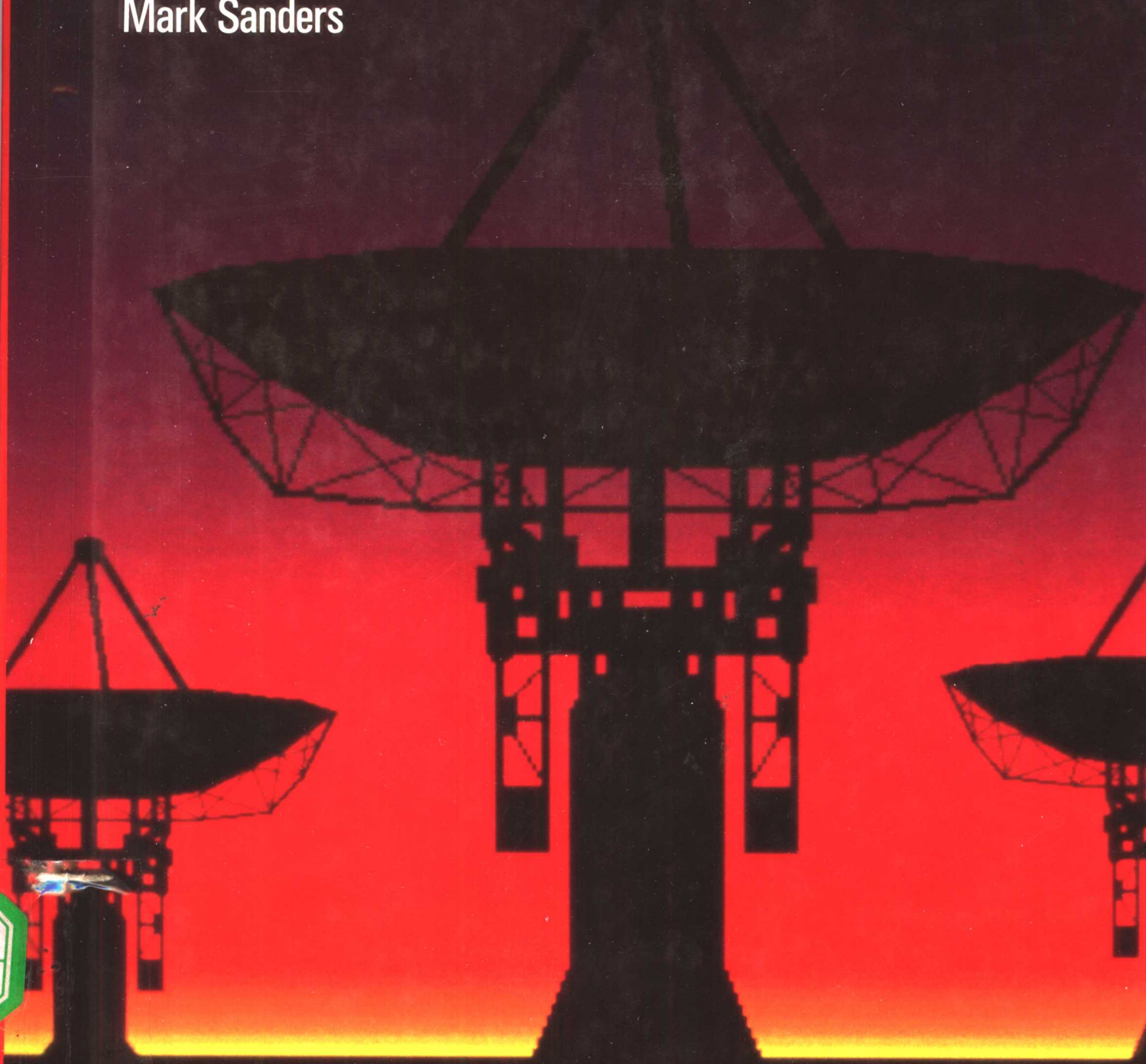
Communication Technology
Today and Tomorrow

