one of a COM interface and a DCOM interface.</p> <p>26. The method of claim 23 wherein said first communications transport and said second communications transport are DCOM interfaces.</p> <p>27. The method of claim 23 wherein said first program and said interface are operating on the same computer.</p> <p>28. The method of claim 23 wherein said first program, said second program, and said interface are all operating on different computers.</p>
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'945 patent	'773 patent
29. The method of claim 23, further comprising the step of providing an acknowledgment to said first program in response to receiving said first command by said interface that said first command was successfully validated prior to validating said first command.	29. The method of claim 23, further comprising the step of providing an acknowledgment to said first program in response to receiving said first command by said interface that said first command was successfully validated prior to validating said first command.
30. The method of claim 29, further comprising the step of receiving responses representative of the state of said digitally controlled model railroad.	30. The method of claim 29, further comprising the step of receiving responses representative of the state of said digitally controlled model railroad.
31. The method of claim 30, further comprising the step of comparing said responses to previous commands to determine which said previous commands it corresponds with.	31. The method of claim 30, further comprising the step of comparing said responses to previous commands to determine which said previous commands it corresponds with.
32. The method of claim 31, further comprising the step of updating a database of the state of said digitally controlled model railroad based upon said responses representative of said state of said digitally controlled model railroad.	32. The method of claim 31, further comprising the step of updating a database of the state of said digitally controlled model railroad based upon said responses representative of said state of said digitally controlled model railroad.
33. The method of claim 32, further comprising the step of updating said successful validation to said first program in response to receiving said first command by said interface together with state information from said database related to said first command.	33. The method of claim 32, further comprising the step of updating said successful validation to said first program in response to receiving said first command by said interface together with state information from said database related to said first command.
34. The method of claim 23 wherein said validation is performed by a dispatcher.	34. The method of claim 23 wherein said validation is performed by a dispatcher.
35. A method of operating a digitally controlled model railroad	35. A method of operating a digitally controlled model railroad

<p>'945 patent</p> <p>comprising the steps of: (a) transmitting a first command from a first program to a first processor through a first communications transport; (b) receiving said first command at said first processor; and (c) said first processor providing an acknowledgement to said first program through said first communications transport indicating that said first command has been validated against permissible actions of said model railroad and properly executed prior to execution of commands related to said first command by said digitally controlled model railroad.</p>	<p>'773 patent</p> <p>comprising the steps of: (a) transmitting a first command from a first program to a first processor through a first communications transport; (b) receiving said first command at said first processor; and (c) said first processor providing an acknowledgement to said first program through said first communications transport indicating that said first command has been validated against permissible actions of said model railroad and properly executed prior to execution of commands related to said first command by said digitally controlled model railroad.</p>
<p>36. The method of claim 35, further comprising the step of sending said first command to a second processor which processes said first command into a state suitable for execution on said digitally controlled model railroad.</p>	<p>36. The method of claim 35, further comprising the step of sending said first command to a second processor which processes said first command into a state suitable for execution on said digitally controlled model railroad.</p>
<p>37. The method of claim 36, further comprising the step of said second process queuing a plurality of commands received.</p>	<p>37. The method of claim 36, further comprising the step of said second process queuing a plurality of commands received.</p>
<p>38. The method of claim 35, further comprising the steps of: (a) transmitting a second command from a second program to said first processor through a second communications transport; (b) receiving said second command at said first processor; and (c) said first processor selectively providing an acknowledgement to said second program through said second communications transport indicating that said second command has been validated against permissible actions regarding the interaction between a plurality of objects of said model railroad and properly executed prior to execution of commands related to said second command by said digitally controlled model railroad.</p>	<p>38. The method of claim 35, further comprising the steps of: (a) transmitting a second command from a second program to said first processor through a second communications transport; (b) receiving said second command at said first processor; and (c) said first processor selectively providing an acknowledgement to said second program through said second communications transport indicating that said second command has been validated against permissible actions regarding the interaction between a plurality of objects of said model railroad and properly executed prior to execution of commands related to said second command by said digitally controlled model railroad.</p>

