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Brendan P. Kehoe

Zen and the Art of the Internet

A Beginner's Guide

Fourth Edition

Brendan P. Kehoe

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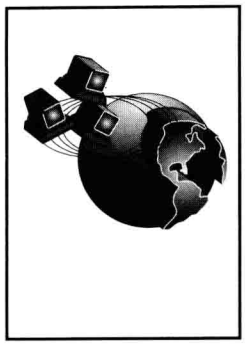

Zen and the Art of the Internet

A Beginner's Guide

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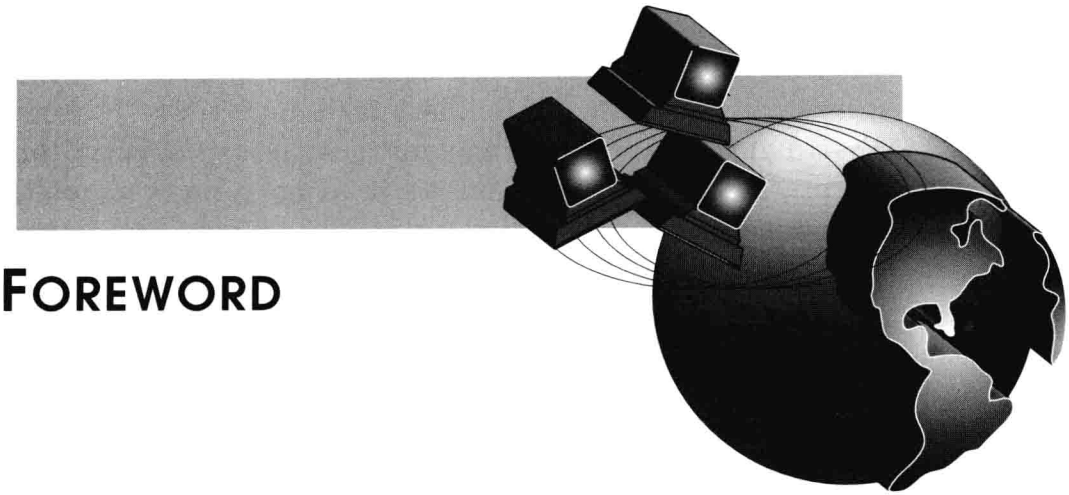
Dedicated to
Mary Ellen Miner
and
Frank Hackett

Thanks.



FOREWORD

One of the wonderful things about working on the Internet is the near guarantee that help will arrive from unexpected places. In this case, a local guide prepared so that a system administrator at a small college wouldn't have to answer so many pesky questions about how to use the Net has turned out to be just the key to helping people all over the world get up to speed on the way the Internet works.

Zen and the Art of the Internet is more than just a collection of recipes of how to connect to this or that site or what arcane commands to type at what prompts. There's a lot of that, to be sure—the Net still has what John Perry Barlow terms a "savage user interface," and some amount of hand-holding is needed to guide people through the rough spots. Much more than that, though, *Zen* gives the new user of the Net some clue as to *why* things are as they are, how people interact in this environment, and an approach to make their use of the Internet less of a hunt through the wilderness.

Brendan has written a book which has been on the wish lists of network builders for a long time—a clear, straightforward, and engaging description of what the Internet is and why you want to be connected to it. While large sums of money may build bigger and faster networks, *Zen* argues that it is the mass of well-trained, literate, and interesting people *behind* the wires and computers that makes them really successful.

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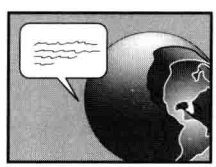

"I think, though, that if I suddenly found myself in the, to me, unthinkable position of facing a class in English usage and style, I would simply lean far out over the desk, clutch my lapels, blink my eyes, and say, 'Get the little *book! Get the* little *book! Get the* little *book!'"*

—E.B. White,
introduction to Strunk and White's
The Elements of Style.

