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Phil Simon

Author of *Slack For Dummies*

Zoom

by Phil Simon
Author of *Slack For Dummies*

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Zoom For Dummies®

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Introduction

Depending on your age, you may take today's powerful communication technologies for granted. (I have done it myself.) Trust me, however: Not that long ago, communicating with others was a dramatically different experience.

As recently as the early 1990s, the most pervasive methods for exchanging messages included instruments of which you may have never heard: landlines, intra-office memos, typewriters, and Telex and fax machines. For personal correspondence, handwritten letters were commonplace, not relics of a bygone era.

The following statistic illustrates the extent to which communication has changed over the last 30-plus years.

On January 24, 2001, the Federal Communications Commission (FCC) released a study on the telecommunications industry. Remarkably, the FCC found that the average per-minute rate for interstate calls in 1984 was roughly 17 cents. (Read the study yourself at `bit.ly/fcc-zoom`.)

Say that you lived in northern New Jersey in 1984, as I did at the time. You called your friend in New York and talked for an hour. You could expect to pay $10 for the privilege. And forget about international calls. Back then, talking to someone in another country was prohibitively expensive. (And you think that long-distance relationships are hard now?) Even worse, the quality and reliability of audio calls usually left more than a bit to be desired. As for video calls, they were pipe dreams back then.

Fast forward to today. Put mildly, we're not in Kansas anymore.

Communication has undergone a veritable sea change. Thank the usual suspects: increasingly powerful computers, the Internet, the World Wide Web, email, Moore's Law, social networks, smartphones with their über-addictive apps, the explosion of affordable broadband connections, improvements from telecommunications carriers, ambitious entrepreneurs, and cloud computing.

The most recent addition to this formidable list is Zoom. Its suite of tools allows hundreds of millions of people to communicate and collaborate easily, affordably,

and reliably with others no matter where they are. Both professionally and personally, Zoom allows people to stay in touch with each other, especially during pandemics and stay-at-home orders.

Zoom's products help teachers conduct virtual classes with their students. Pilates and yoga instructors use Zoom in similar ways. Rock bands jam via Zoom, including Marillion — one of my very favorites. Rabbis and priests rely upon Zoom to connect with their congregations from their homes. Journalists conduct interviews with it. In the corporate world, Zoom helps salespeople close deals, host untold numbers of employee- and customer- training sessions, and allow executives to address their troops from distant locations.

No, Zoom doesn't solve every conceivable communication problem. No software program can. Still, when used properly, Zoom promotes simple and effective communication — and more than 300 hundred million people have taken notice.

About This Book

Against this backdrop arrives *Zoom For Dummies* — the most extensive guide on how to use this powerful, flexible, affordable, and user-friendly suite of communication and collaboration tools. It provides an in-depth overview of Zoom's most valuable features — some of which even experienced users may have overlooked. The book you're holding goes beyond merely demonstrating how to install, configure, and customize Zoom's flagship Meetings & Chat product, though. It also offers practical tips on how individual users, groups, and even entire firms can get the most out of Zoom's tools. Finally and perhaps most important, I describe how to secure Zoom from prying eyes.

As with all titles in the *For Dummies* series, you'll find the book's organization and flow straightforward and intuitive. My tone is conversational, and I drop the occasional joke. (Whether or not it ultimately lands is your call to make.) Ideally, you'll have fun while concurrently learning how to use an increasingly important, popular, and useful set of tools. I certainly enjoyed writing it.

Foolish Assumptions

I wrote *Zoom For Dummies* with a number of different cohorts in mind:

- People who want to adopt a contemporary videoconferencing tool.

- People who generally want to know more about Zoom's different products and how they work. Perhaps they have subscribed to one (usually, Meetings & Chat) and want to learn more about the others.
- Employees at companies that have already experimented with or purchased Zoom but haven't explored most of its powerful features.
- Organization decision-makers who believe that their employees can collaborate and communicate better and be more productive. (Make no mistake: They are right.)