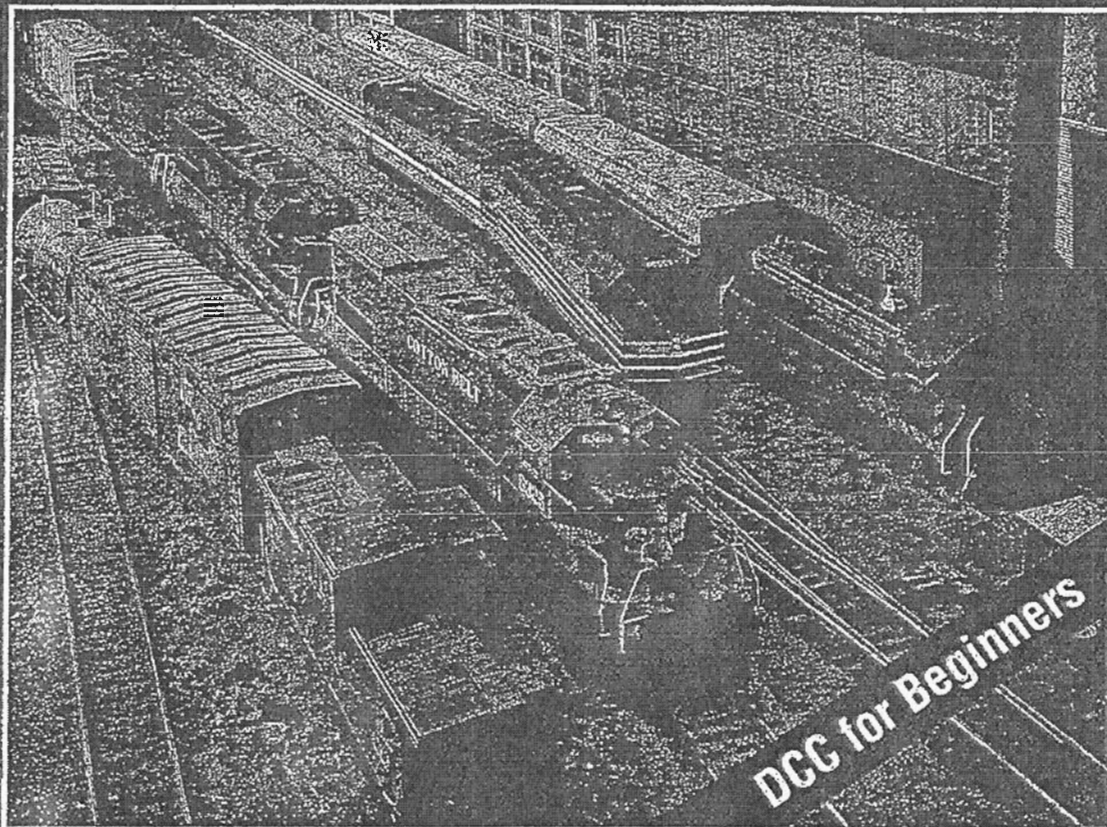
'945 patent	'773 patent
<p>39. The method of claim 38, further comprising the steps of: (a) sending a third command representative of said first command for execution on said digitally controlled model railroad based upon information contained within at least one of said first and third commands; and (b) sending a fourth command representative of said second command for execution on said digitally controlled model railroad based upon information contained within at least one of said second and fourth commands.</p>	<p>39. The method of claim 38, further comprising the steps of: (a) sending a third command representative of said first command for execution on said digitally controlled model railroad based upon information contained within at least one of said first and third commands; and (b) sending a fourth command representative of said second command for execution on said digitally controlled model railroad based upon information contained within at least one of said second and fourth commands.</p>
<p>40. The method of claim 35 wherein said first communications transport is at least one of a COM interface and a DCOM interface.</p>	<p>40. The method of claim 35 wherein said first communications transport is at least one of a COM interface and a DCOM interface.</p>
<p>41. The method of claim 38 wherein said first communications transport and said second communications transport are DCOM interfaces.</p>	<p>41. The method of claim 38 wherein said first communications transport and said second communications transport are DCOM interfaces.</p>
<p>42. The method of claim 35 wherein said first program and said first processor are operating on the same computer.</p>	<p>42. The method of claim 35 wherein said first program and said first processor are operating on the same computer.</p>
<p>43. The method of claim 38 wherein said first program, said second program, and said first processor are all operating on different computers.</p>	<p>43. The method of claim 38 wherein said first program, said second program, and said first processor are all operating on different computers.</p>
<p>44. The method of claim 35 further comprising the step of receiving responses representative of the state of said digitally controlled model railroad.</p>	<p>44. The method of claim 35, further comprising the step of receiving responses representative of the state of said digitally controlled model railroad.</p>
<p>45. The method of claim 35, further comprising the step of</p>	<p>45. The method of claim 35, further comprising the step of</p>

