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About the Author

Stephen Olejniczak (pronounced ole-en-ee-check) is the Director of Operations for ATI Communications, and has over ten years of telecom experience under his belt. His initial job in telecom was provisioning data services, eventually taking a position as the customer service manager for a small long-distance company, and finally as its manager of dedicated provisioning.

Stephen did not start out in life as a techie, only falling prey to the glamour and easy money after failing to find a career that enabled him to use his Bachelors degree in Cultural Anthropology. He currently lives in the quaint hamlet of Laguna Beach, California, with his wife, Kayley, and a collection of fountain pens.

Dedication

This book is dedicated to the entire telecom industry. From the CEOs of large carriers to everyone that supplies, sells, or uses phone service (I guess that is everyone in the world), I give you this tome of information. The primary group in the industry to whom I dedicate this book are those new employees who have just entered the wild world of telecom. The learning curve in telecom is vertical for at least the first six months, and it is easy to feel overwhelmed. Don’t let anyone talk down to you, because we all started out knowing nothing.

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Introduction

Welcome to *Telecom For Dummies,* a book for people who work in telecom (99 percent of whom come into the industry through no fault of their own). You're probably a very smart person, and so your boss decided to give you the responsibility of handling that expensive communication network that keeps the company in business. Don't worry! This book can help you work through almost any question you have about telecom. In the end, you will be very comfortable with your new environment and you will continue to impress others as the wonder kid they always believed you to be.

This book contains everything you need to know to order, maintain, and troubleshoot basic phone service. It covers the nuts and bolts of how phone systems work, why they work, and why it sometimes takes so long for them to work. When you have questions, simply track down the chapter and subsection that covers the issue in question, and after a little reading, you will be able to talk to any technician with confidence.

About This Book

This book was not intended for bedtime reading from cover to cover. It is a very helpful reference for telecom products, applications, and troubleshooting. The first few

parts cover finding a phone service that best suits your business needs. Another part provides the ins and outs of ordering what you need. If you already have a phone system set up, move to the part that covers what you need to know to troubleshoot the circuits and systems you've installed.

Every chapter has been written with you, not an MIT technician, in mind. The information is easy to understand and digest, even if you have absolutely no prior telecom knowledge. If additional information might be helpful, I refer you to another chapter for more information.

Telecom For Dummies is applicable to almost all phone service in North America, including Canada, many of the Caribbean countries and Guam. The regulations and infrastructure for telecom vary between most countries, and although some aspects may be applicable in Europe and Asia, the steps for ordering and testing systems vary.

Conventions Used in This Book

We've used a few conventions in this book to make it easier for you to spot special information. Here are those conventions:

- New terms are identified by using *italic* and followed by a short definition.

- Web site addresses (URLs) are designated by using a `monospace` font.
- If I tell you to dial a number or type a specific command, the command appears in **boldface.**

What You Don’t Have to Read

You don’t have to read anything that doesn’t apply to your needs. If you don’t have a phone system, or dedicated circuits, or place any international calls, for example, you can ignore the sections that cover them. The book contains enough great information that you won’t hurt my feelings by jumping from chapter to chapter (or even from section to section).

Icons Used in This Book

Telecom For Dummies includes icons that point out special information. Here are the icons I use and what they mean:

This icon makes you feel like a real telecom pro. It highlights special tricks and shortcuts that make understanding and maneuvering within the vast telecom world even easier. Don’t skip this information!

This icon reminds you of important information that can be far too easy to forget and which can cause a lot of frustration when you do forget.

Be careful when you see this icon. It points out an area where you'll want to be extra cautious so that you don't cause yourself problems. It also tells you how to avoid the problems.

Technical Stuff is information for folks who want to know all the geeky details.

Foolish Assumptions

I assume that you have seen a phone, dialed a phone, and have had a conversation on a phone before. In addition to that, your job is somehow linked to buying, selling, using, or supporting some kind of telecommunications service. I assume the following about your everyday contact with telecom tools and systems (perhaps you don't fit in every one of these scenarios, but you recognize yourself in at least a few of them):

- You have to make decisions on buying or upgrading phone services.
- You have had problems ordering phone service in the past and want to know some tips on how to keep moving forward without unnecessary delays.
- You have an inventory of toll-free numbers that you must manage.

- You want to find the most efficient way to speak to your carriers and hardware vendors so they understand your needs and expectations.
- You would like to have the power to troubleshoot issues, such as failed calls and quality issues, without relying on someone else for answers.

How This Book Is Organized

Telecom For Dummies has six parts. Each part is self-contained, but all the content is somewhat interconnected. That way you'll see the most useful information without a lot of boring repetition.

Part I: The ABCs of Telecom Services

This part explains the landscape of telecom, the key players, and how they work together. I describe the differences in responsibilities between local, long-distance, and wireless carriers. I also include information that introduces the basic telecom features and options.

Part II: Reviewing Telecom Products and Prices

Not every telecom product is right for every customer. Part II reviews the most common telecom products so that you can evaluate which of them are right for your business. This part covers a wide range of services, and helps you analyze whether you should jump from regular (switched) phone service to dedicated phone service. It also gives you the lay of the toll-free land and helps you maneuver through your phone bill, looking for areas that are costing you more money than they should. Stop the bleeding in this part, and figure out which of your potential telecom investments will give you the best return.

Part III: Ordering and Setting Up Telecom Service

The second most painful aspect of telecom is ordering new service (see Part IV for the most painful aspect of telecom). This part guides you through the ordering process for all services, from regular (switched) phone lines to dedicated circuits, to toll-free service. Because dedicated and toll-free services are complicated, I include a chapter in this part that goes the extra mile, showing you how to activate these services after you order them. All along the way, I tell you about potential pitfalls so that you can successfully avoid them.

Part IV: Taking Care of Your Telecom System

The most painful aspect of telecom is troubleshooting problems. The issue afflicting your system may be huge or microscopic, but you still need to fix it. Part IV covers troubleshooting switched phone lines, dedicated phone lines, and toll-free service in a step-by-step manner that enables you to make quick work of almost any problem. By following the rules I set out for you in this part, you can systematically identify problems and keep your technicians from going on a wild goose chase.

Part V: What’s Hot (Or Just Geeky) in the Telecom World

The chapters in Part V cover the world of telecom — beyond voice phone calls. I cover the basics of data transfer technologies, and the hottest buzzword in telecom right now, VoIP. Part V won’t show you how to write the code to transfer the data, but it does give you an overview of the newest and greatest technology, gives you some hints on pricing, and tells you about the hardware required to create a data-transfer interface with your carrier.