REMEMBER

The target audience for *Zoom For Dummies* is everyday users, not application developers. To be sure, I mention a few resources for people who want to know more about creating third-party apps. Coders looking for a text on how to build Zoom apps, however, will have to go elsewhere.

Zoom For Dummies presumes zero prior use or even knowledge of Zoom's suite of tools. Zilch. Fret not if you're not exactly tech-savvy. You'll be fine. Perhaps you just want to understand more about what this "Zoom thing" does and how you can do it. In fact, even if you have used Zoom's tools, reading this book will teach you a great deal.

Congratulations. You've found the right book.

I do, however, make a few assumptions. Specifically:

- You are curious about how you can use Zoom to communicate with your colleagues, partners, customers, vendors, and/or friends.
- You know how to use a proper computer, whether it's a Mac or PC.
- You can navigate a mobile device, such as a smartphone or a tablet.
- At some point in your life, you've accessed the Internet via a web browser.

I'm a firm believer in truth in advertising. By way of background, my editor and I wanted to keep this book at a reasonable length and cost. Accomplishing this objective forced me to make some conscious decisions about its content that I want you know from the get-go.

First, the book that you're holding is no 700-page opus. *Moby Dick* it is not. At the same time, though, it certainly isn't slim. *Zoom For Dummies* does not include step-by-step directions to configure and tweak every setting or feature for a single Zoom service, never mind all of them. Please understand this choice going in. Such a task is simply impractical. Even if it were, Zoom adds new features on a regular basis and, on occasion, changes and retires existing ones. All software companies do today. Way it goes. . .

At a high level, *Zoom For Dummies* highlights

- Its essential and frequently used features
- Some relatively obscure functionality that people should use or, at the very least, ought to know about

In some cases, I describe a feature without spending valuable space on how to actually do it because Zoom makes it self-explanatory.

Second and along these lines, I have intentionally written all the instructions in this book in a device-agnostic manner. In other words, I demonstrate how to do things in Zoom by using its desktop client and, in some necessary cases, via a web browser.

No, I'm not living in the past. (Well, I am with my tastes in music and movies, but I digress.) I know full well that mobile devices arrived in earnest a long time ago. At times, I mention in passing how you can perform a specific Zoom task on a smartphone or tablet. Due to space considerations, however, I simply cannot replicate how to execute each Zoom action on all iOS and Android versions and devices. Minor differences persist.

Even if I somehow managed to pull off that remarkable feat in the following pages, odds are that you'd ignore large chunks of *Zoom For Dummies*. Very few folks use every mainstream operating system or OS. People typically pick one side or the other. As Mr. Spock says in the 1982 film *The Wrath of Khan*, "Logic clearly dictates that the needs of the many outweigh the needs of the few."

Fear not, young Jedi. (Apologies to sci-fi geeks for putting *Star Wars* and *Star Trek* references so close together.) The vast majority of users find Zoom to be remarkably intuitive. You'll soon be able to naturally perform many of Zoom's key functions. In the event that accomplishing something on your phone or tablet vexes you, the support portion of Zoom's website contains detailed instructions on how to do whatever you want on every OS.

Icons Used in This Book

Zoom For Dummies highlights key information in the margins. You'll find small pictures that indicate the following:

TIP

This icon identifies shortcuts and/or tricks that should save you some time.

WARNING

Be careful whenever you see this icon.

TECHNICAL STUFF

This icon highlights technical information that may or may not interest you. If not, then feel free to skip it.

REMEMBER

You'll want to keep these key points in mind as you work in Zoom. This icon emphasizes those points.

Beyond the Book

In addition to the book that you're reading right now, you can also access a free Zoom Cheat Sheet. It's full of pointers and shortcuts on how to immediately start using Meetings & Chat. Access it by visiting `www.dummies.com` and typing "Zoom For Dummies Cheat Sheet" in the Search box.

