

Virtual Reality The Revolutionary Technology Of Computer Generated Artificial Worlds And How It Promises To Transform Society

Virtual and augmented reality raise significant questions for law and policy. When should virtual world activities or augmented reality images count as protected First Amendment ‘speech’, and when are they instead a nuisance or trespass? When does copying them infringe intellectual property laws? When should a person (or computer) face legal consequences for allegedly harmful virtual acts? The Research Handbook on the Law of Virtual and Augmented Reality addresses these questions and others, drawing upon free speech doctrine, criminal law, issues of data protection and privacy, legal rights for increasingly intelligent avatars, and issues of jurisdiction within virtual and augmented reality worlds.

Did you ever wonder who built the first head-mounted display? Who first detailed a coherent theory of Cyberspace? Who wrote about cybersex and the challenges it creates? Who worried about addiction to VR? Did anyone ever cure cyber-sickness? From 1991 to 1996, CyberEdge Journal covered these stories and hundreds more. CEJ was read in more than 40 countries by thousands of VR investors, researchers, entrepreneurs, vendors, and aficionados. Appreciated for its “No VR Hype” attitude, CyberEdge Journal was the publication of record for the VR industry in the 90’s. Author Ben Delaney was the Publisher and Editor of CyberEdge Journal, and was one of the most respected commentators and presenters in the field, and went on to publish the industry-defining multi-year market study, The Market for Visual Simulation/Virtual Reality Systems until 2004. Now that VR is enjoying a renaissance, it’s time to understand where it came from, and avoid making the same mistakes that were made in the first golden age of VR, the 1990’s. It’s also a good time to remember the excitement and sense of adventure, as well as the people, that characterized those time. Virtual Reality 1.0 describes not just some of the hot topics of VR, but also the origins, issues, and solutions that were chronicled in the pages of CyberEdge Journal. Complemented by over 100 photos and drawings, there is a surprisingly contemporary feel to these old articles. In addition, more than a dozen VR pioneers have contributed new reminiscences of their work in VR. Another treat, the book is introduced by one of the acknowledged leaders of VR research and industry, Dr. Thomas Furness, Founding Director of the world-famous Human Interface Technology Laboratory at the University of Washington. This book is a re-issue of Sex Drugs and Tesselation, with minor edits.

This is Volume 42 of the Educational Media and Technology Yearbook. For the past 40 years, our Yearbook has contributed to the field of Educational Technology in presenting contemporary topics, ideas, and developments regarding diverse technology tools for educational purposes. Our Yearbook has inspired researchers, practitioners, and teachers to consider how to develop technological designs and develop curricula and instruction integrating technology to enhance student learning, teach diverse populations across levels with effective technology integration, and apply technology in interactive ways to motivate students to engage in course content. In addition, Volume 42 features the Virtual Reality (VR) and Augmented Reality (AR) research and educational use cases, organized and coordinated by Vivienne and David. This section provides evidence that the affordances of AR, VR, and mixed reality as an immersive multi-platform experience reality (XR), have begun to make indelible changes in teaching and learning in the United States. XR’s recent developments stimulated the editors to propose a special edition to mark the interoperability of immersive technology to push the boundaries of human curiosity, creativity, and problem solving. After years of incremental development, XR has reached a critical level of investment, infrastructure, and emerging production. The chapters included in this section illustrate how XR can push user inquiry, engagement, learning, and interactivity to new levels within physical and digital contexts.

This book constitutes the refereed proceedings of the 5th International Conference on Pervasive Computing Paradigms for Mental Health, MindCare 2015, held in Milan, Italy, in September 2015. The 23 full papers and 6 short papers presented were carefully reviewed and selected from 40 submissions. The papers deal with the use of technologies in favor of maintaining and improving mental wellbeing. They focus on building new computing paradigms and on addressing a multitude of challenges in mental healthcare, for example in psychiatric and psychological domains with emphasis on new technologies, such as video and audio technologies and mobile and wearable computing.