<p>'945 patent updating a database of the state of said digitally controlled model railroad.</p> <p>46. The method of claim 45, further comprising the step of updating said successful validation to said first program in response to receiving said first command by first processor together with state information from said database related to said first command.</p> <p>47. The method of claim 43 wherein said first processor communicates in an asynchronous manner with said first program.</p>	<p>'773 patent updating a database of the state of said digitally controlled model railroad.</p> <p>46. The method of claim 45, further comprising the step of updating said successful validation to said first program in response to receiving said first command by first processor together with state information from said database related to said first command.</p> <p>47. The method of claim 43 wherein said first processor communicates in an asynchronous manner with said first program.</p>
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Appendix C

DIGITAL COMMAND CONTROL

— the comprehensive guide to DCC —



- Terminology and Concepts
- Buyer's Checklist
- Decoder Installation
- Layout Wiring
- Comprehensive Decoder Guide
- Advanced DCC Operation
- Computerized Operations
- Avoiding Pitfalls
- Maximize DCC Benefits
- DCC software guide

Stan Ames

Rutger Friberg

Ed Loizeaux

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Digital Command Control

— the comprehensive guide to DCC —

**Stan Ames
Rutger Friberg
Edward Loizeaux**

*To my friend Mark
with regards
Rutger*

**Published by
Allt om Hobby
In co-operation with
The National Model Railroad Association**



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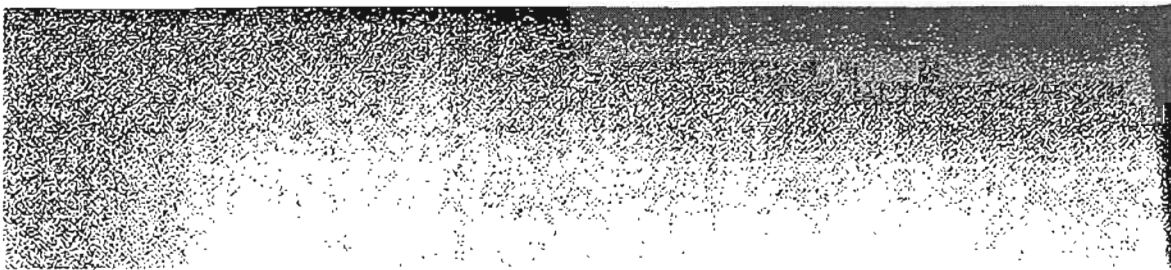
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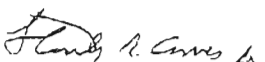
Preface

We are in the midst of a microprocessor technology revolution. Capabilities that formerly required expensive, multiple integrated circuits are now available as a single chip microcontroller costing only a few dollars. These chips enable control of numerous devices since custom software can be programmed in. These microcontrollers allow manufacturers to develop products to precisely control locomotives — as well as lights, sounds, switch motors, and other devices on the layout. This in turn has opened up a whole new dimension for model railroad operation, which is the basis for attracting the next generation of model railroaders. And we are only at the beginning of this journey. As the information technology revolution continues more powerful microcontrollers with lower costs and more features will be available for use by the model railroad hobbyist. This trend towards more capabilities at lower cost is projected to continue long into the future.

New inventions are difficult to explain to those not familiar with the technology employed. Digital Command Control (DCC) is no exception, and this is the fundamental reason for the preparation of this book. Our goal is to provide readers with accurate and comprehensive information regarding DCC technology.

Historically, technical advances suffer from erroneous reporting. When the first steam locomotive was unveiled, it was widely — and erroneously — reported that the human body could not survive speeds above 29 miles per hour. Reports of the first Model T automobile included predictions of social upheaval due to speed, accidents, and death. Recently, claims have been published stating that cellular telephones might cause brain cancer.

Following this historical trend, errors and misconceptions about DCC sometimes arise. This often results in confusion about the benefits of this new technology and often makes DCC look much more difficult or expensive than it actually is. Our intent is to clarify these misunderstandings and dispose of myths surrounding the use of DCC technology.


Stan Ames


Rutger Friberg


Ed Loizeaux

This book's emphasis is educational. It is not written for entertainment, and does not contain beautiful color photographs of gorgeous scenery or superbly detailed locomotives. But knowledge it does have — and lots of it! With careful reading and reasonable thought, everyone can become well-versed with this new form of model railroad control. We hope you enjoy the information.