Where to Go from Here

If you like, you can start reading this book on page one and continue to the end. The option is yours. *Zoom For Dummies* isn't a novel or play. If you've already dabbled with Zoom's powerful suite of communication tools, then you can jump around to the sections that pique your interest. I've written it in that vein.

If you're only considering hopping on the Zoom train or have only heard about it, then begin with the first three chapters. From there, you'll want to read in a relatively linear manner.

Regardless of where you ultimately start reading, you'll find it helpful to create a new, free Zoom account or log into your existing one at `www.zoom.us`. You should also download the Zoom desktop client for your computer. Over the years, I have taught myself plenty of new programming languages, applications, and technologies. I have found that getting my hands dirty and doing the exercises myself to be invaluable.

Thank You

Thank you for buying *Zoom For Dummies*. I hope that you find it useful, informative, and even a little entertaining. Throughout the book, I demonstrate Zoom's many potential benefits and how to take advantage of them.

I deliberately qualified the previous statement with the word "potential." Zoom's tools have never been an elixir. They don't let Zoom's customers magically solve all of their communication-related challenges.

Zoom will never be such a tool, nor will any technology or app for that matter. Despite being able to use Zoom, many employees will invariably revert to incessant email threads; these folks will use Zoom intermittently, if at all. In the process, they will fail to recognize its considerable advantages. As with any new tool, Zoom's ultimate individual, group, and organizational success hinges upon many factors. At the top of my list are opening your mind and setting realistic expectations for what it can and can't do.

Good luck on your journey for better communication and collaboration. Let me know if I can help.

Phil Simon | *www.philsimon.com*

June 30, 2020

1 Staying Connected with Zoom

IN THIS PART . . .

Find out about Zoom and the core technologies behind it.

Discover how Zoom became the gold standard for videoconferencing.

Get to know Zoom's robust suite of collaboration and communication tools.

IN THIS CHAPTER

- Explaining what Zoom's tools do
- Dissecting the reasons that Zoom grew so quickly
- Understanding Zoom's competitive landscape

Chapter 1

Communicating and Collaborating Better with Zoom

What is Zoom anyway? Where did it come from? Was it the result of long-term planning, a eureka moment, or a happy accident? Is Zoom only for large organizations, or can smaller ones benefit from it? And what business problems does Zoom solve, anyway?

This chapter answers these questions in spades. Further, it provides some background information about Zoom, the technologies behind it, and its main competition.

Introducing Zoom

Zoom provides a suite of simple, affordable, powerful, secure, and interoperable communication and collaboration tools. As of this writing, the company's self-purposed mission is to make video communications frictionless.

As you see in this book, Zoom has accomplished its mission in spades. Zoom's management and investors bet the company on the belief that it could build a better mousetrap. With it, people could accomplish more than they could without it. Again, you can check that box. That gamble has paid off handsomely. It has vastly exceeded its early aspirations.

Discovering Zoom's origins

In August 1997, Eric Yuan began working as a software engineer at Webex — one of the first enterprise-videoconferencing companies. Yuan grew his team from ten engineers to more than 800 across the globe. To paraphrase Ron Burgundy of *Anchorman* fame, Webex became kind of a big deal. On March 15, 2007, Cisco Systems acquired the company in a deal worth $3.2 billion.

At Cisco, Yuan rose to the level of VP of Engineering — a key role at a tech juggernaut. As part of his job, he spent a good chunk of his time talking to Webex enterprise customers about the videoconferencing program. To put it bluntly, many businesses disliked Webex's complexity and general clunkiness. (Apropos of nothing, I felt the same way back then.)

After a few years, Yuan began to doubt whether Cisco would be able to improve Webex as much as its customers were demanding. To boot, other software vendors were starting to catch up. Yuan questioned whether Cisco's management would invest the requisite time and resources required to build a new, better generation of videoconferencing products — one that could easily scale up and down as needed thanks to the rise of cloud computing.

