

# **Iterating Infusion**

Clearer Views of Objects,  
Classes, and Systems

GREG ANTHONY

## **Iterating Infusion: Clearer Views of Objects, Classes, and Systems**

**Copyright © 2005 by Greg Anthony**

Lead Editor and Technical Reviewer: Jonathan Hassell

Editorial Board: Steve Anglin, Dan Appleman, Ewan Buckingham, Gary Cornell, Tony Davis, Jason Gilmore,  
Jonathan Hassell, Chris Mills, Dominic Shakeshaft, Jim Sumser

Assistant Publisher: Grace Wong

Production Manager: Kari Brooks-Copony

Compositor: Kinetic Publishing Services, LLC

Proofreader: Elizabeth Berry

Indexer: Brenda Miller

Artist: Kinetic Publishing Services, LLC

Cover Designer: Kurt Krames

Manufacturing Manager: Tom Debolski

Library of Congress Cataloging-in-Publication Data

Anthony, Greg, 1979-

Iterating infusion : clearer views of objects, classes, and systems /

Greg Anthony.

p. cm.

Includes index.

ISBN 1-59059-537-8

1. Computer software—Development. 2. Object-oriented programming  
(Computer science) I. Title.

QA76.76.D47A536 2005

005.1—dc22

2005012611

All rights reserved. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage or retrieval system, without the prior written permission of the copyright owner and the publisher.

Printed and bound in the United States of America 9 8 7 6 5 4 3 2 1

Trademarked names may appear in this book. Rather than use a trademark symbol with every occurrence of a trademarked name, we use the names only in an editorial fashion and to the benefit of the trademark owner, with no intention of infringement of the trademark.

Distributed to the book trade in the United States by Springer-Verlag New York, Inc., 233 Spring Street, 6th Floor, New York, NY 10013, and outside the United States by Springer-Verlag GmbH & Co. KG, Tiergartenstr. 17, 69112 Heidelberg, Germany.

In the United States: phone 1-800-SPRINGER, fax 201-348-4505, e-mail [orders@springer-ny.com](mailto:orders@springer-ny.com), or visit <http://www.springer-ny.com>. Outside the United States: fax +49 6221 345229, e-mail [orders@springer.de](mailto:orders@springer.de), or visit <http://www.springer.de>.

For information on translations, please contact Apress directly at 2560 Ninth Street, Suite 219, Berkeley, CA 94710. Phone 510-549-5930, fax 510-549-5939, e-mail [info@apress.com](mailto:info@apress.com), or visit <http://www.apress.com>.

The information in this book is distributed on an “as is” basis, without warranty. Although every precaution has been taken in the preparation of this work, neither the author(s) nor Apress shall have any liability to any person or entity with respect to any loss or damage caused or alleged to be caused directly or indirectly by the information contained in this work.

# Contents

Preface .....	ix
About the Author .....	xiii
Introduction .....	xv

## PART I ■ ■ ■ Whole Consistency

■ CHAPTER ONE	<b>Orientation</b> .....	3
	Some Other Ramifications .....	3
	Related to Programming .....	5
	Some Languages .....	11
	Some Hardware and Software Manufacturers .....	20
	Some Other Languages .....	21
	Incremental Adaptation .....	23
■ CHAPTER TWO	<b>Bi-design</b> .....	25
	Analyzing .....	25
	Designing .....	28
	Mechanism Characteristics .....	29
	Network Characteristics .....	34
	Applying Philosophy .....	35
	Very Broad Philosophy .....	42
	General Recommendation .....	44
■ CHAPTER THREE	<b>Untangled Web</b> .....	45
	Overall Processing Flows .....	45
	Keyboard-Only Interaction .....	45
	Visual Object Interaction .....	49
	Network Browsers .....	52
	Just Text and Pictures .....	52
	Added Interaction and Manageability .....	55

Network Site Servers .....	57
More Java .....	57
Storage Interaction .....	59
Preprocessing for Variability .....	59
Variable Markup .....	60
Storage Interaction with a New Subcontext .....	62
Standardized Objects .....	63
Much More Java .....	63
Standardized Distributed Objects .....	64
Server Processing Reorganization .....	65
The Foundation .....	65
Building on Management .....	66
Refinement .....	67
Visual Object Implementation in a New Context .....	67
The Variety of Syntax .....	68

## PART II ■ ■ ■ **Derived Simplicity**

■ <b>CHAPTER FOUR</b> <b>x = Why</b> .....	71
Function Set Network Representation .....	71
Syntax .....	71
Identification Notation .....	76
Shorthand .....	76
Name Notation .....	77
Common Examples .....	78
Resulting General Observations .....	83
Database Representation .....	84
Syntax .....	84
Shorthand .....	85
Resulting General Observations .....	85
Interaction Algebra II .....	85
■ <b>CHAPTER FIVE</b> <b>Live and Unscripted</b> .....	87
More Data Orientation .....	87
Data Relationship Management .....	89
Direct Effects on Programming .....	90
A Dream Language .....	91
Syntax of D .....	92
General Formats .....	93
Set Definitions .....	95

Fundamental Body Statement . . . . .	96
Major Definitions (Header Statements) . . . . .	96
Minor Definitions (Body Statements) . . . . .	98
Interval Orientation . . . . .	110
Aspect Orientation . . . . .	115
Reserved Words . . . . .	117
An Example of D . . . . .	118
Possible D Design Stages . . . . .	120
<b>■ Conclusion . . . . .</b>	<b>123</b>
Reading Recommendations . . . . .	124
Orientation . . . . .	124
Bi-design . . . . .	125
Untangled Web . . . . .	126
<b>■ APPENDIX A . . . . .</b>	<b>129</b>
Syntax of Descript . . . . .	129
General Formats . . . . .	129
Management Definitions . . . . .	130
Major Definitions (Header Statements) . . . . .	130
Body Statements . . . . .	131
Interval Orientation . . . . .	136
Aspect Orientation . . . . .	139
Reserved Words . . . . .	140
<b>■ APPENDIX B . . . . .</b>	<b>143</b>
Syntax of Desc . . . . .	143
Reserved Words . . . . .	144
An Example of Desc . . . . .	147
<b>■ APPENDIX C . . . . .</b>	<b>151</b>
Procedure-Oriented to Data-Oriented Translation Key . . . . .	151
Concepts . . . . .	151
Keyphrases . . . . .	152
<b>■ DATA-ORIENTED DICTIONARY . . . . .</b>	<b>153</b>
<b>■ INDEX . . . . .</b>	<b>179</b>