The authors of this book are members of the National Model Railroad Association's (NMRA) DCC Working Group, and have been involved with DCC since its early days. Ed Loizeaux, a non-technical person, strives to make complex topics easy to understand by the average modeler. Over the years Ed has published several articles and presented several clinics for the entry level DCC user. Rutger Friberg is the model railroad editor for *Allt om Hobby* (the model railroad magazine in Sweden) and prolific DCC author. His expertise is with detailed circuit designs and custom electronic projects that go beyond commercially available products. Stan Ames spearheaded the creation of the NMRA DCC Standards and Recommended Practices. As original Chairman of the NMRA/DCC Working Group and the past Chairman of the NMRA Conformance & Inspection Committee, he brings a unique perspective to this book. His knowledge of the NMRA DCC Standards, Recommended Practices, and product specifics is hard to beat.

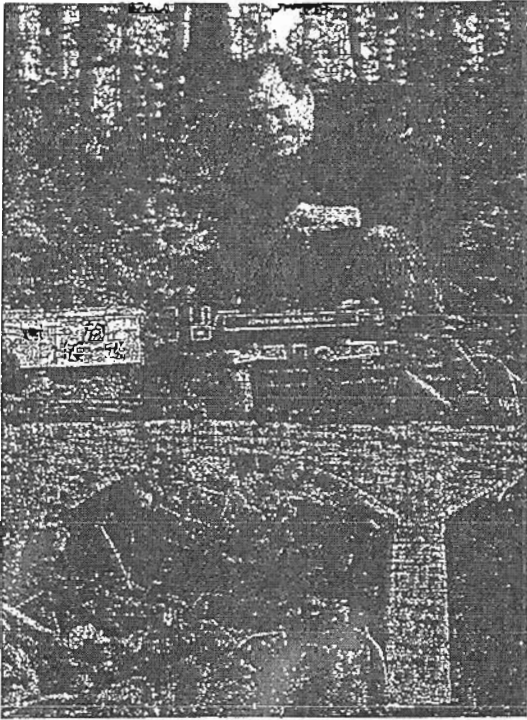
This book is dedicated to Dick Andrews, Chairman of the NMRA Technical Department during the formative years of DCC, the NMRA Board of Trustees who made the bold decision to create DCC Standards and the NMRA DCC Working Group. NMRA DCC and this book are the result of a community effort. Since 1992 the DCC community (manufacturers and model railroaders alike) has worked long and hard to bring forth a high quality, multi manufacturer, modern model railroad control system. DCC would never have evolved without their efforts. We are all indebted.

Acknowledgements

The authors readily admit this book was a much larger undertaking than originally envisioned. Just when we thought the book was finished, numerous excellent ideas arrived from the DCC community, friends, and others. Incorporating all these ideas was almost like writing the book for a second time. Now that everything is finally finished, we'd like to gratefully acknowledge the contributions of the many people who assisted with this project as follows:

Dorothee Asmis for extensive manuscript word-processing and diagram creation. The entire DCC working group

for all their support and especially Michael Greene, Brian Bamt, John Balogh, and Seth Neumann for image scanning, proofreading, coordination and general advice. Bob Backway for his contribution on DCC couplers. Mikal Pruitt for the use of his enjoyable cartoons. Dr Stanley R. Ames, Sr., Bill Schaumburg, and Sarah Rohde for copy editing, minor rewriting, long hours, and general enthusiasm. Mattias and Maria Stenbom for layout. The NMRA home office for their excellent assistance in seeing this project through. And let's not forget our families who have lived with our absence during the preparation of this book.