Yuan wasn't guessing; he exactly knew what enterprise customers needed. He envisioned a single, modern app that would seamlessly work on any device: laptop, computer, tablet, and smartphone. Because of his background, Yuan realized that minor tweaks to Webex's legacy code base would not suffice. Rather, undertaking such an endeavor would require a ground-up product rebuild.

Yuan knew that transforming Webex at Cisco would require him to fight many bruising internal battles. After several relatively enjoyable post-acquisition years, the politicking was starting to wear Yuan down. As he told NBC in August 2019, "Every day, when I woke up, I was not very happy. I even did not want to go to the office to work." (Visit `cnb.cx/zfd-123` to read the article.)

Yuan predictably left Cisco in June 2011 and took 40 talented engineers with him. Later that month, he founded Zoom Video Communications, Inc. He wanted to refine a concept that he first conceived during the 1990s as a college student in China. Back then, Yuan had to commute ten hours to his then-girlfriend, now his wife. (Read the entire interview at `bit.ly/zfd-eric`.)

The company launched its flagship Meetings & Chat service in January 2013. Its target customers remained the same from Yuan's Webex and Cisco days: other businesses. By May 2013, more than 1 million people used Zoom products. In March 2019, Zoom officially filed to go public on the NASDAQ. April 18, 2019, marked its first day of trading.

Understanding what Zoom does

Zoom's tools help individuals, formal and informal groups, departments, and even entire organizations communicate and collaborate better. In this way, Zoom falls under the umbrella of technologies often labeled as *Unified Communications* (UC). The term first gained popularity in the mid-1990s. (I'm happy to report that I was there.) In a nutshell, UC describes a collection of integrated, enterprise-grade communication services. Specific examples include

- **Instant messaging (IM):** Also known as *chat*.
- **Presence information:** Status indicators that conveys one's availability to communicate.
- **Voice:** This bucket includes calls or, more precisely, Internet Protocol (IP) telephony.
- **Audio, web, and video conferencing:** The ability to hold different types of calls with large groups of people.
- **Desktop sharing:** The ability to instantly see what your peer is doing.
- **Data sharing:** Interactive whiteboards, annotation, and the like.
- **Unified messaging:** Integrated voicemail, email, and fax.

You may not have heard of UC before now. Again, though, it's not exactly new. In fact, the idea of using the web to do things such as make audio and video calls is almost as old as the web itself.

The following sidebar explains a bit of history behind some of UC's technical underpinnings. Make no mistake: These pillars remain critical today even if they run seamlessly in the background. Feel free to skip the nearby sidebar, however, if you consider it too much information — or TMI, as the kids say today.

A BRIEF PRIMER ON COMMUNICATING OVER THE INTERNET

You probably have not heard of ARPANET, but you almost certainly use the technology behind it every day.

In the 1960s, the Cold War between the United States and the former Soviet Union was simmering. The two powers nearly destroyed each other during the 1962 Cuban Missile Crisis. Things got very real. In the aftermath of the near debacle, government officials began to wonder how citizens would communicate with each other in the event of a nuclear conflict and tens of millions of deaths.

Against this backdrop, the U.S. Department of Defense launched the Advanced Research Projects Agency. The agency began work on a decentralized network that would, at a high level, address that very question. Launched in 1969, ARPANET represented the first network of its kind. Back then, communication networks were primitive, especially by today's standards. (If Netflix had existed back then, you would not have had any luck streaming 4K videos.)

But how would that network actually work?

Packets

Circuit-based networks are centralized in nature. Examples include traditional telephone systems. In the event of a nuclear war, one strategic missile would render the entire network inoperable. What's more, they involve a great deal of manual intervention. That's why switchboard operators manually patched through calls to recipients beginning in 1878. Brass tacks: The ARPA folks knew that a circuit-based network ultimately wouldn't meet their objectives.

