

[Read now] Augmented Reality: Principles and Practice (Usability)

Augmented Reality: Principles and Practice (Usability)

Dieter Schmalstieg, Tobias Hollerer

**Download PDF | ePub | DOC | audiobook | ebooks*



[Download](#)

[Read Online](#)

#145299 in Books Addison-Wesley Professional 2016-06-13 Original language: English PDF # 1 8.90 x 1.00 x 6.90l, .0 #File Name: 0321883578528 pages Addison-Wesley Professional | File size: 77.Mb

Dieter Schmalstieg, Tobias Hollerer : Augmented Reality: Principles and Practice (Usability) before purchasing it in order to gauge whether or not it would be worth my time, and all praised Augmented Reality: Principles and Practice (Usability):

0 of 0 people found the following review helpful. The Big AR Overview By mnoble In the preface, the authors point out that it can be used as an academic textbook by teachers and it does seem to be as though they were trying to write the authoritative reference on AR. In large part, I believe they've succeeded in their aim and it's a very good overview of the "state of art" as far as I can tell. It covers many aspects of AR in exhaustive detail with a plethora of external references to follow up on if that's your inclination. In many cases, exhaustive is the operative word, which can make it a bit of a tough slog in terms of reading and comprehension which is why I didn't give it 4 stars instead of 5. I was initially torn between this book and the other book by the same publisher, Practical Augmented Reality. I wound up buying both. Frankly, I enjoyed that one a bit better and switched to reading it first. However, I did return to this book

to see if they covered things in more detail, which in some cases they did. 10 of 11 people found the following review helpful. Excellent Reference
By Brendan Mattina
As a graduate student focusing on AR visualizations for thesis work, I needed an all encompassing reference to provide me with a foundation in AR and point me in the right direction to start development (quickly). Thus far this reference is providing all of the above. Strongly recommended for those just beginning in AR.
1 of 1 people found the following review helpful. Five Stars
By Sandra J. Vincent
I found this to be a great introduction to AR. - Ron Vincent

Today's Comprehensive and Authoritative Guide to Augmented Reality
By overlaying computer-generated information on the real world, augmented reality (AR) amplifies human perception and cognition in remarkable ways. Working in this fast-growing field requires knowledge of multiple disciplines, including computer vision, computer graphics, and human-computer interaction. Augmented Reality: Principles and Practice integrates all this knowledge into a single-source reference, presenting today's most significant work with scrupulous accuracy. Pioneering researchers Dieter Schmalstieg and Tobias Hiller carefully balance principles and practice, illuminating AR from technical, methodological, and user perspectives. Coverage includes Displays: head-mounted, handheld, projective, auditory, and haptic Tracking/sensing, including physical principles, sensor fusion, and real-time computer vision Calibration/registration, ensuring repeatable, accurate, coherent behavior Seamless blending of real and virtual objects Visualization to enhance intuitive understanding Interaction from situated browsing to full 3D interaction Modeling new geometric content Authoring AR presentations and databases Architecting AR systems with real-time, multimedia, and distributed elements This guide is indispensable for anyone interested in AR, including developers, engineers, students, instructors, researchers, and serious hobbyists.

This is an essential book for anyone interested in Augmented Reality, by two of the leading pioneers. It provides an outstanding foundation to the fast growing field of AR, both for those already in the field as well as those who just want to understand the technology more deeply. Dr. Mark Billinghurst, Professor of Human Computer Interaction, University of South Australia, and creator of the ARToolKit "At first, I thought this book provided a very solid foundation for any Augmented Reality newbie who needed to learn all aspects of AR, but then I realized I couldn't stop digging and learning...it goes deeper than many of the AR books I reviewed in the past decade!" Ori Inbar, Executive Director, Augmented World Expo (augmentedworldexpo.com); CEO and founder, AugmentedReality.org
About the Author
Dieter Schmalstieg is professor and head of the Institute for Computer Graphics and Vision at Graz University of Technology (TUG), Austria. His current research interests are augmented reality, virtual reality, real-time graphics, 3D user interfaces, and visualization. He received Dipl.-Ing. (1993), Dr. techn. (1997) and Habilitation (2001) degrees from Vienna University of Technology. He is author and coauthor of more than two hundred peer-reviewed scientific publications, associate editor of IEEE Transactions on Visualization and Computer Graphics, member of the editorial advisory board of computers and graphics and of Springer Virtual Reality, member of the steering committee of the IEEE International Symposium on Mixed and Augmented Reality, chair of the EUROGRAPHICS working group on Virtual Environments (1999-2010), advisor of the K-Plus Competence Center for Virtual Reality and Visualization in Vienna, and member of the Austrian Academy of Science. In 2002, he received the START career award presented by the Austrian Science Fund. In 2012, he received the IEEE Virtual Reality Technical Achievement Award for seminal contributions to the field of augmented reality. Since 2008, he is also director of the Christian Doppler Laboratory for Handheld Augmented Reality. Tobias Hiller is professor of computer science at the University of California, Santa Barbara, where he leads the Four Eyes Laboratory, conducting research in the four I's of Imaging, Interaction, and Innovative Interfaces. Dr. Hiller holds a Diplom in informatics from the Technical University of Berlin, as well as an M.S. and Ph.D. in computer science from Columbia University. He is a recipient of the U.S. National Science Foundation's CAREER award for his work on "Anywhere Augmentation." enabling mobile computer users to place annotations in 3D space wherever they go. In 2013, he was named an ACM Distinguished Scientist. Dr. Hiller is author of more than one hundred fifty peer-reviewed journal and conference publications in the areas of augmented and virtual reality, information visualization, 3D displays and interaction, mobile and wearable computing, and social computing. Several of these publications have been selected for best paper or honorable mention awards at such venues as the IEEE International Symposium on Mixed and Augmented Reality (ISMAR), IEEE Virtual Reality (VR), ACM Virtual Reality Software and Technology, ACM User Interface Software and Technology, ACM MobileHCI, IEEE SocialCom, and IEEE CogSIMA. Dr. Hiller is an associate editor of IEEE Transactions on Visualization and Computer Graphics. Among his many organizational roles for scientific conferences he served as program chair for IEEE VR 2015, ICAT 2013, IEEE ISMAR 2010 and 2009; as general chair of IEEE ISMAR 2006; and as member of the steering committee of IEEE ISMAR.