The Birth of VR in the pages of CyberEdge Journal

Virtual, Augmented and Mixed Reality

Concepts, Methodologies, Tools and Applications

The Re-Emergence of Virtual Reality

Silicon Mirage

How Immersive Technologies Can Transform Your Business

Current and Prospective Applications of Virtual Reality in Higher Education

Understanding Virtual Reality: Interface, Application, and Design, Second Edition, arrives at a time when the technologies behind virtual reality have advanced dramatically in their development and deployment, providing meaningful and productive virtual reality applications. The aim of this book is to help users take advantage of ways they can identify and prepare for the applications of VR in their field, whatever it may be. The included information counters both exaggerated claims for VR, citing dozens of real-world examples. By approaching VR as a communications medium, the authors have created a resource that will remain relevant even as the underlying technologies evolve. You get a history of VR, along with a good look at systems currently in use. However, the focus remains squarely on the application of VR and the many issues that arise in application design and implementation, including hardware requirements, system integration, interaction techniques and usability. Features substantive, illuminating coverage designed for technical or business readers and the classroom Examines VR’s constituent technologies, drawn from visualization, representation, graphics, human-computer interaction and other fields Provides (via a companion website) additional case studies, tutorials, instructional materials and a link to an open-source VR programming system Includes updated perception material and new sections on game engines, optical tracking, VR social interface software and a new glossary with pictures

This book explores the implications of VR’s re-emergence into the media mainstream, critiquing the notion of a VR revolution by analyzing the development and ownership of VR companies while also exploring the possibilities of immersion in VR and the importance of immersion in the interest and ownership of VR enterprises. He assesses how the ideologies and desires of both computer programmers and major Silicon Valley industries may influence how VR works are conceived and experienced by users while also exploring the mechanisms that create the immersive experience that underpins interest in the medium.

This volume constitutes the refereed proceedings of the 8th International Conference on HCI in Virtual, Augmented and Mixed Reality, VAMR 2016, held as part of the 18th International Conference on Human-Computer Interaction, HCI 2016, which took place in Toronto, Canada, in July 2016. HCI 2016 received a total of 4354 submissions, of which 1287 papers were accepted for publication after a careful reviewing process. The 70 papers presented in this volume are organized in topical sections named: Usability, User Experience and Design in VAMR, Perception, Cognition, Psychology and Behaviour in VAMR, Multimodal Interaction in VAMR, Novel Devices and Technologies in VAMR, VAMR Applications in Aviation, Space and the Military, Medicine, Health and Well-Being Applications of VAMR, VAMR in Industry, Design and Engineering, Novel Virtual Environments.

Virtual reality (VR) has become a revolutionary technology allowing users to experience nearly unlimited computer-generated realities—exercising a strong hold on the popular imagination, attracting hundreds of researchers, and spawning a booming industry. Possible Worlds provides a sociological and historical account of the genesis of VR and how it has shaped social life. The book also relates VR to more general issues in the study and effects of the new communications

Virtual Technologies for Business and Industrial Applications: Innovative and Synergistic Approaches

Virtual Reality Church

How to Understand the Techniques and Potential of Virtual Reality

Homesteading on the Electronic Frontier

Virtual Reality

The Virtual Community, revised edition

Innovative and Synergistic Approaches

Due to the growing prevalence of artificial intelligence technologies, schools, museums, and art galleries will need to change traditional ways of working and conventional thought processes to fully embrace their potential. Integrating virtual and augmented reality technologies and wearable devices into these fields can promote higher engagement in an increasingly digital world. Virtual and Augmented Reality in Education, Art, and Museums is an essential research book that explores the strategic role and use of virtual and augmented reality in shaping visitor experiences at art galleries and museums and their ability to enhance education. Highlighting a range of topics such as online learning, digital heritage, and gaming, this book is ideal for museum directors, tour developers, educational software designers, 3D artists, designers, curators, preservationists, conservators, education coordinators, academicians, researchers, and students.

