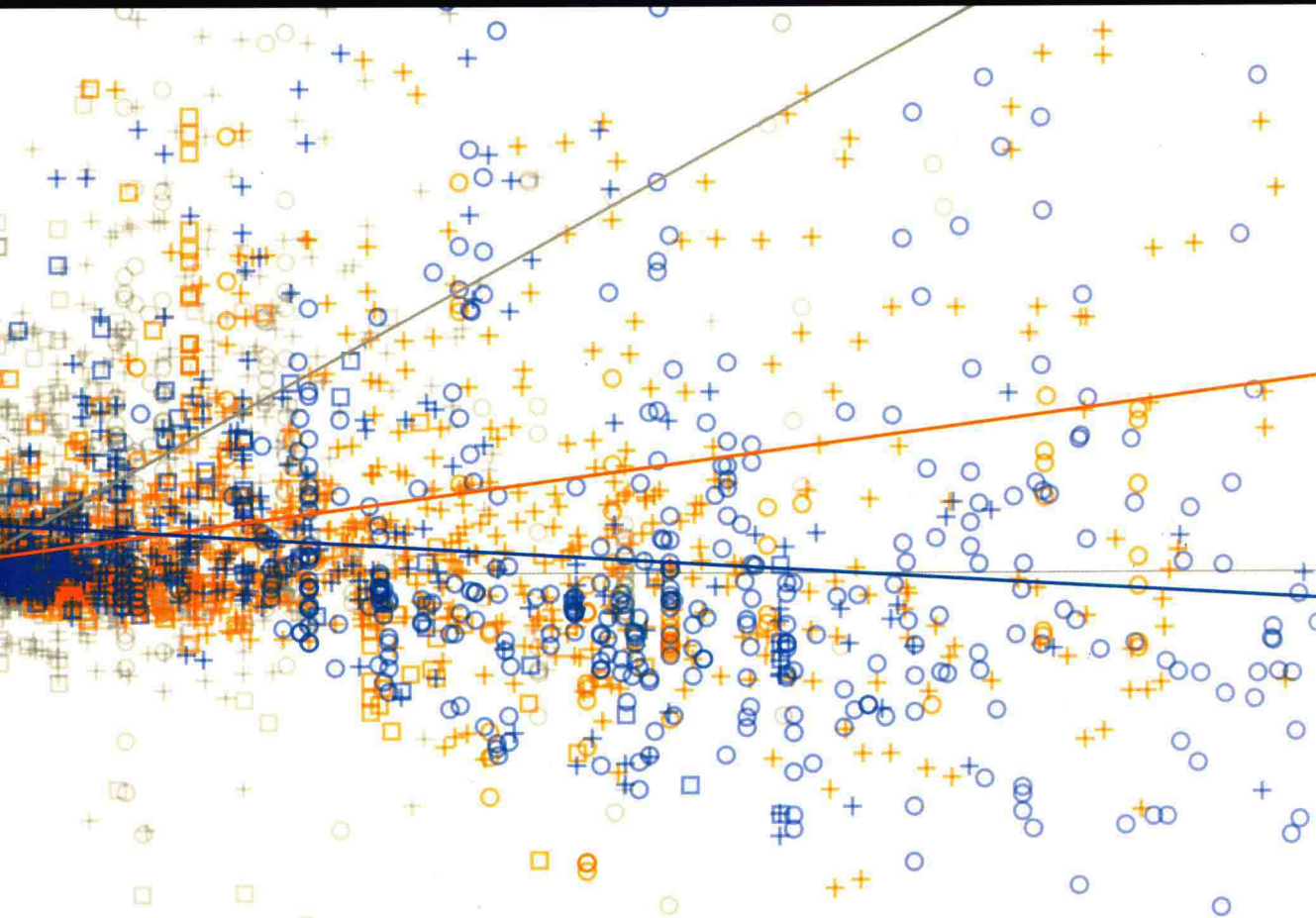


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SOFTWARE

Foreword by Christian Chabot, CEO, Co-founder and Chairman, Tableau Software

Tableau Your Data!

Fast and Easy
Visual Analysis with
Tableau Software®



Daniel G. Murray, with the InterWorks team

WILEY

Tableau Your Data!