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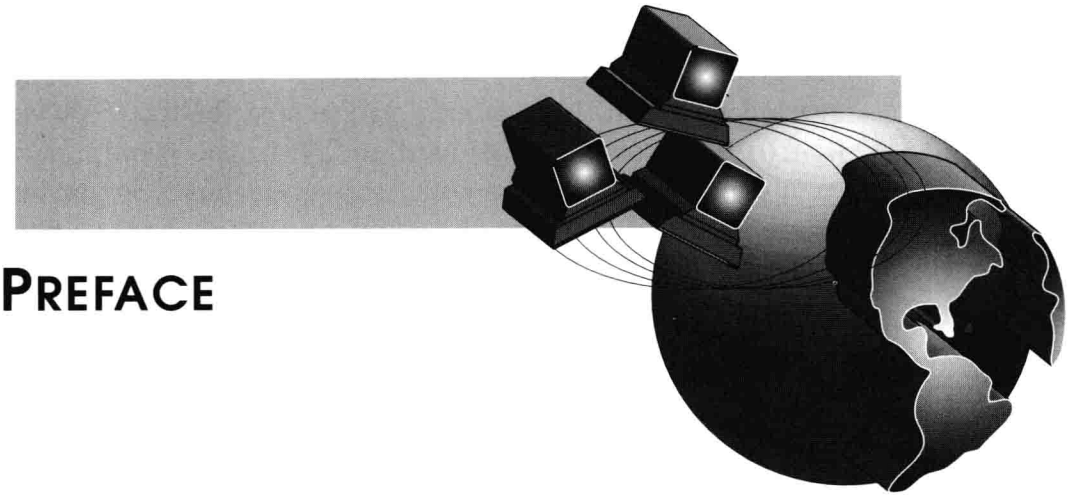


PREFACE

When historians travel through the records of a century, seeking those events that had a pronounced impact on society as a whole, they often find ideas that were originally nothing more than passing thoughts.

Over time, these inspirations grew to affect the daily life of millions of people. The car, the telephone, finding a cure for illnesses like the polio virus, all of these discoveries made a notable impression on the global culture.

What you are now pursuing—this global method of communications known as *networking*—will be seen to have had a similar effect. Look at our world today: friends staying in touch across the oceans; researchers sharing their results not in terms of days or weeks, but *minutes*; couples being married after having met in Cyberspace; and most of all, a generation being born to communicating with other nations as if it were a commonplace occurrence.

The uncountable millions of people all becoming

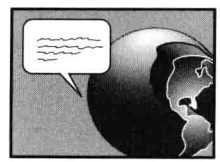
involved in this world-wide sharing of information each started out with the curiosity you're now feeling. You've heard the Internet mentioned on TV, in the newspaper, in cartoons, even in every-day conversations. So you've finally decided to "take the leap" and learn how to use this new medium—to see if it meets the grand predictions you've been told.

This book is intended to ease you into this new world. As you go along, you'll find new ways to talk, new ways to think. If you encounter areas of this virtual world that leave you confused or frustrated, don't give up. Odds are you know someone who can explain that particular area to you. And most of all, realize that it's like any other aspect of life: the potential routes are uncountable. Choose your pursuits carefully, and know that the Internet is used by a community driven by its desire to share information with others. It has grown from an interesting idea by some very influential and creative people, to become a veritable backbone to modern society.

Enjoy your travels.

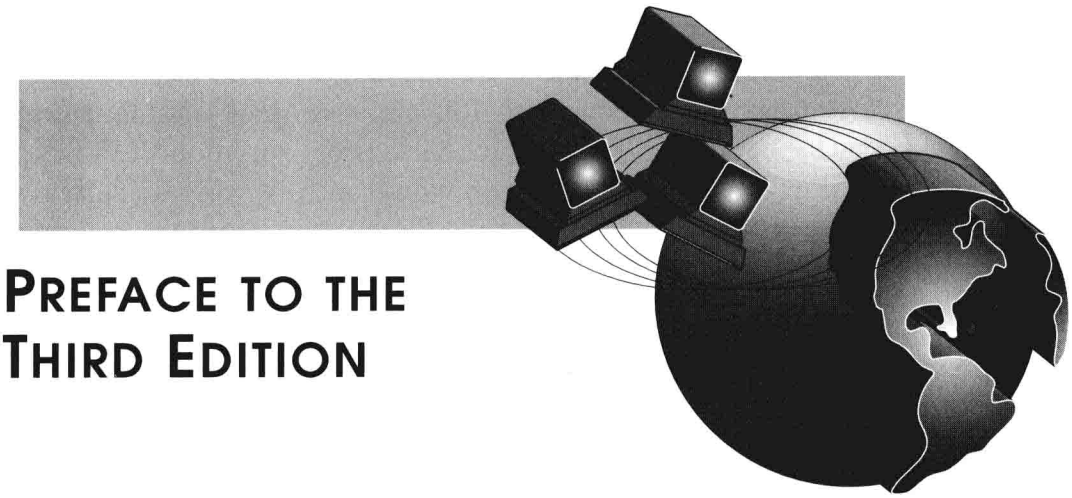
brendan@zen.org

Mountain View, CA



"Forward, forward let us range,
Let the great world spin for ever
down the ringing grooves of change."

— Alfred, Lord Tennyson,
LocksleyHall, l. 181.