Mark Sanders



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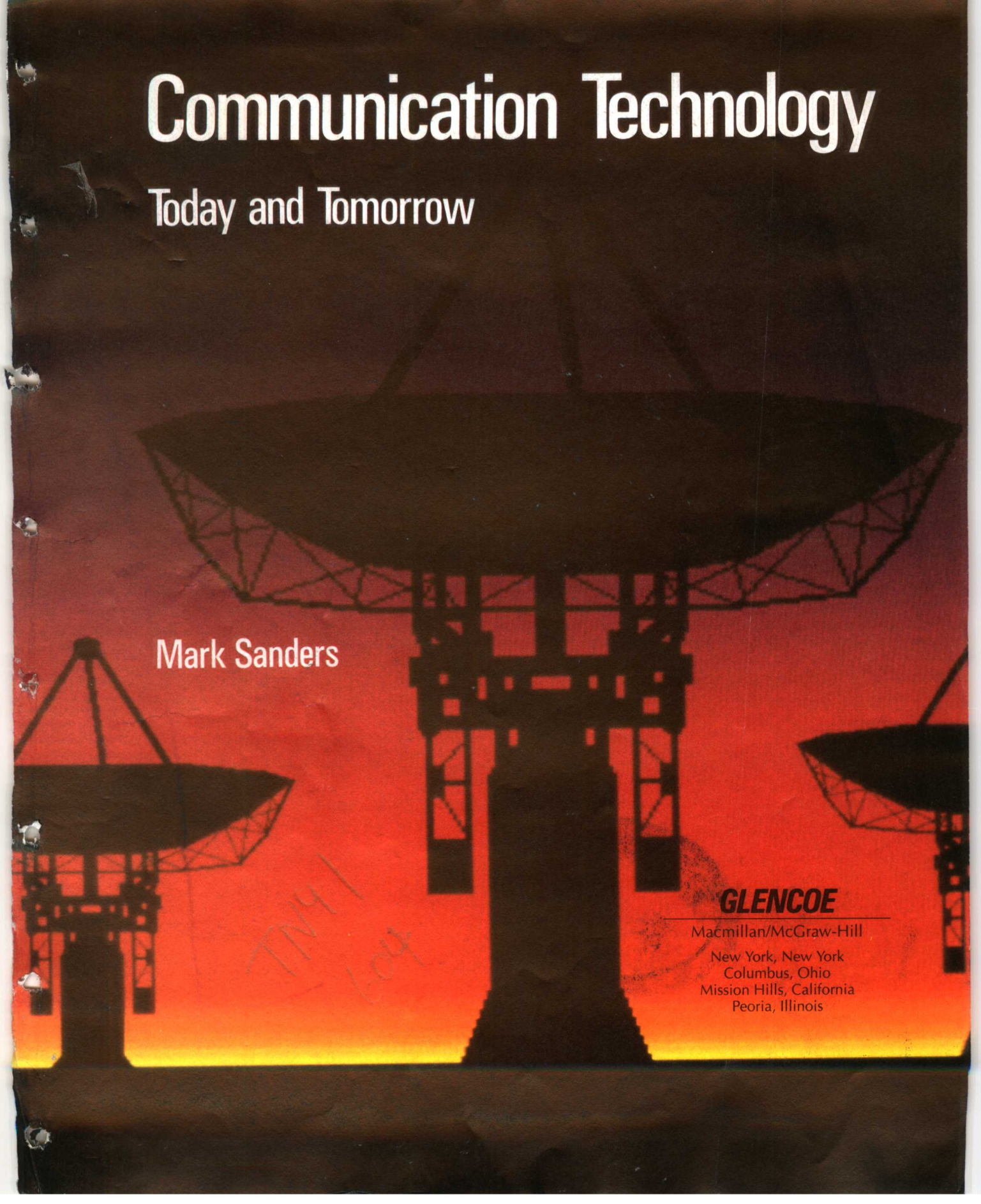

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GLENCOE
Macmillan/McGraw-Hill
New York, New York
Columbus, Ohio
Mission Hills, California
Peoria, Illinois

Glencoe/McGraw-Hill

A Division of The McGraw-Hill Companies

Printed in the United States of America

Send all inquires to:
Glencoe/McGraw-Hill
15319 Chatsworth Street
P.O. Box 9609
Mission Hills, CA 91346-9609

ISBN 0-02-677110-1 (Text)
ISBN 0-02-677111-X (Instructor's Resource Guide)
ISBN 0-02-677112-8 (Student Workbook)

7 8 9 10 11 12 13 14 15 VHJ 01 00 99 98 97 96

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Cover Photo by Digital Art/Westlight

Dedication

For Gail Marie, Nikki Grace, and Rachel Leigh.

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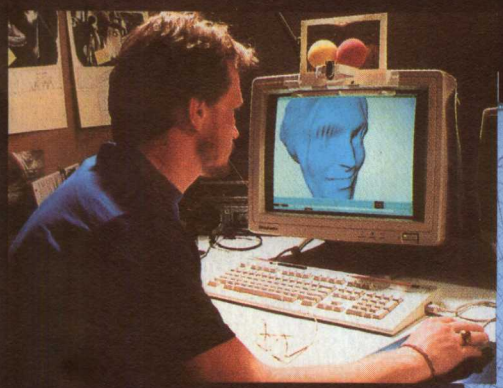
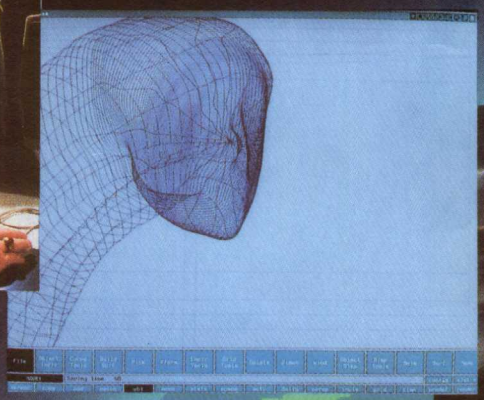
COMMUNICATION TECHNOLOGY TODAY

