



Digital devices can be confusing, even threatening to some. They have limited resemblance to the electronics of 20 years ago. Things that were assumed for decades, like the difference between a telephone and a television, are no longer so clear. Even change itself has changed. Developments today are so numerous and so rapid that it's difficult to keep up with them. The new communication technologies seem so complex that many people don't even try to understand how they work or what they mean. Industry participants, government regulators, and students of the media struggle to find a way to explain what's happening and predict where it's going.

Despite these challenges, digital developments are vital subjects in an exciting new digital era. Real industrial revolutions don't come along very often, and this is indeed a revolution—an information and telecommunication revolution that will prove to be every bit as important as the industrial and transportation revolutions of past centuries. Telecommunication and its associated devices and services have become the largest industrial enterprise of our time. New devices and services arise daily, some with significant implications for our lives and the future. As these developments unfold, we have a unique opportunity to understand them in context.

Traditional books about the media are divided into several chapters, each dealing with a separate and distinct medium. In turn, these are organized historically, beginning with a discussion of the print media (books, newspapers, magazines) followed by the electronic media (recordings, radio, television). Somewhere along the way, movies are inserted, and somewhere near the end is a discussion of the Internet and other "new media."

For nearly a century we've called it "mass media" and distinguished each medium by the technology of its delivery. Each had a different system for encoding, reproducing, and delivering its content, and these differences created clear boundaries between media. There was little problem distinguishing a newspaper from a book or a telephone from a television. In that kind of world, the traditional approach to studying media made sense; it was logical, historical, and easy to follow.

In this new millennium, however, there are several problems with the traditional approach to media study.

1. The media in this new millennium no longer fit so nicely into traditional historical categories. For example, is a newspaper on the Internet a printed medium or something else?
2. Treating the media as a historical subject is not always the best way to understand what is happening now. There are few historical precedents for the rapid convergence, integration, and interactivity of present day media.
3. There are many new and significant entrants into this industry that have not historically been included: telephone companies, computer hardware and software companies, and the like.

Understanding the implications of becoming digital requires a new approach. Digital technology is rapidly integrating all kinds of media that were once quite separated by their individual technologies, and integrated media require integrated thinking. For that reason, this text seeks to explain digital technologies, trends, and issues in an integrated way. This requires a grasp of at least three aspects of modern telecommunication.

- **The Elements:** Understanding the elements of digital devices—how they work and how people use them. Unit 1 covers this aspect.
- **The Trends:** Understanding the trends in our digitally integrated world—new developments in each part of this consumer-driven market . Unit 2 covers this aspect.
- **The Issues:** Considering the consequences of digital technology for our society and ourselves. Unit 3 covers this aspect.