"This book provides research related to the concept of virtual reality and developing business models using this concept"—Provided by publisher.

Discusses a new interactive computer technology that creates the illusion of being immersed in an artificial world that exists only in the computer, and examines the remarkable future implications of virtual reality technology

Grounded on the assumption that the relationship between the arts and the sciences is dictated by technology, the essays in Rethinking Technologies explore trends in contemporary thought that have been changing our awareness of science, technology, and the arts.

Pervasive Computing Paradigms for Mental Health

Research Handbook on the Law of Virtual and Augmented Reality

Educational Leadership and Administration: Concepts, Methodologies, Tools, and Applications

The Art and Science of Virtual Reality

Virtual Reality Technology

Medical Education and Ethics: Concepts, Methodologies, Tools, and Applications

The Revolutionary Technology of Computer-Generated Artificial Worlds And How It Promises to Transform Society

An introduction to virtual reality covers every aspect of the revolutionary new technology and its many possible applications, from computer games to air traffic control. Original. National ad/promo.

The dramatic, larger-than-life true story behind the founding of Oculus and its quest for virtual reality, by the bestselling author of Console Wars. Drawing on over a hundred interviews with the key players driving this revolution, The History of the Future weaves together a rich, cinematic narrative that captures the breakthroughs, breakdowns and human drama of trying to change the world. The result is a super accessible and supremely entertaining look at the birth of a game-changing new industry. From iconic books like Neuromancer to blockbuster films like The Matrix, virtual reality has long been hailed as the ultimate technology. But outside of a few research labs and military training facilities, this tantalizing vision of the future was nothing but science fiction. Until 2012, when Oculus founder Palmer Luckey—then just a rebellious teenage dreamer living in a garage in Menlo Park—created a device that has the potential to change everything. With the help of a videogame legend, a serial entrepreneur and many other colorful characters, Luckey’s scrappy startup kickstarts a revolution and sets out to bring VR to the masses. As with most underdog stories, things don’t quite go according to plan. But what happens next turns out to be the ultimate entrepreneurial journey: a tale of battles won and lost, lessons learned and reverending twists and turns—including an unlikely multi-billion-dollar acquisition by Facebook’s Mark Zuckerberg, which shakes up the landscape in Silicon Valley and gives Oculus the chance to forever change our reality. Drawing on over a hundred interviews with the key players driving this revolution, The History of the Future weaves together a rich, cinematic narrative that captures the breakthroughs, breakdowns and human drama of trying to change the world. The result is a super accessible and supremely entertaining look at the birth of a game-changing new industry.

Game culture and material culture have always been closely linked. Analog forms of rule-based play (ludus) would hardly be conceivable without dice, cards, and game boards. In the act of free play (paidia), children as well as adults transform simple objects into multifaceted toys in an almost magical way. Even digital play is suffused with material culture: Games are not only mediated by technical interfaces, which we access via hardware and tangible peripherals. They are also subject to material hybridization, paratextual framing, and processes of de-, and re-materialization. The contributors examine this playful materiality from various angles.

During the last decade the word virtual became one of the most exposed words in the English language. Today we have virtual universities, virtual offices, virtual pets, virtual actors, virtual museums, virtual doctors - and all because of virtual reality. So what is virtual reality? Essentially, virtual reality is about the navigation and manipulation of 3D computer-generated scenes. Navigation lets us move around and explore features of a 3D scene (a building for example), and once inside that virtual building, it is possible to interact with objects such as chairs and cups by picking them up or moving them. Virtual Reality is moving very quickly and there are an ever-increasing number of people wanting to know more about this exciting subject. Introduction to Virtual Reality explains what VR is about, without going into the underlying mathematical techniques. Key topics are: The origins of VR; how VR works; how VR is being used. After reading this book you will have a far better understanding of the impact of virtual reality on our everyday lives.