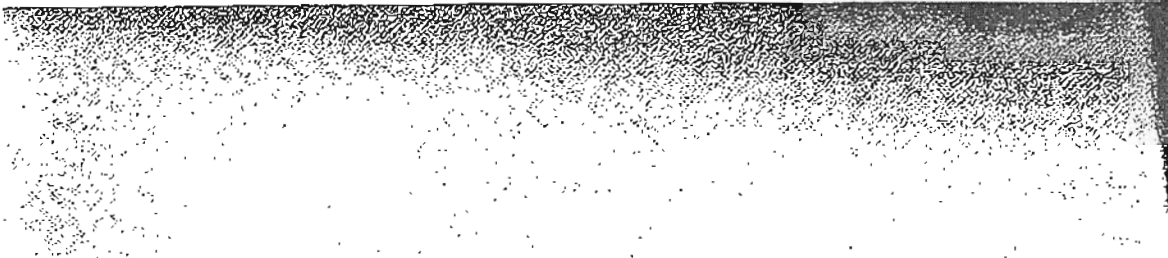
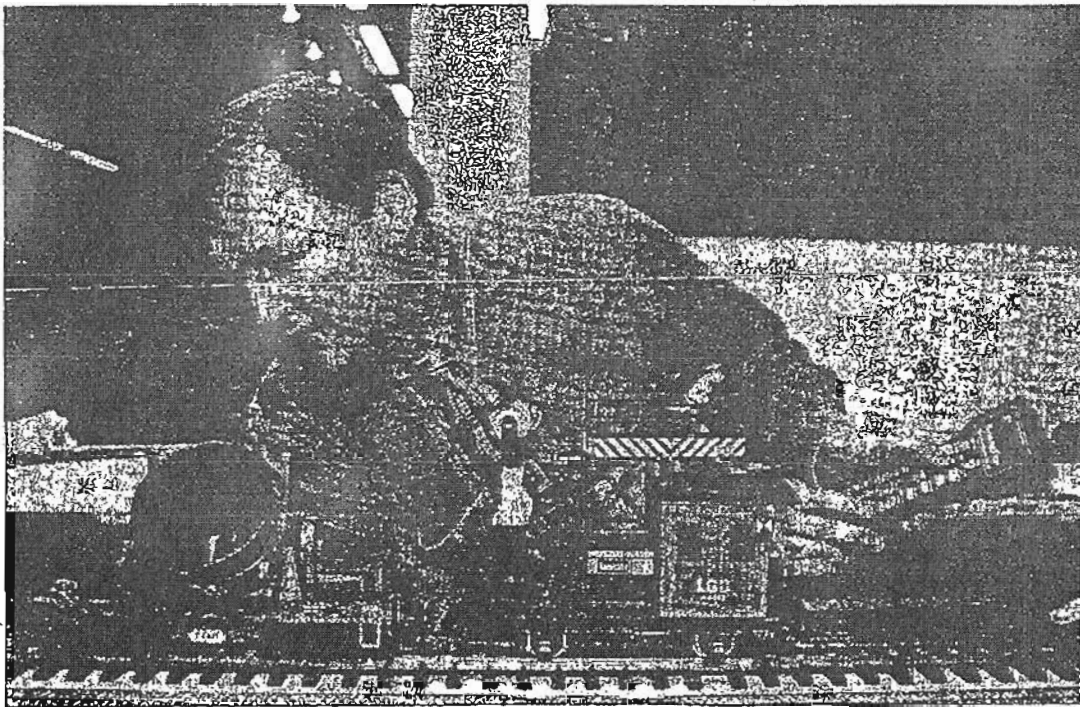


Author, Stan Ames, in his garden railway.



Author, Ed Loizeaux, operating his S scale layout.

Author, Rutger Friberg, operating his digitally controlled Large Scale models.



Foreword

"Standard"— derived from a Middle English word meaning rallying point. Even if you tried, it would be difficult to invent a more telling, more compelling origin for the word.

Historically, the setting of standards was the "rallying point" for our National Model Railroad Association. Formed in 1935 and now the largest organization devoted to the hobby of scale model railroading, the NMRA has developed a rich tradition of service to the hobby. It is an honor to preside over the NMRA as we continue that tradition by setting standards for Digital Command Control, an innovation that, I believe, will transform the "world's greatest hobby" as we enter the twenty-first century.


DCC standards could not have arrived at a more appropriate time. With the phenomenal growth of interest in prototypical operation, DCC will find a large and ready audience. As important as standards are for our hobby, they do have one limitation: they are not a "how-to" guide. The book you have in your hands is just that. In addition


to helping you evaluate and apply this technology, it may lead you to re-think operations on your railroad, adding more fun and realism.


This book and the DCC standards are the result of thousands of hours of volunteer and professional effort. To those who worked long and hard to develop our standards, and to the authors of this book, all modelers owe a debt of gratitude. We are grateful, too, to those manufacturers who have made suggestions for revisions or additions to this book. While the National Model Railroad Association does not endorse any manufacturer listed herein, we are pleased to be able to provide, for informational purposes, a listing of products available as of this writing. The manufacturers and DCC Working Group volunteers listed below and on the next page have reviewed the contents of this book, and affix their signatures as indication of their support for the information provided. Happy modeling!

