Preface

The year 2000 marked a turning point for the Internet. For the first time, over 50% of all American homes and more than 90% of all American college students had Internet access. As a group, college students are relatively savvy about the Internet, quick to exploit online resources and eager to embrace technological innovations. Out of necessity, most students have learned what they know about the Internet on their own. They’ve learned by word-of-mouth, by browsing the Web, and by asking friends for help. This hit-or-miss process works to some extent, but it does have its limitations. For one thing, it takes a long time to cover the basics when your lesson plan relies on serendipity. In addition, some things are likely to be learned the hard way, and the school of hard knocks can be downright painful when it comes to computers.

This book is for anyone who wants to learn more about the Internet. These pages cover all the basics for those who are just starting out. At all times, our emphasis is more practical than technical, although we aim for a level of understanding that is more general than the operation of specific software applications.

FROM NEWBIES TO NETIZENS

In these chapters you will find a solid foundation of basic concepts and practical know-how for everyone from the novice to the self-taught expert. You don’t have to have any experience with the Internet to get started with this book—we explain it all from scratch. On the other hand, if you’ve been online for a few years and think you know everything, you might be surprised to find out how much you still have to learn. This book was written for a range of readers, from Internet newcomers (the “newbies”) to seasoned regulars (the “Netizens”).

In order to address a wide range of readers, we have structured our topics in a way that makes it easy to pick and choose. Each chapter is written in two parts: The first part contains core topics that cover the basics. A newbie could cover just these core topics and learn enough to make the Net a valuable asset. The second part is easily identified by sections titled “Above and Beyond” the core topics. This material is for those who already know the basics and want to dig a little deeper.

WHAT’S IN THE BOOK

Chapter 1 starts by explaining some basic computer and computer networking concepts as a foundation for all that follows. We develop a working vocabulary in Chapter 1 before moving on to an in-depth tour of the Internet. Chapter 2 surveys important pitfalls and precautions before the real hands-on learning begins—we don’t want anyone to get into trouble, and there is danger out there. Starting with Chapter 3 on e-mail management, we encourage readers to dive right in and use the Net. E-mail is a good place to start because many people have an e-mail account and are already familiar with at least one e-mail program.

No book about the Internet would be complete without an introduction to Web-page construction. We cover the basics of HTML in Chapter 4 for beginners.
Although the Internet is clearly about computers, computer networks, and computer software, the Internet is also about information. We cover online search strategies (Chapter 6). To be knowledgeable about the Internet also means being educated about a wide range of contemporary issues, including intellectual property law, software piracy, and personal privacy in a digital age. These topics are all introduced and discussed, with advice and guidelines for all Internet users.

WHAT’S ON THE WEB

As one of the reviewers for this book commented, timely Internet topics have the “half-life of a May fly.” As soon as you put something about the Internet into print, it’s out of date. This is true of the technology that drives the Net, the software we use to tap the Net, and all the information that lives on the Net. Any book about the Internet is not just a shot at a fast-moving target; it’s also a shot at a shape-shifting target as well.

With so much in flux, it makes sense to turn to the Net itself for updates. Each chapter of this book contains pointers to resources on the Net. The most important pointers are grouped inside special sections titled “Where Can I Learn More?” Others are scattered throughout the text but printed in blue to help you spot them. You can visit our Web site and find links to all of the online resources referenced throughout these pages:

http://www.awl.com/lehnerlightweb

Many of the Web sites mentioned throughout this book are accompanied by URLs, but not all. Web page addresses are notoriously short-lived and require frequent updates. We cannot update a URL that appears in these pages, but we can update the links at our Web site. We will update any URLs at the Web site as needed in order to keep these resources readily available. You will also find a software index with links to software sites, documentation, and tutorials (if available) for all of the software mentioned in this book.

SOFTWARE THAT STUDENTS CAN USE

It is impossible to discuss software without showing examples of specific software packages in action. This is tricky in an educational text because we are not trying to endorse specific products, we just want some concrete examples for good pedagogy. We are also aware that it can be discouraging for students to see software that they cannot afford, and many popular software titles (e.g., Web-page construction kits) may be out of reach for a large number of students. In an effort to avoid commercial endorsements and pricey software, this book emphasizes the use of freeware (with two or three exceptions where no good freeware was available).

This policy may perplex some instructors and experienced Netizens, who may find themselves wondering why the book showcases an obscure piece of freeware instead of a popular shareware alternative. In all cases, I have tested each of these freeware options myself and have found them to be largely comparable to their better-known $20–$30 counterparts. When it comes to software, high prices and high quality do not always go hand in hand. Some students need to cut corners, and software is one place where students can exploit the Internet to great advantage.

For those who prefer to see a perfect match between the software in front of them and blow-by-blow instructions in a textbook, I would suggest putting more emphasis on the underlying functionality of comparable software packages and less emphasis on soft-
ware-specific details. There is nothing terribly unique about most Internet software applications. The underlying functionality of a Web browser, an FTP client, or a download manager does not vary a great deal from program to program. It’s a rare piece of software that distinguishes itself with truly original operations and features. This is good news for users: If you master one application, you can master any other application of the same type without much trouble. The menus and check boxes won’t be identical, but the basic commands and preferences will all be there.