Fast and Easy Visual Analysis
with Tableau Software®



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Tableau Your Data!: Fast and Easy Visual Analysis with Tableau Software®

Published by
John Wiley & Sons, Inc.
10475 Crosspoint Boulevard
Indianapolis, IN 46256
www.wiley.com

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Published simultaneously in Canada

ISBN: 978-1-118-61204-0
ISBN: 978-1-118-61219-4 (ebk)
ISBN: 978-1-118-83946-1 (ebk)
Manufactured in the United States of America

10 9 8 7 6 5 4 3 2 1

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Library of Congress Control Number: 2013948016

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To my wife, Linda, and my children, Erin and Hannah, for your understanding during the months I was "away" writing at home. And to my parents, Mike and Joan, who instilled the desire to learn.

About the Author

Daniel G. Murray has over 30 years of professional experience. Dan has seen firsthand the technical revolution in data that led to the creation of Tableau Software. Prior to starting the InterWorks Tableau/BI practice in 2008, he held a variety of increasingly responsible roles in finance, accounting, sales, and operations for a mid-sized global manufacturing company serving the heavy industry and construction markets. During the late 1990s his employer acquired over 50 companies. Dan's role in 2006 as a CFO/CIO led to an assignment to integrate and create a global reporting environment. Uninspired by the high cost and complicated products available from traditional vendors, Dan discovered Tableau Software through data visualization expert Stephen Few. Less than one month after downloading a trial license of Tableau Software, Dan and his team were able to successfully create a reporting platform for less than 15 percent of the cost, and in 1/10th the time that traditional vendors had quoted. At this point it was apparent that everyone needed Tableau—they just didn't know it yet.

Within months after speaking at Tableau's first customer conference, Dan went to friend and Founder of InterWorks Inc., Behfar Jahanshahi, to convince him to allow Dan to form a boutique consulting team focusing on providing the best practices of data visualization and reporting using Tableau Software and any emerging or popular database.

InterWorks, Inc. is now the premier Gold Professional Consulting Partner for Tableau Software with clients all over the world and over 35 Tableau consultants providing data visualization, database, and hardware expertise to many of the most significant organizations spanning business, education, and government.

Dan is a 1982 graduate of Purdue University's Krannert School of Business. He and his family live in the metro Atlanta area.

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Acknowledgments

This book is the product of years of experience and the collective effort of many different InterWorks team members. Writing a book requires a little more effort than a tweet or a blog post. Many different people provided technical feedback and inspiration.

Brian Bickell and Eric Shiarla contributed initial drafts of the chapters related to Tableau Server. Kate Treadwell provided a section and examples related to Tableau's `tabcmd` and `tabadmin` command line functionality. Significant portions of Chapter 2 were provided by UK team members Mel Stephenson, Rob Austin, and James Austin.

Creating function references in Appendix A was a team effort, but Mike Roberts was instrumental in collecting and organizing all of the examples, and also contributing a lot of original example material. Ben Bausili, Josh Davis, Tim Costello, and Matthew Miller from the North American team provided code examples. Jeroen Spanjers, Alastair Young, and Darren Evans of the UK Team also contributed excellent reference material.

Several Tableau Software employees were instrumental in providing technical feedback. I especially want to thank Molly Monsey for the many hours she spent reviewing initial drafts and coordinating other subject area experts within Tableau. François Ajenstat provided guidance during several phases of the book's development—thank you Francois for your enthusiasm and wonderful perspective! Dan Huff and Lee Gray provided detailed technical feedback and advice on the chapters that related to Tableau Server. Russell Christopher gave critique on Tableau's dashboard features and feedback on my ideas related to best practices. All of your contributions improved the content. Any mistakes that have made it into the final release are entirely my own.

Case studies and advice were contributed by clients and friends: Andy Kriebel of Facebook; Paul Lisborg of Newnan Utilities; John Hoover of Norfolk Southern; Gregory Lewandowski, Rob Higgins, and Paul Laza of Cisco; Tim Kuhn of the ACT.org; and Ted Curran of Carnegie Mellon University. Tableau Zen Master Jonathan Drummey of the Southern Maine Medical Center contributed an interesting case study, which came from Jonathan's amazing mind and with no assistance from InterWorks. A former client and current friend, Adrian Abarca, contributed an interesting study of Tableau use for human resource analysis. Most of all I want to thank Brian McKinsey, my old boss and President of Blastrac, Inc., for

tasking me to figure out a way to globalize our reporting schema; and Elaine Hillyer, a friend and co-worker, who provided a lot of solutions during our first Tableau project. That initial project literally changed my life.

