Designing good human-computer interfaces is important to the effective use of computers and the Internet. One design challenge is to make the interfaces simple enough for a person with minimal skills and experience to use.

*Intelligent Agents for Mobile and Virtual Media* focuses on how intelligent software agents can simplify human-computer interfaces and contribute to the evolution of systems that are based on mobile and virtual media.
AN ASSORTMENT OF TOPICS

The first two chapters explore interface issues associated with human-machine interaction, machine-machine interaction, and small mobile technologies. Recognizing the importance of data visualization for computer graphics, Chapter 3 discusses visual data navigators that provide interactive visualization for the Web.

Chapter 4 predicts how we'll use the PC and mobile-communications technologies in the future, and Chapters 5 and 7 discuss virtual characters. Chapter 6 presents an agent-based architecture for the distributed management and analysis of multispectral data.

Chapters 8 and 9 discuss intelligent and collaborative virtual environments, and Chapter 10 is about refining Web-based, instructional design-and-development guidance systems for teaching music fundamentals. Chapter 11 analyzes the TV series *Walking with Dinosaurs*, which showed that computer animation could successfully contribute to television programs. Chapter 12 discusses and criticizes using the Web for cult movies. It presents examples of using the Web for cult movies and examines issues related to technologies such as the Internet and subcultural practices. Chapter 13 discusses how you can use digital technology to represent the cultural heritage of the organ, and Chapter 14 describes using synthetic vision to simulate road traffic in a virtual environment. Chapter 15, the last chapter, investigates children's usage patterns when using computers for creative purposes.

INTERESTING EXAMPLES OF AGENTS

The book is well written and logically organized, with current information, helpful illustrations, and pertinent references. Each chapter contributes an interesting perspective to the book's overall purpose-to show that intelligent software agents can help simplify human-computer interfaces.

The book's significance is that it not only explains what intelligent agents are but also provides current examples of agents that are products of each author's research area. Consequently, the examples are clear and well organized.

Chapters 5 and 6 are the strongest chapters because of their interesting research applications. Chapter 5 presents a project that develops virtual characters like the Teletubbies from the children's television series. Daniel Ballin, Ruth Aylett, and Carlos Delgado describe the
autonomous characters developed in this project as intelligent virtual agents. Interestingly, this project lets the autonomous Teletubby agents interact in a virtual environment-something that's impossible in the TV program. Chapter 6 shows how the agent-based architecture offers modularity, scalability, decentralization, and extensibility. As Omer F. Rana and his colleagues say, the system has many applications, such as analyzing multitemporal images that correspond to changes in an area's ecology (for example, when it's necessary in studying the environmental pollution in that area).

CONCLUSION

The book met my expectation to learn about research areas in which intelligent agents are being used successfully in media-based systems. None of the information in the book seems outdated; the examples come from active research areas and represent the current state of agent-based research. I know of no other book that emphasizes using intelligent agents in software development for mobile and virtual media in the same way that this book does. This book shows that important research in intelligent software agents will continue and that intelligent-software-agent use will increase in the future in many application domains related to media-based systems.

*Intelligent Agents for Mobile and Virtual Media* is a valuable resource for software professionals and researchers interested in intelligent software agents and human-computer interfaces, but it does require previous knowledge of these topics.

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