Software is constantly being upgraded and replaced, just like everything else on the Net. If we publish detailed instructions for a particular software exercise, there is an excellent chance those instructions will be obsolete within a year. Once again, it makes sense to focus on the basic functionality of an Internet application rather than on specific command lists and instructions. We do illustrate selected preference settings with screenshots for the sake of having some concrete examples, but no attempt has been made to provide comprehensive coverage at this level of detail.

HANDS-ON LEARNING

We may steer clear of in-depth software tutorials, but we emphatically stress that there is no substitute for hands-on software experience. No one can learn about the Internet without getting online and working with Internet software applications. To facilitate software mastery, many chapters have software checklists that enumerate the most important things you should be able to do with a given piece of software. We do not tell you how to do them, just that you should be able to do them. For readers who have trouble with a software checklist, solutions for all of the most popular software applications are available at [http://www.awl.com/lehnertlightweb](http://www.awl.com/lehnertlightweb). In this way, readers using different software can still tackle a software checklist and get the help they need—not from the book, but from the book’s Web site. When the software changes, we will update our checklist solutions with solutions for new software releases or entirely new software packages as needed. Additional opportunities for first-hand software experience will be found in exercises that have been marked [Hands on].

PEDAGOGICAL FEATURES

Each chapter is divided into two sections: a section containing core topics, followed by a separate section containing optional topics. At the end of each core section you will find:

**Things to Remember**—Facts, tips, and reminders
**Important Concepts**—Key terminology and definitions
**Where Can I Learn More?**—URLs for relevant Web sites
**Problems and Exercises.** Including three special types of questions:
- [Find It Online]—Find the answer on the Web
- [Hands On]—Gain experience with software
- [Take a Stand]—Present and defend an opinion

Throughout the text, we also distinguish notable material using a system of five reference boxes:

**Tips and Tricks**—Useful information of practical value
**Definitions**—Definitions for important terms or phrases
TOPICS AND CHAPTER SELECTION

First Things First - Chapter 1
To get off the ground, we introduce the Internet in Chapter 1. Most importantly, we use this chapter to introduce a core vocabulary which will be used throughout the book. We cover important Internet concepts and practical tips for working with Web browsers. Most of this material should be familiar to a seasoned Netizen, but the newbies will find Chapter 1 an important prerequisite for everything that follows.

Personal Safety Online - Chapter 2
There are some very real dangers online. Many will be discussed in great detail throughout the book. But we have devoted Chapter 2 to the topic of personal safety so you’ll have everything you need to know in one place. If you master Chapter 2, you’ll steer clear of the most serious mistakes that people make online.

E-Mail Management - Chapter 3
Everyone uses e-mail these days, but not everyone has it under control. Chapter 3 begins with the basic operations of any good e-mail program and covers the rules of e-mail netiquette that everyone should know. We look at different e-mail services (POP, IMAP, HTTP) and discuss the pros and cons of each service. Then we move on to filtering, routing, and some general mail-management tips.

Basic Web Page Construction - Chapter 4
Web pages are easy to create and can be a lot of fun. Chapter 4 introduces HTML, the language of all Web pages. We explain and illustrate the elements of beginning HTML, concluding with a presentation of tables and frames. With this level of knowledge, students can construct a recreational Web page, spruce up a seller’s listing at eBay, or add some pizazz to an e-mail newsletter. For those who want to learn more, this is a good foundation for intermediate tutorials and more advanced topics in Web page construction.

Find What You Want—Fast! - Chapter 5
You might be wasting a lot of time if you keep going back to the same old search engine every time you need to hunt down information on the Net. Chapter 6 presents a systematic approach to online searching. We describe three different types of search tools, and explain which tools are best for what types of questions. We show how to use suc-
cessive query refinement to get the best possible results, and we finish up with a dis-


cussion of quality assessment.

**A NOTE TO THE STUDENT**

As the Internet evolves, we all have to struggle to keep up, and the first step is a solid

foundation. Seemingly mundane activities such as a trip to an e-store can turn into a

regrettable undertaking if you don’t know how to spot a secure Web server, how to pro-
tect personal information from data resellers, or to expect the unexpected. Other prob-

lems creep in over time. For example, e-mail is a breeze until you start getting 100

messages a day. Then you need to get organized and take advantage of specialized
tools for e-mail management.

Ignorance of computer security is another pitfall for newcomers to the Internet. Each
time you connect to the Internet, you open the door to possible hacker attacks. If you
visit a poorly designed e-store, your credit-card number could be stolen. Spend some
time at another site, and highly personal or sensitive information can wind up in count-
less databases. You can break the law by downloading the wrong file, or you could find
yourself visited by the FBI, or on the receiving end of a lawsuit for speaking candidly
about the wrong subject in an online forum.