Remember that even the most powerful networks of the time could not transmit even modest amounts of information in one big chunk. To overcome this obstacle, ARPANET engineers and scientists relied upon a concept called *packet switching*. Developed by American computer scientist Paul Baran in the early 1960s, the basic idea involved automatically breaking down data sent over digital networks into their smallest possible components: packets. The network would disseminate these packets without any human intervention. For more on this arcane yet fascinating subject, check out Katie Hafner's 1998 book *Where Wizards Stay Up Late: The Origins of the Internet* (Simon & Schuster).

To this end, APRANET was downright revolutionary. It represented the first wide-area packet-switching network. Ever. Even though today's telecommunications networks are

far more robust than they were 50 years ago, packet switching remains a core tenet of today's Internet. And so are protocols.

Protocols

Think of protocols as common languages that allow devices, networks, computers, and servers to communicate with each other. For example, all websites begin with *http*. That's no coincidence. The acronym stands for *Hypertext Transfer Protocol*. Among other things, http defines how the web formats and transmits messages, images, web pages, and much more. Email also relies upon several essential protocols.

As it relates to some of Zoom's suite of services, two protocols are especially important:

- **H.323** provides multimedia communication standards for equipment, computers, and services across packet-based networks. It specifies precisely how to transmit real-time video, audio, and data. H.323 is popular with IP-based videoconferencing, Voice over Internet Protocol (VoIP), and Internet telephony.
- **Session Initiation Protocol** (SIP) initiates, maintains, and terminates real-time sessions. Typical applications include voice, video, and messaging.

Bottom line: Without packets and protocols, you wouldn't be able to send an email or view a web page, much less make audio or video calls from your devices.

Reviewing the numbers behind Zoom's rapid ascent

Zoom has been a popular enterprise tool since its inception. Case in point: In December 2019, 10 million people regularly used Zoom's tools. Most CEOs only dream about this level of success. Along the way, Zoom has landed many prominent customers, including

- The Nasdaq stock market
- Ridesharing behemoth Uber
- Delta Airlines
- Harvard University
- High-end audio vendor Sonos

Of course, the preceding list consists of large organizations and/or multibillion dollar companies. You may be thinking that Zoom lies outside of the reach of your local law firm, dentist's office, or web-design shop.

And you'd be spectacularly wrong.

For a variety of reasons that I cover later in this chapter, Zoom has long appealed to the smallest of startups and mid-sized businesses. (See the section "Reaping the Benefits of Zoom's Tools.")

Case in point: My friend Andrew Botwin runs a successful executive coaching shop. His company is the very definition of a small business. Like me, he gladly pays a modest annual fee for Zoom's Pro Meetings & Chat plan. (Chapter 2 covers Zoom's specific offerings, plans, and prices, in far more detail.) As Botwin told me, "Zoom allows me to conduct meetings with an in-person type of feel. It also lets me easily share my computer screen with my clients."

Zoom's industry penetration runs the gamut: healthcare, retail, higher education, manufacturing, finance, nonprofit — you name it. As for employer age, companies both young and old have jumped on the Zoom bandwagon. For years, thousands of businesses have regularly used Zoom's tools to communicate and collaborate with their employees, customers, prospects, and partners.

TIP

To read more about how a wide array of companies uses Zoom in innovative ways, go to `bit.ly/zm-cust`.

All of this is to say that, as a company, Zoom was doing extraordinarily well before a global pandemic shook the world to its core.

Assessing how COVID-19 changed Zoom's trajectory

Starting in early February 2020, the company's floodgates began to blow open. In a matter of weeks, oodles of businesses from mom-and-pop stores to large enterprises started getting Zoom religion. Examples of rapid Zoom adoption abounded during this unprecedented time. Here's one of them.

On March 19, 2020, California governor Gavin Newsom issued a stay-at-home order for his state's citizens. As a result, thousands of California-based businesses needed to adapt to a new world — and fast. One such shop was Reeder Music Academy based in Danville, California. Within a week, the 28-employee company migrated roughly 70 percent of its classes online using — you guessed it —Meetings & Chat. Thousands of small businesses in just one state would have immediately shuttered were it not for affordable videoconferencing tools such as Zoom.