Finally, a big thank you to the first believer in the idea for a consulting practice focused on Tableau and for supporting this book—Behfar Jahanshahi, CEO and Founder of InterWorks, Inc. Without his early "faith"—it wouldn't have happened. Thank you all!

Foreword

Tableau was founded with a simple mission: to help people see and understand their data. More than ten years later, we're pursuing that same mission. We've been fortunate to build a talented team of people who deeply believe in serving that mission. Just as importantly, we've collaborated with hundreds of thousands of people working for our 13,500+ customer accounts worldwide.

Tableau Desktop and Tableau Server, which are the focus of this book, put the power of data into the hands of those people who inspired us from the beginning. We've designed our software to be flexible and capable enough to help a single person answer questions from a spreadsheet, or to enable thousands of people across an enterprise to execute complex queries against massive databases.

Tableau can help you answer questions with data. We hear stories daily about how people use Tableau to help increase sales, streamline operations, improve customer service, manage investments, assess quality and safety, study and treat diseases, pursue academic research, address environmental problems, and improve education.

My hope is that this book can accelerate your adoption of Tableau.

CHRISTIAN CHABOT
CEO, CO-FOUNDER AND CHAIRMAN
TABLEAU SOFTWARE

•

Introduction

Tableau Software started ten years ago as a desktop application, but as the tool has matured it has become popular in the enterprise and is being used in “Big Data” environments. The *enterprise* means any type of significant organization—a global business or non-profit, such as a large university, small college or hospitals, banks, retailers, or internet-based data companies that have accumulated massive data sets. Or, this might refer to a small business with only a few employees. A short list of the types of organizations using Tableau should include:

- Multi-national financial institutions
- Federal Government
- International police organizations
- The military
- Government intelligence organizations
- Media companies
- Financial institutions
- Hospitals
- Book publishers
- Internet-based business (with Big Data)
- Insurance companies
- Non-profit entities
- Manufacturing and Distribution companies
- Education (universities, colleges, charter schools, public schools)
- Law firms
- Consulting firms
- Retailers
- Consumer products’ companies
- Accounting firms
- Consulting firms

Any person who needs to see and understand data is a candidate for using Tableau Software.

Tableau does a good job listening to their customers and partners. They've improved the speed, security, and added more visualization types to Tableau's capabilities.

Today, many large enterprises use Tableau because they find it increases user adoption rates. It also allows business users to create their own reports with relative ease—reducing the report backlog that accumulates within information technology departments. Smaller enterprises are using Tableau because it provides a low-cost way to turn data into useful information.

OVERVIEW OF THE BOOK AND TECHNOLOGY

This book aims to provide an introduction to Tableau in the context of the needs of enterprises—large and small. With every Tableau deployment, there are several user constituencies—report designers, who are responsible for performing analysis and creating reports; information technology team members, responsible for managing Tableau Server and maintaining good data governance; and the information consumers who use the output and may want to do their own report creation.

This book's goal is to provide each group with a basic introduction to Tableau's Desktop and Server environments, while also providing best practice recommendations that encompass novice, intermediate, and advanced use of the software.

HOW THIS BOOK IS ORGANIZED

There are four distinct sections. Part I (Chapters 1-8) covers the basics related to Tableau Desktop and then progresses to more advanced topics, including best practices for building dashboards that will be understandable to end users, load quickly, and be responsive to query requests made by information consumers.

Part II (Chapters 9-11) focuses on Tableau Server, mostly from the perspective of a technology manager responsible for installing, securing, and maintaining the Tableau Server environment.

Part III (Chapter 12) includes case studies from clients and experienced users who have deployed Tableau and are actively using it effectively. These short stories provide a glimpse into how other people are using Tableau and will provide grist for your brainstorming related to your own project.

Part IV (Appendices A, B, C, D)—Appendix A includes a detailed function reference, sorted alphabetically, that includes every function with example code and brief explanations. The intent is to provide a quick reference if you need to refresh your memory about the syntax of a function. One to three examples for most of the functions are provided. The goal of the function reference is to give you an easy way to refresh your memory regarding infrequently-used functions or help you learn about a function you've never used. Other supplemental material related to preparing data for analysis is presented in Appendix B, and Appendix C provides a brief introduction to the book's InterWorks book website. A glossary of technical terms is provided in Appendix D.