Whether you expect to use the Net personally or professionally, this book will give you
the skills you need to make the Net a real asset. No one can say what the Internet will be
like five or ten years from now, but the people who are using the Internet today will help
shape the Internet of tomorrow. In a very real way, this technology belongs to you and is
yours to mold. Every week, some Congressional hearing in Washington touches on the
Internet in one way or another. Children need to be protected. Consumers need to be pro-
tected. Musicians and artists need to be protected. A burgeoning e-commerce needs to
be nurtured, and a digital divide between the rich and the poor needs to be crossed.
Learn about the Internet today, and you will get the Internet you want tomorrow.

**A NOTE TO THE INSTRUCTOR**

If you’ve taught an Internet course before, you know the Internet is not your only mov-
ing target. Your students are changing at least as fast as the Net itself, and it may be
necessary to take their collective pulse two or three times a year. We know that college
students tend to be very interested in music: Many students already know how to find
and download music files from the Net. Some students have mastered the know-how
needed to find and download software from the Net because they’ve investigated their
MP3 player options (the software needed to play music files found on the Net). These
same students have probably been using e-mail for at least a year or two, they may
have dabbled in Web-page construction, and they have probably purchased at least
one item online. We know that online chat is also quite popular among students, and
a growing number of students are learning to use the Internet to make long-distance
phone calls at reduced rates. We hope that students are also using the Internet to
enhance their education and find valuable information. Evidence suggests this is true:
We know that 80% of all students graduating in 1999 used the Internet to search for a
job or research a prospective employer.

**The Digital Divide**

If you conduct a survey of your students, you will find that many are knowledgeable
about e-mail and Web browsers, others are very experienced with a wide range of
Internet resources and applications, and a few have managed to miss out on everything and are desperate to catch up. This wide range of expertise is a major challenge facing all instructors of the Internet. You need to hold the interest of the more experienced students while getting the less experienced students off the ground. If the digital divide is dramatically apparent in your classroom, your syllabus must be flexible and your assignments must somehow accommodate everyone.

In the Instructor’s Manual (IM) that accompanies this text, I address the very real problem of the digital divide. Students who do not have their own computers will not be able to do some of the hands-on chapter exercises, even if computing facilities are available to your students in computer labs. Security concerns usually prohibit students from downloading and installing software from the Internet in educational computer labs, and this will be a problem for some of the exercises in Chapters 8 and 9. I have some suggestions in the IM for handling this, as well as other problems related to the digital divide.

Wizards in the Classroom
Courses about the Internet are usually fun for both students and teachers, but neither should underestimate the amount of work involved. Everyone is struggling to keep abreast of the most valuable Internet tools and resources. You should expect to find at least one or two students who are more experienced than you are with some aspects of the Internet (the “wizards”). I tell you how to identify these individuals early on and give you some suggestions on how to turn their expertise into a classroom asset.

With each new class, an instructor should always revisit the question of where to start, how fast to move, and how much material to cover. In the case of the Internet, initial class assessments are even more important. In the IM, I show you how to assess your class with a few casual questions during your first class meeting. Not only can you benchmark your class in general, but you can smoke out the wizards right from the start.

The Instructors Manual
The IM also contains all the usual things you hope to find in an IM:

- Solutions to all the problems and exercises in the book
- A large archive of test questions, indexed by chapter and section
- Chapter notes and teaching tips
- Suggested classroom demonstrations
- Suggested class projects
- A checklist of things to do at the start of the semester
- A sample class syllabus (with variations)

All recipients of the IM are also welcome to join my Internet 101 Mailing List for Internet instructors (see http://www.awl.com/lehntweb101/ for instructions on how to subscribe). Members are welcome to post questions, ask for advice, report on classroom experiments, and look for inspiration in our collective classroom experience.

I’ve had a lot of fun teaching undergraduates about the Internet, and I have written the IM for both the inexperienced first timer as well as for the experienced teacher who is looking for ways to improve an existing course offering. Students bring considerable enthusiasm to the subject of the Internet; all you have to do is sustain it. The Internet itself is always a plentiful source of timely Internet-related news items. Plus, students who have been online for a year or more have probably had their own first-hand learning experiences. If you draw from the news as it happens, and encourage selected students to participate in your class presentations, you can sustain a high level of interest and involvement (your own included) for an entire semester.
WHY THE IGUANA?

For those who are curious about the cover of this book, I suppose I should say a few words about the iguana. The green iguana is a fitting symbol for everything that is unique and wonderful about the Internet. Iguanas are surprisingly popular in the United States as pets, especially among college students and the 20- or 30-something crowd. Unfortunately, much published misinformation is available to a prospective iguana owner about what constitutes a healthy diet or how an iguana should be housed. Luckily for the iguana, many iguana enthusiasts are active on the Internet and talking to each other. Questions from beginners are being answered in great detail by herpetologists and experienced iguana owners. Thanks to the Internet, this native inhabitant of tropical rain forests now thrives in Arizona, Alaska, and all kinds of intemperate regions. The iguana community is not a place you will find on any map, but it is alive and well on the Internet!

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Wendy Lehnert (February 2001)