Virtual and Augmented Reality in Education, Art, and Museums

Lexical Change in Present-day English

Playful Materialities

The Metaphysics of Virtual Reality

8th International Conference, VAMR 2016, Held as Part of HCI International 2016, Toronto, Canada, July 17-22, 2016. Proceedings

The Inside Story of the Virtual Reality Revolution

Where We Will All Live

Mixed Realism is about how we interact with media. Timothy J. Welsh shows how videogames, like novels, both promise and trouble experiences of “immersion.” His innovative methodology offers a new understanding of the expanding role of virtuality in contemporary life. Today’s wired culture is a mixed reality, conducted as exchanges between virtual and material contexts. We make balance transfers at an ATM, update Facebook timelines, and squeeze in sessions of Angry Birds on the subway. However, the “virtual” is still frequently figured as imaginary, as opposed to “real.” The vision of 1990s writers of a future that would pit virtual reality against actual reality has never materialized, yet it continues to haunt cultural criticism. Our ongoing anxiety about immersive media now surrounds videogames, especially “shooter games,” and manifests as a fear that gamers might not know the difference between the virtual world and the real world. As Welsh notes, this is the paradox of real virtuality. We understand that the media-generated virtualities that fill our lives are not what they represent. But what do they tell us about the world? Do they have presence, significance, or influence exceeding their material presence and the user processes that invoke them? What relationships do they establish through and beyond our interactions with them? Mixed Realism brims with fresh analyses of literary works such as Truman Capote’s In Cold Blood and Mark Z. Danielewski’s House of Leaves, along with sustained readings of controversial videogames such as Super Columbine Massacre and Call of Duty: Modern Warfare 2. Continually connecting the dots between surprising groupings of texts and thinkers, from David Foster Wallace to the cult-classic videogame Eternal Darkness and from Cormac McCarthy to Grand Theft Auto, it offers a fresh perspective on both digital games and contemporary literature.

Is Virtual Reality a Biblical Reality? The invention of the printing press catalyzed Martin Luther’s reformation: radios and televisions delivered Billy Graham’s gospel proclamations to millions of households. Technological advancements have undoubtedly advanced kingdom work for centuries—but is the same true for the burgeoning technologies of today? As virtual reality becomes increasingly prominent throughout society, churches must assess how to respond thoughtfully and biblically. In Virtual Reality Church, theologians Darrell Beck and Jonathan Armstrong present a systematic reflection on how to faithfully apply virtual reality for ministry purposes. They examine the risks—like compromising the meaning of tangible worship—and opportunities—like safely reaching persecuted churches—of integrating revolutionary technologies into the Christian life. Learn to think critically, theologically, and pastorally about new technologies so that you can faithfully advance the gospel into the future.

As enlightening as The Facebook Effect, Elon Musk, and Chaos Monkeys—the compelling, behind-the-scenes story of the creation of one of the most essential applications ever devised, and the rag-tag team that built it and changed how we navigate the world Never Lost Again chronicles the evolution of mapping technology—the “overnight success twenty years in the making.” Bill Kilday takes us behind the scenes of the tech’s development, and introduces to the team that gave us not only Google Maps but Google Earth, and most recently, Pokémon GO. He takes us back to the beginning to Keyhole—a cash-strapped startup mapping company started by a small-town Texas boy named John Hanke, that nearly folded when the tech bubble burst. While a contract with the CIA kept them afloat, the company’s big break came with the first invasion of Iraq: CNN used their technology to cover the war and made it famous. Then Google came on the scene, buying the company and relaunching the software as Google Maps and Google Earth. Eventually, Hanke’s original company was spun back out of Google, and is now responsible for Pokémon GO and the upcoming Harry Potter: Wizards Unite. Kilday, the marketing director for Keyhole and Google Maps, was there from the earliest days, and offers a personal look behind the scenes at the tech and the minds developing it. But this book isn’t only a look back at the past; it is also a glimpse of what’s to come. Kilday reveals how emerging map-based technologies including virtual reality and driverless cars are going to upend our lives once again. Never Lost Again shows us how our worldview changed dramatically as a result of vision, imagination, and implementation. It’s a crazy story. And it all started with a really good map.