WHO SHOULD READ THIS BOOK

This book is intended to introduce new users to the features that Tableau Desktop has to offer from the perspective of someone who needs to create a new analysis or do reporting. It is also intended for staff responsible for installing, deploying, and maintaining Tableau Server.

The chapters related to Tableau Server are more technical because the subject matter assumes that you have a grasp of server terminology and security.

You can read the book sequentially from start to finish. Or, you can skip around and read about a topic of particular interest. Each chapter builds on the previous material, but if you've already mastered the basics of connecting and using the Desktop, you can skip any chapter related to Tableau Desktop and focus on topics of interest.

TOOLS YOU WILL NEED

You can read the book without having Tableau Software installed on your computer, but you'll get a lot more from the material if you follow the examples yourself. Tableau provides free trials of the software. Alternatively, you can download Tableau Public for free, indefinitely—all of the book examples related to Tableau Desktop should work on Tableau Public.

WHAT'S ON THE INTERWORKS BOOK WEBSITE?

Tableau constantly updates the Desktop and Server products with multiple maintenance releases and at least one major product release every 12 to 15 months. The InterWorks book website (<http://tableauyourdata.com>) includes articles related to the releases, sample files related to the book's examples, and will also include examples related to new capabilities added to the product as

Tableau makes them available. The InterWorks team actively tests new Tableau products, so the companion website may also include demonstrations of new visualization types or techniques before they become available publically.

Wiley also has a website dedicated to the book that you can find at:

www.wiley.com/go/tableauyourdata

SUMMARY

Tableau lowers the technical bar for accessing data from many different data-sources. This book should allow you to advance your technical ability and enable you to save time deploying Tableau in your enterprise by making better decisions, earlier in your deployment.

Contents

<i>Foreword</i>	<i>xix</i>
<i>Introduction</i>	<i>xxi</i>

Part I Desktop 1

1 Creating Visual Analytics with Tableau Desktop 3

The Shortcomings of Traditional Information Analysis	4
The Business Case for Visual Analysis	4
<i>Three Kinds of Data that Exist in Every Entity</i>	5
<i>How Visual Analytics Improves Decision-Making</i>	5
<i>Turning Data into Information with Visual Analytics</i>	8
The Tableau Software Ecosystem	8
<i>Tableau Desktop and Tableau Reader</i>	8
Introducing the Tableau Desktop Workspace	14
<i>Using the Workspace Controls Effectively</i>	14
<i>The Start Page and Data Connection Page</i>	14
<i>What You Need to Know about the Menu</i>	18
<i>Leveraging Toolbar Icons</i>	20
<i>The Data Window, Data Types, and Aggregation</i>	22
<i>Building Visualizations with the Row and Column Shelves</i>	25
<i>Number of Records, Measure Values, and Measure Names</i>	26
<i>Understanding Color in Icons and Pills</i>	27
<i>Using the View Cards to Identify Trends and Outliers</i>	28
<i>How the Status Bar Helps You Understand Visualizations</i>	30
<i>Saving Time by Using the Show Me Button</i>	31
Notes	33

2	Connecting to Your Data	35
	How to Connect to Your Data	35
	<i>Connecting to Desktop Sources</i>	36
	<i>Connecting to Database Sources</i>	37
	<i>Connecting to Public Datasources</i>	38
	What Are Generated Values?	39
	<i>Measure Names and Measure Values</i>	40
	<i>Tableau Geocoding</i>	41
	<i>Number of Records</i>	42
	Knowing When to Use a Direct Connection or a Data Extract ..	43
	<i>The Flexibility of Direct Connections</i>	43
	<i>The Advantages of a Data Extract</i>	44
	<i>Using Tableau's File Types Effectively</i>	45
	<i>Tableau Workbook Files</i>	45
	<i>Tableau Packaged Workbooks</i>	46
	<i>Tableau Datasource Files</i>	46
	<i>Tableau Bookmark Files</i>	47
	Joining Database Tables with Tableau	47
	<i>The Default Inner Join</i>	49
	<i>The Left and Right Join Types</i>	50
	<i>Customizing Tableau's Join Script</i>	51
	Blending Different Datasources in a Single Worksheet	54
	<i>When to Use Blending vs. Joins</i>	54
	<i>How to Create a Data Blend</i>	54
	<i>Factors that Affect the Speed of Your Data Connections</i>	59
	<i>Your Personal Computer</i>	59
	<i>Your Server Hardware</i>	60
	<i>The Network</i>	61
	<i>The Database</i>	61
	How to Deal with Data Quality Problems	61
	<i>Quick Solutions in Tableau</i>	62
	<i>Correcting Your Source Data</i>	63
	Note	63
3	Building Your First Visualization	65
	Fast and Easy Analysis via Show Me	65
	How Show Me Works	66
	<i>Chart Types Provided by the Show Me Button</i>	67
	<i>Text Tables (crosstabs)</i>	67
	<i>Maps (Symbol and Filled)</i>	68
	<i>Heat Maps, Highlight Tables, Treemaps</i>	69
	<i>Bar Chart, Stacked Bar, Side-by-Side Bars</i>	69