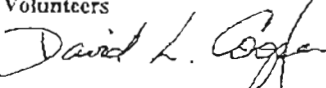
Robert W. Charles, President
National Model Railroad Association

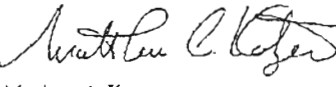
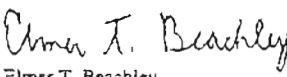
NMRA Officials

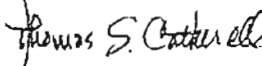

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Chair NMRA Technical Department



Bob Charles
President NMRA

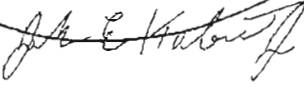

John A. Nawn
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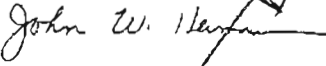

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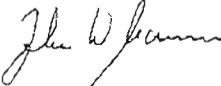

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Chair NMRA DCC Working Group



John E. Kabat, Jr.



William L. Brown, Jr.


John W. Hermanson

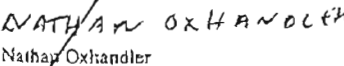

John W. Mann



Karl Kobel


Richard H. Lord

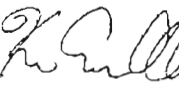

Garrett Paine

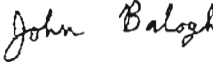

Douglas E. Menke


Nathan Oxhandler

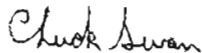

Michael Greene
Chair NMRA Working Group, 94-95



Kenneth D. Rice



Ken Willmott

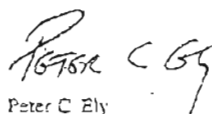

John D. Balogh
Chair DCC SIG


Bruce Stockdale

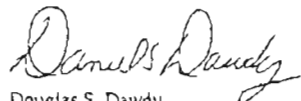

Chuck Swan

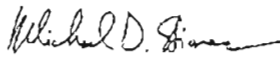

Chris Webster

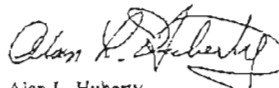

Kenneth West

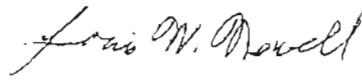

Peter C Ely



Thomas Bunce

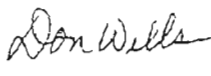

Douglas S. Dawdy



Michael D. Stimac

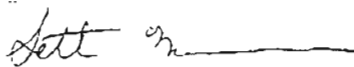

Alan L. Huberty


Louis W. Newell


Jim Kirwan



Donald C. Wells


Jean-Pol Matheys



Seth Neumann



Karl Eisermann



Deborah P. Arnes

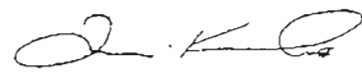

Robert Backway


DCC manufacturers

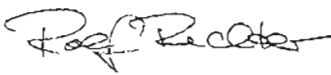

Georg Fuhs
Arnold Digital

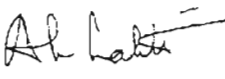

Keith Gutierrez
CVP Products



James F. Scorse
North Coast Engineering

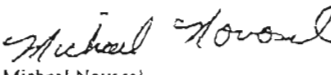

Louis Kovach
IC Controls, Inc.


Richard Reggi
Model Rectifier Corporation

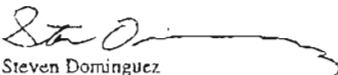

Rolf Richter
Ernst Paul Lehmann Patentwerk

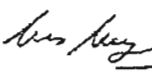

Abbon Lahti
Power Systems, Inc.

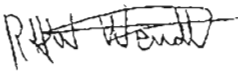

Don Wangrow
Wangrow Electronics



Michael Novosei
Real Rail Effects, Inc.



Christian Plohberger
ROCO Modellspielwaren GmbH & Co. KG


Steven Dominguez
Throttle Up!

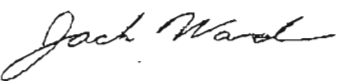

Urs Meyer
Umeloc Ing Buero

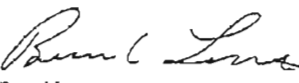

Richard Wendt
Ramfixx Technologies, Inc.


Peter Ziegler
ZIMO Elektronik


Robin Palmer
ZTC Systems


Digitrax, Inc.


Jack Ward
Rock Junction Controls


Bernd Lenz
Lenz GmbH

