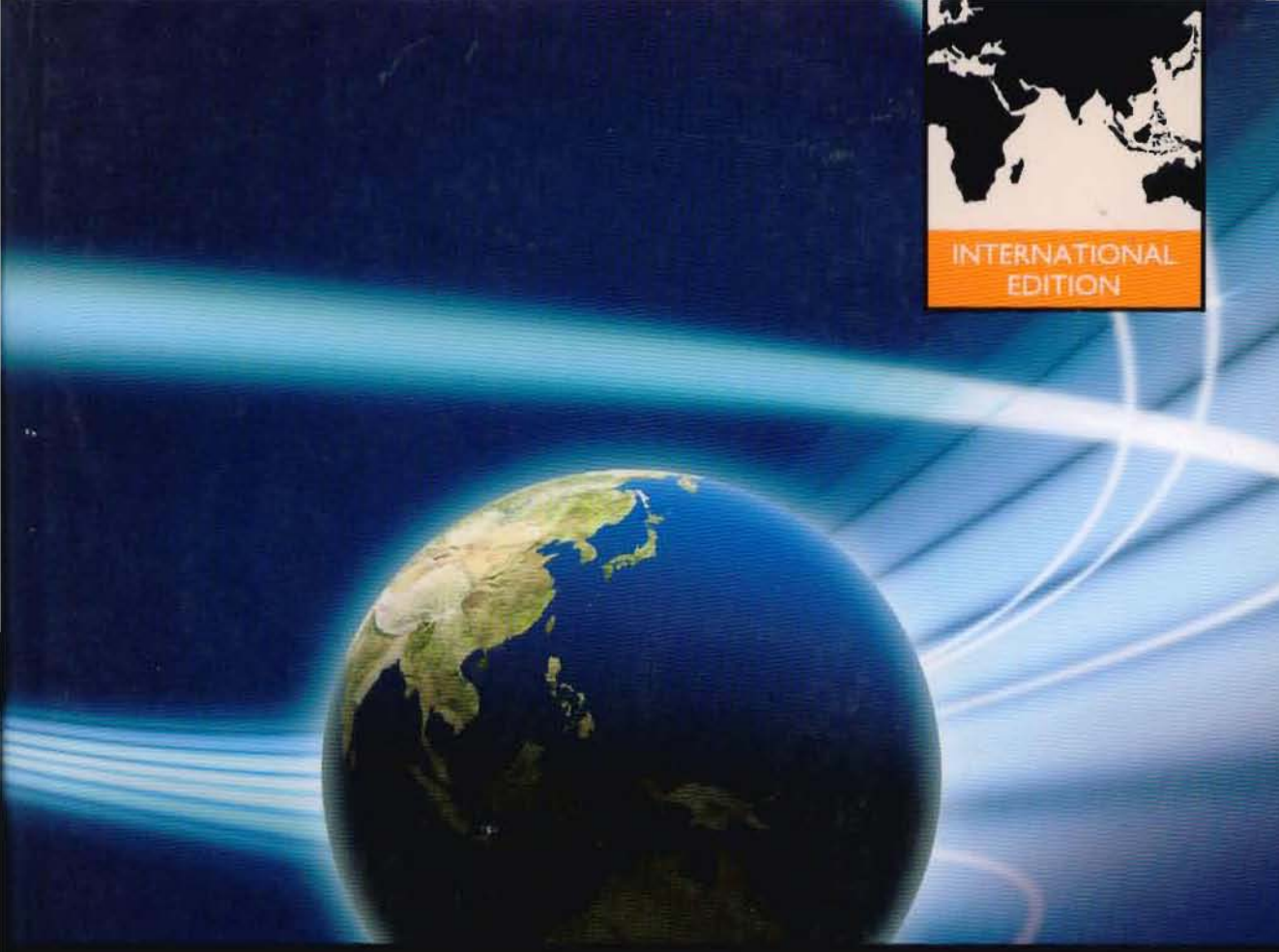

TCP/IP Illustrated, Volume 1

THE PROTOCOLS

Second Edition

Kevin R. Fall • W. Richard Stevens

Foreword by **Vint Cerf,** *Internet Pioneer*

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Contents

Preface to the Second Edition

Welcome to the second edition of *TCP/IP Illustrated, Volume 1*. This book aims to provide a detailed, current look at the TCP/IP protocol suite. Instead of just describing how the protocols operate, we show the protocols in operation using a variety of analysis tools. This helps you better understand the design decisions behind the protocols and how they interact with each other, and it simultaneously exposes you to implementation details without your having to read through the implementation's software source code or set up an experimental laboratory. Of course, reading source code or setting up a laboratory will only help to increase your understanding.

Networking has changed dramatically in the past three decades. Originally a research project and object of curiosity, the Internet has become a global communication fabric upon which governments, businesses, and individuals depend. The TCP/IP suite defines the underlying methods used to exchange information by every device on the Internet. After more than a decade of delay, the Internet and TCP/IP itself are now undergoing an evolution, to incorporate IPv6. Throughout the text we will discuss both IPv6 and the current IPv4 together, but we highlight the differences where they are important. Unfortunately, they do not directly interoperate, so some care and attention are required to appreciate the impact of the evolution.

The book is intended for anyone wishing to better understand the current set of TCP/IP protocols and how they operate: network operators and administrators, network software developers, students, and users who deal with TCP/IP. We have included material that should be of interest to both new readers as well as those familiar with the material from the first edition. We hope you will find the coverage of the new and older material useful and interesting.

Comments on the First Edition

Nearly two decades have passed since the publication of the first edition of *TCP/IP Illustrated, Volume 1*. It continues to be a valuable resource for both students and professionals in understanding the TCP/IP protocols at a level of detail difficult to