A leading doctor unveils the groundbreaking potential of virtual medicine. Brennan Spiegel has spent years studying the medical power of the mind, and in VRx he reveals a revolutionary new kind of care: virtual medicine. It offers the possibility of treating illnesses without solely relying on intrusive surgeries or addictive opioids. Virtual medicine works by convincing your body that it’s somewhere, or something, it isn’t. It’s affordable, widely available, and has already proved effective against everything from burn injuries to stroke to PTSD. Spiegel shows how a simple VR headset lets a patient with schizophrenia confront the demon in his head, how dementia patients regain function in a life-size virtual town, and how vivid simulations of patients’ experiences are making doctors more empathic. VRx is a revelatory account of the connection between our bodies and ourselves. In an age of overmedication and depersonalized care, it offers no less than a new way to heal.

The History of the Future

Volume 42

Augmented Reality

How Virtual Therapeutics Will Revolutionize Medicine

Interface, Application, and Design

Educational Media and Technology Yearbook

VRx

Imagine being able to “walk” into your computer and interact with any program you create. It sounds like science fiction, but it’s science fact. Surgeons now rehearse operations on computer-generated “virtual” patients, and architects “walk through” virtual buildings while the actual structures are still in the plans. In “Virtual Reality” Howard Rheingold takes us to the front lines of this revolutionary new technology that creates computer-generated worlds complete with the sensations of touch and motion, and explores its impact on everything from entertainment to particle physics. Written in the shadow of the approaching millennium, American literature in the 1990s was beset by bleak announcements of the end of books, the end of postmodernism, and even the end of literature. Yet, as conservative critics marked the century’s twilight hours by launching elegies for the conventional canon, American writers proved the continuing vitality of their literature by reinvigorating inherited forms, by adopting and adapting emerging technologies to narrative ends, and by finding new voices that had remained outside that canon for too long. By reading 1990s literature in a sequence of shifting contexts - from independent presses to the AIDS crisis, and from angeloogy to virtual reality - American Literature in Transition, 1990-2000 provides the fullest map yet of the changing shape of a rich and diverse decade’s literary production. It offers new perspectives on the period’s well-known landmarks, Toni Morrison, Thomas Pynchon, David Foster Wallace, but also overdue recognition to writers such as Ana Castillo, Evan Dara, Steve Erickson, and Carole Maso.

VR provides an alternative to the use of computers to assist individuals who have disabilities. The book provides the reader with a comprehensive introduction to the possibilities and limitations inherent in the emerging field of Adaptive Technology. A fascinating exploration of the history, development, and future of virtual reality, a technology with world-changing potential, written by award-winning journalist and author David Ewalt, stemming from his 2015 Forbes cover story about the Oculus Rift and its creator Palmer Luckey. You’ve heard about virtual reality, seen the new gadgets, and read about how VR will be the next big thing. But you probably haven’t yet realized the extent to which this technology will change the way we live. We used to be bound to a physical reality, but new immersive computer simulations allow us to escape our homes and bodies. Suddenly anyone can see what it’s like to stand on the peak of Mount Everest. A person who can’t walk can experience a marathon from the perspective of an Olympic champion. And why stop there? Become a dragon and fly through the universe. But it’s not only about spectacle. Virtual and augmented reality will impact nearly every aspect of our lives—commerce, medicine, politics—the applications are infinite. It may sound like science fiction, but this vision of the future drives billions of dollars in business and is a top priority for such companies as Facebook, Google, and Sony. Yet little is known about the history of these technologies. In Defying Reality, David M. Ewalt traces the story from ancient alchemists to Cold War military laboratories, through decades of hype and failure, to a nineteen-year-old video game aficionado who made the impossible possible. Ewalt looks at how businesses are already using this tech to reimagine the world around us, and what we can expect in the future. Writing for a mainstream audience as well as for technology enthusiasts, Ewalt offers a unique perspective on VR. With firsthand accounts and on-the-ground reporting, Defying Reality shows how virtual reality will change our work, our play, and the way we relate to one another.