Line Charts For Time Series Analysis	70
Area Fill Charts and Pie Charts	71
Scatter Plot, Circle View, and Side-by-Side Circle Plots	72
Bullet Graph, Packed Bubble, Histogram, and Gantt Charts	72
Trend Lines and Reference Lines	74
Adding Trendlines and Reference Lines to Your Charts	76
Trend Lines	76
Reference Lines	76
Why the Concept of Scope is Important	78
Changing the Scope of Trend Lines	79
Sorting Data in Tableau	81
Manual Sorting via Icons	81
Calculated Sorts Using the Sort Menu	83
Enhancing Views with Filters, Sets, Groups, and Hierarchies. . .	84
Making Hierarchies to Provide Drill-Down Capability	84
Creating and Using Filters	86
Creating a Filter with the Filter Shelf	86
Grouping Dimensions	90
How Tableau Uses Date Fields	97
Tableau's Date Hierarchy	99
Rearranging Time with Tableau	100
Creating Customized Date Fields	101
Taming Data with Measure Names and Values	102
Notes	107

4 **Creating Calculations to Enhance Your Data** **109**

What is Aggregation?	110
Count Distinct Versus Count	110
Median	111
Dimension versus Attribute	111
What Are Calculated Values and Table Calculations?	112
How Do Calculated Values Work?	113
How Do Table Calculations Work?	114
A Word on Calculations and Cubes	115
Using the Calculation Dialog Box to Create	
Calculated Values	115
Field Selection	117
Function Selection	117
Parameter Selection	117
Building Formulas Using Table Calculations	118
Editing Table Calculations to Suit Your Purpose	120
Understanding Table Calculation Behavior	122

	<i>Customizing Table Calculations</i>	123
	<i>Secondary Table Calculations</i>	125
	Using Table Calculation Functions	128
	Adding Flexibility to Calculations with Parameters.....	129
	<i>What are Basic Parameters?</i>	130
	<i>What Are Advanced Parameters?</i>	132
	Using the Function Reference Appendix.....	135
	Notes	136
5	Using Maps to Improve Insight	137
	Creating a Standard Map View	138
	<i>How Tableau Geocodes Your Data</i>	140
	<i>Typical Map Errors and How to Deal With Them</i>	142
	Plotting Your Own Locations on a Map.....	144
	<i>Adding Custom Geocoding to Your Datasource</i>	144
	<i>Importing Custom Geocoding into Tableau</i>	145
	<i>Using Custom Geographic Units in a Map</i>	146
	Replacing Tableau's Standard Maps.....	149
	<i>Why Replace Tableau's Standard Maps?</i>	149
	<i>Replacing Tableau's Standard Maps to</i> <i>Enhance Information</i>	150
	Using Custom Background Images to Plot Spatial Data	152
	<i>Why Are Non-Standard Plots Useful?</i>	152
	<i>The Steps Required to Build a Custom Spatial Plot</i>	152
	<i>Positioning Marks on a Non-Standard Map</i>	153
	<i>Publishing Workbooks with Non-Standard Geographies</i>	156
	Shaping Data to Enable Point-to-Point Mapping.....	157
	Animating Maps Using the Pages Shelf or Slider Filters.....	159
	Notes	160
6	Developing an Ad Hoc Analysis Environment	161
	Generating New Data with Forecasts	162
	<i>How Tableau Creates Forecasts</i>	162
	Providing Self-Service Ad Hoc Analysis with Parameters	166
	<i>What Are Parameters?</i>	167
	<i>How Can Parameters Be Used?</i>	167
	<i>Basic Parameter Controls</i>	167
	<i>Advanced Parameter Controls</i>	171
	Editing Views in Tableau Server	175
	Note	176