A VERY BRIEF HISTORY OF CORONAVIRUS

In late 2019, tens of thousands of Chinese citizens mysteriously contracted a severe respiratory illness and started dying. People with heart disease, diabetes, obesity, and generally weak immune systems were particularly susceptible to contracting it. Ultimately dubbed coronavirus, the outbreak quickly escalated to nightmarish proportions and every country in the world. On March 11, 2020, the World Health Organization did the inevitable and declared COVID-19 a global pandemic.

Since that time and as of this writing, the numbers have been nothing short of grim: According to Johns Hopkins University, more than 500,000 people have died across the globe. More than five million others became infected but have since recovered. Epidemiologists almost unanimously agree that a second wave is coming in the fall of 2020.

When coronavirus hit the United States in earnest, it evoked images of the 1918 Spanish flu. To minimize the carnage and stress on their healthcare systems, state governments — some far more reluctantly than others — issued stay-at-home orders.

COVID-19 did not just leave more than 100,000 dead bodies in its wake. It wrought psychological, social, and economic devastation as well. With respect to the latter, tens of millions of Americans lost their jobs. U.S. unemployment spiked to nearly 15 percent in April 2020. Most workplaces, parks, restaurants, schools, retail stores, and places of worship closed. Musicians postponed concerts, comedians canceled shows, and professional sports as the world knows them ceased to exist.

Against this backdrop, hundreds of millions people needed to find new, virtual ways to work and, more than that, recapture some semblance of normalcy. In each case, Zoom was the most popular choice.

And Zoom adoption quickly spread to decidedly non-corporate environments. As but one example during the height of frenzy, teachers from more than 90,000 schools across 20 countries began educating their students from their homes via Meetings & Chat. Beyond professional reasons, people needed a way to connect with their family and friends. Again, Zoom answered the bell.

To say that Zoom's user numbers exploded over a three-month period would be the acme of understatement. By the end of March 2020, more than 200 million people participated in both free and paid Zoom meetings every day. (Industry types refer to this number as *daily active users*, or DAUs.) By way of comparison,

just four months earlier, Zoom had averaged approximately 10 million DAUs. The 2,000 percent increase was downright stupefying.

And Zoom's user growth didn't stop there.

During its first fiscal quarter of 2020 (ending on April 30), Zoom reported that its DAUs had climbed to 300 million — a 50 percent jump from only a month earlier. Many of those users decided to become proper customers. Company revenue in that quarter grew by an eye-popping 169 percent. Analyst Richard Valera of the asset-management firm Needham called the results "incredible." (Read more about Zoom's most recent financial results at `on.wsj.com/2Y0RJjz`.)

Fast-forward a few weeks. As of July 1, 2020, Zoom's market capitalization exceeded a staggering $73 billion. If you had bought Zoom stock just a few months earlier, you'd be ecstatic.

It wasn't all puppy dogs and ice cream for Zoom, though. On the flip side, its viral consumer growth has led to some unexpected issues and a slew of bad press. (I cover those legitimate concerns in Chapter 9.) For now, however, rest assured: Zoom's management has taken its unforeseen challenges very seriously.

Reviewing Zoom's industry awards and recognition

Beyond Zoom's outrageous growth, the company has garnered plenty of recognition and even won some prestigious industry awards. Highlights include

- **Leader in Gartner 2019 Magic Quadrant for Meeting Solutions:** You may not be familiar with the world of enterprise software. Trust me, though, vendors expend an enormous amount of energy trying to land in the vaunted Magic Quadrant.
- **2019 Inc. 5000 list of America's fastest-growing private companies:** Employers that make this list are doing something right.
- **Glassdoor Second Best Place to Work in 2019:** Employees tend to like working at Zoom. This accolade and its attendant publicity help the company attract, retain, and motivate highly skilled workers.