The Stuff that Games Are Made Of

Introduction to Virtual Reality

Virtual Reality in Japan

The Fourth Industrial Revolution

Cyberspace

Rethinking Technologies

5th International Conference, MindCare 2015, Milan, Italy, September 24-25, 2015, Revised Selected Papers

"This multi-volume book delves into the many applications of information technology ranging from digitizing patient records to high-performance computing, to medical imaging and diagnostic technologies, and much more"--

Discover THE next big competitive advantage in business: learn how augmented and virtual reality can put your business ahead. Augmented reality (AR) and virtual reality (VR) are part of a new wave of immersive technologies that offer huge opportunities for businesses, across industries and regardless of their size. Most people think of AR or VR as a new development in video gaming like Pokémon GO, or an expensive marketing campaign by the Nikes of the world. The truth is, businesses of any size can put these new technologies to immediate use in areas that include - Learning and development - Remote collaboration and assistance - Visualization of remote assets and environments - Sales and marketing - Consumer behaviour research Reality Check dispels the common misconceptions of AR and VR, such as them being too expensive or not easily scalable, and details how business leaders can integrate them into their business to deliver more efficient, impactful and cost-effective business solutions. The up and coming voice of AR and VR for businesses, Jeremy Dalton, uses case studies from organizations all over the world including Cisco, Ford, GlascoSmithKline, La Liga and Vodafone to showcase the practical uses of immersive technologies. Reality Check makes cutting-edge technology accessible and grounds them into the everyday workings of normal businesses. It is your one-stop non-technical guide to incredibly exciting new technologies that will deliver results.

The delivery of quality education to students relies heavily on the actions of an institution’s administrative staff. Effective leadership strategies allow for the continued progress of modern educational initiatives. Educational Leadership and Administration: Concepts, Methodologies, Tools, and Applications provides comprehensive research perspectives on the multi-faceted issues of leadership and administration considerations within the education sector. Emphasizing theoretical frameworks, emerging strategic initiatives, and future outlooks, this publication is an ideal reference source for educators, professionals, school administrators, researchers, and practitioners in the field of education.

For the last decade, virtual reality has been utilized in diverse fields such as entertainment, medicine, and industry. Recently, virtual reality has been applied in educational settings in order to transform student learning and experiences through such methods as building prototypes using digital devices or exploring new cultures through immersive interactions. Teachers who can incorporate virtual reality into their classrooms can provide their students with more meaningful learning experiences and can witness higher engagement. Current and Prospective Applications of Virtual Reality in Higher Education is a cutting-edge academic research book that provides comprehensive research on the integration of virtual reality in education programs and establishes foundations for course design, program development, and institutional strategic planning. The book covers an overall understanding and approach to virtual reality in education, specific applications of using virtual reality in higher education, and prospects and issues of virtual reality in the future. Highlighting a wide range of topics such as gamification, teacher training, and virtual reality, this book is ideal for teachers, instructional designers, curriculum developers, academicians, program developers, administrators, educational software developers, policymakers, researchers, education professionals, and students.

Pitfalls and Possibilities (Or How to Think Biblically about Church in Your Pajamas, VR Baptisms, Jesus Avatars, and Whatever Else is Coming Next)