How do people use communication technology today? They use it to help them communicate faster, farther, and more often than ever before. They use it to exchange information, not only with other people but also with machines and with animals. At work, people are using communication technology to become more creative and more productive. In school, they're using it to learn new things and explore their own interests and abilities. At home, people are using communication technology to stay informed, to be entertained, and to keep in touch with family and friends.



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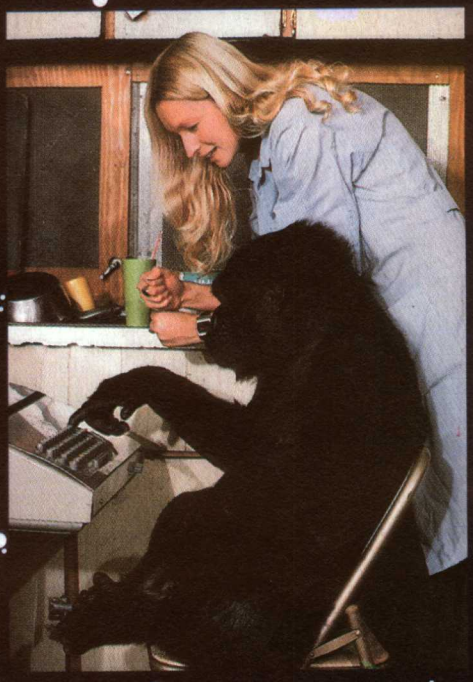
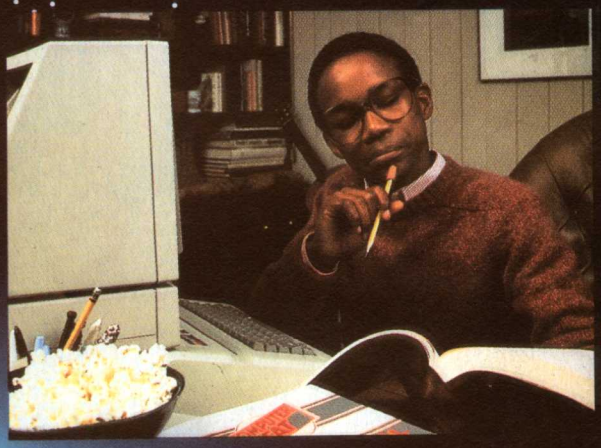
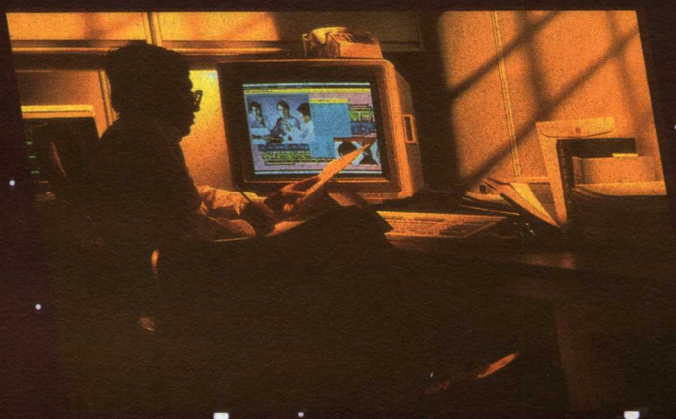




AND TOMORROW

How will people use communication technology in the future? During the 1990s, we can expect improvements in existing devices as well as exciting new products. The technology for altering existing photos (or films or music) and creating a new "original" will continue to improve. With "virtual reality" software, we will not just look at computer graphics on a screen; we will seem to be inside them. (See photos at lower left.) Different computers will be able to "talk" to each other, and a single communication network will be able to send voice, data, and video. Translation programs will help remove language barriers between people of different nations. High definition television (HDTV) will provide much clearer, sharper images (opposite page, lower right).

As information of all kinds becomes more readily available to more people, our world will grow smaller and more complex. Advances in communication technology will improve lives, but they will also pose questions of national security and individual rights. More than ever, we need to know about technology in order to make wise choices and decisions.