PREFACE TO THE THIRD EDITION

The Internet has come of age.

In the United States, the 1992 Presidential campaign had an unparalleled presence in Cyberspace. Candidates sported email addresses, electronically available position papers, and a heretofore unseen awareness of this "global village." In the former Soviet Union, email was one of the only ways citizens could get information out about the coup against then-President Gorbachev. And MTV is on the Net.

For those who helped build the Internet, its fantastic growth—more than doubling in size each six months—has been both exciting and sobering. Many predict that in only a few years, Internet connectivity will be available by right, in much the same way as having access to a telephone is considered a basic necessity.

To someone learning about the Net for the first time, the sheer size of it can be overwhelming. Many people feel a strong urge to panic when they first encounter the Internet, putting it on a list of things to avoid, like

learning to program a VCR. I urge you to stick with it and set your own pace. You alone control your learning process. If you need to, learn to program your VCR first, so you can tape the shows you'll miss when you're traveling through Cyberspace. Then start reading, keeping in mind that in a day or two, you'll have learned enough to actually help others use the Net.

In 1968, just before the birth of what became the Internet, J.C.R. Licklider and Robert Taylor wrote about virtual communities; a quarter of a century later, their words perfectly describe what's happened on the Net.

> *What will on-line interactive communities be like? In most fields they will consist of geographically separated members, sometimes grouped in small clusters and sometimes working individually. They will be communities not of common location but of common interest.*

And thus begins the web.

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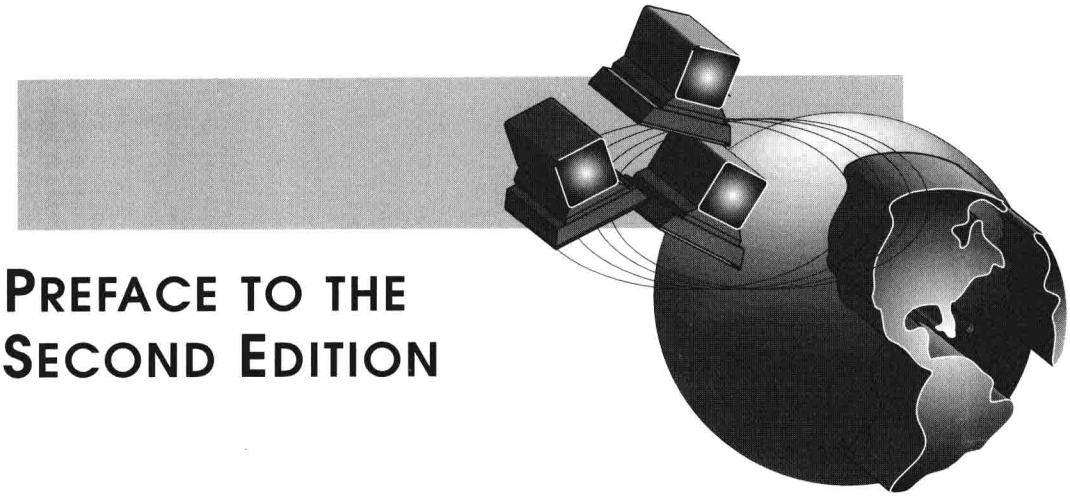

PREFACE TO THE SECOND EDITION

Welcome to Cyberspace!

We've been expecting you. Be careful as you try out your new legs—the ground's firm, but does have some unexpected twists and turns. This book will be your guide through a vast and amazing web of new people, places, and ideas.

Zen is intended for computing novices and experienced researchers alike. It attempts to remain operating-system "neutral"—little information herein is specific to DOS, Unix, VMS, or any other environment. In its early stages, this book prompted response from a vast and disparate audience—from librarians to hobbyists to carpenters to Ph.D. physicists. It's my hope that it will be useful to nearly anyone.

Some typographical conventions are maintained throughout. All abstract items like possible filenames, usernames, etc., are represented in *italics*. Similarly, definite filenames and email addresses are represented in a quoted '`typewriter`' font. A user's session

is usually offset from the rest of the paragraph, as such:

```
prompt> command
     The results are usually displayed here.
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The purpose of this book is twofold: first, it will serve as a reference piece which you can easily grab on-the-fly to look something up. You'll also gain a foundation from which you can explore your surroundings at your leisure. *Zen and the Art of the Internet* doesn't spend a significant amount of time on any one point; rather, it provides enough for people to learn the specifics of what their local system offers.

One warning is perhaps in order—this territory we are entering can become a fantastic time-sink. Hours can slip by, people can come and go, and you'll be locked in Cyberspace. Remember to do your work!

With that, it's my distinct pleasure to usher you into the Net.

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