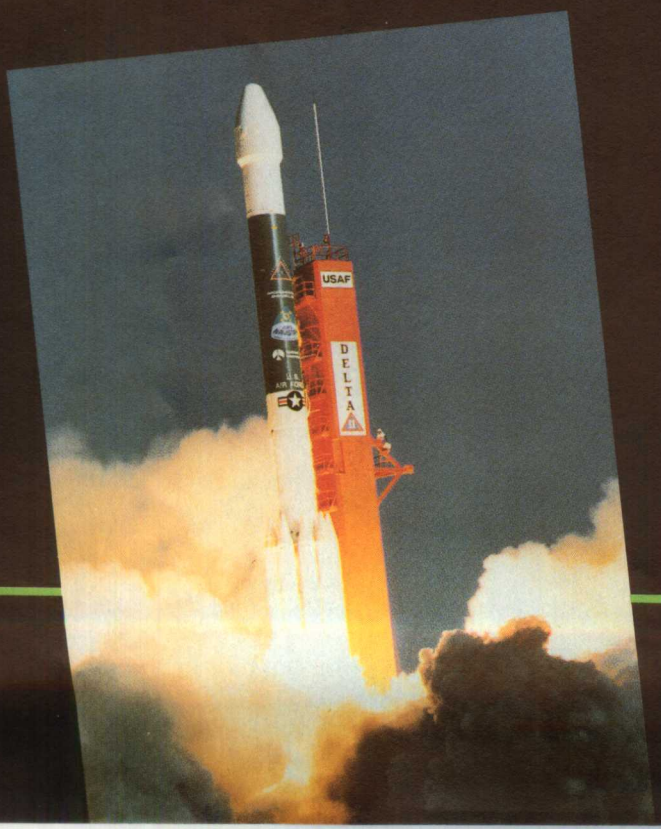


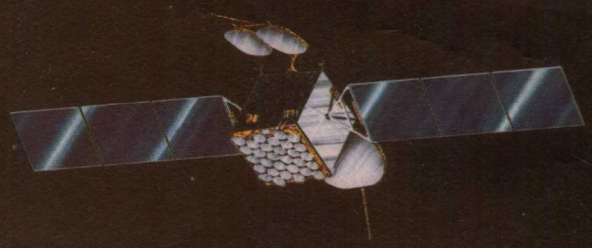
SECTION

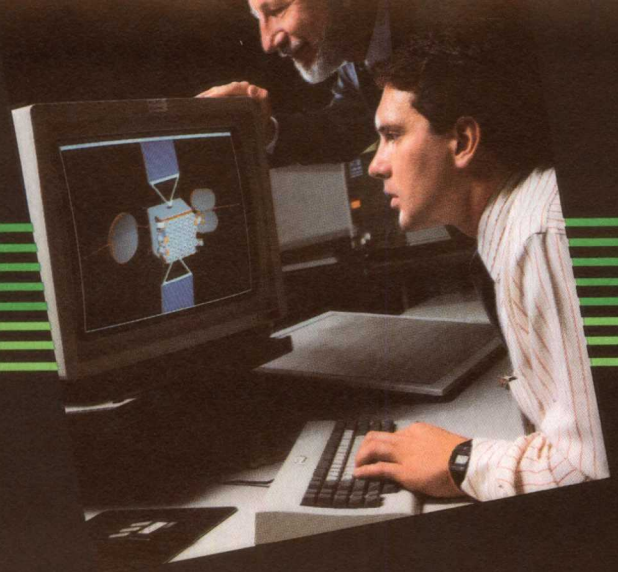
I

Introduction to Communication Technology

Chapter 1: Understanding Communication Systems
Chapter 2: The Changing Nature of Communication Technology
Chapter 3: The Impact of Communication Technology







If you ask ten of your friends what "technology" means, you will probably get ten different answers. The term is used so commonly today that it means different things to different people. When they hear "technology," some people think of computers. Others think of hammers and saws. Still others think of ideas.

Technology is more than just computers and tools. It's more than ideas. **Technology** is using knowledge, tools, and skills to solve problems. Technology suggests "doing."

The study of technology can be approached in many different ways. In technology education, we usually start by looking at technical processes. We are involved in the hands-on application of what we know about our technological world.

To make technology easier to study, we can divide its subject matter into three general areas: communication, production, and energy/power/transportation. Each of these areas may be subdivided. Production, for example, includes construction and manufacturing.

In this book, we will be focusing on the technologies that help us communicate. Communication is the sharing of information, thoughts, and ideas. You'll see that the different subject areas have been grouped into systems. The communication systems you will learn about in this book are

- Data Communication Systems
- Technical Design Systems
- Optic Systems
- Graphic Production Systems
- Audio and Video Systems

Why bother to call them "systems" instead of using terms such as "printing" or "television"? You will see as you read through this book that communication technology includes more than is suggested by the traditional names. For example, there is much more to reproducing graphic images today than putting ink on paper. In fact, many graphic production systems do not use ink. Therefore the term "printing" isn't broad enough. The same is true in each of the other areas. Communication technology is much more complex than it used to be!

CHAPTER

1

Understanding Communication Systems