Mixed Realism

Defying Reality

Understanding Virtual Reality

The Social Dynamic Of Virtual Reality Technology

Never Lost Again

Oculus, Facebook, and the Revolution That Swept Virtual Reality

Although virtual reality promises to immerse a person in another world, its true power lies in its ability to sever a person’s spatial situatedness in this one. This is especially clear in Japan, where the VR headset has been embraced as a way to block off existing social environments and reroute perception into more malleable virtual platforms. Is immersion just another name for enclosure? In this groundbreaking analysis of virtual reality, Paul Roquet uncovers how the technology is reshaping the politics of labor, gender, home, and nation. He examines how VR in Japan diverged from the American militarism and techno-utopian visions and became a tool for renegotiating personal space. Individuals turned to the VR headset to immerse themselves in three-dimensional worlds drawn from manga, video games, and genre literature. The Japanese government promoted VR-operated robots would enable a new era of remote work, targeting those who could not otherwise leave home. Middle-aged men and corporate brands used VR to reimagine themselves through the virtual bodies of anime-styled teenage girls. At a time when digital platforms continue to encroach on everyday life, The Immersive Enclosure takes a critical look at these attempts to jettison existing social realities and offers a bold new approach for understanding the media environments to come.

A groundbreaking virtual reality textbook is now even better. Virtual reality is a very powerful and compelling computer application by which humans interact with computer-generated environments in a way that mimics real life and engages various senses. Although its most widely known application is in the entertainment industry, the real promise of virtual reality lies in such fields as medicine, education, and business. In Neuromancer, the author introduces the reader to the use of virtual reality, and explains the role of discovery pilots can do with virtual reality. The Metaphysics of Virtual Reality provides an overview of the history of virtual reality, and explains, in easy-to-understand terms, the concepts of computer graphics and how they are integral to VR systems. The importance of integrating human factors, such as vision, sound, touch and balance, is emphasized. Exploring actual VR systems, readers will learn about all the important aspects of virtual environments, including the hardware, software, and sound systems, as well as the latest VR techniques on the Internet.

This book provides a critical analysis of the state of augmented reality (AR) in its entirety and sets out to distinguish AR from other intermediate technologies like virtual reality (VR) and mixed reality (MR). The author presents AR from its initial philosophies and early developments, to its current technologies and its impact on our modern society, to its possible future developments, providing readers with the tools to understand issues relating to defining, building, and using our perception of what is represented in our perceived reality, and ultimately how we assimilate and react to this information. Augmented Reality: Where We Will All Live can be used as a comprehensive guide to the field of AR and provides valuable insights for technologists, marketers, business managers, educators and academics who are interested in the field of augmented reality; its concepts, history, practices and the science behind this rapidly advancing field of research and development.

Essential Virtual Reality fast

The Google Mapping Revolution That Sparked New Industries and Augmented Our Reality

Videogames and the Violence of Fiction

A Corpus-based Study of the Motivation, Institutionalization, and Productivity of Creative Neologisms

Adaptive Technology for Special Human Needs

Emerging Tools and Applications of Virtual Reality in Education

The Immersive Enclosure

Between the 18th and 19th centuries, Britain experienced massive leaps in technological, scientific, and economic advancement

Computers have dramatically altered the way we live. Today we can draw on worldwide computer links, speeding up communications by radio, newspapers, and television. Ideas fly back and forth and circle the globe at the speed of electricity. And just around the corner lurks full-blown virtual reality, in which we will be able to immerse ourselves in a computer-simulated world not only in our imaginations, but in our actual physical world. As we begin to move in and out of a computer-generated world, Michael Heim asks, how will the way we perceive our world change? In The Metaphysics of Virtual Reality, Heim considers this and other philosophical issues of the Information Age. With an eye for the dark as well as the bright side of computer technology, he explores the logical and historical origins of our computer-generated world and speculates about the future direction of our computerized lives. He discusses such topics as the effect of word-processing on the English language (while word-processors have led to increased productivity, they have also led to physical hazards such as repetitive motion syndrome, which causes inflamed hand and arm tendons). Heim looks into the new kind of literacy promised by Hypertext (technology which allows the user to link audio and video elements, the disadvantages including disorientation and cognitive overload). And he also probes the notion of virtual reality, “cyberspace”—the computer-simulated environments that have captured the popular imagination and may ultimately change the way we define reality itself. Just as the definition of interface itself has evolved from the actual adapter plug used to connect electronic circuits into human entry into a self-contained cyberspace, so too will the notion of reality change with the current technological drive. Like the introduction of the automobile, the advent of virtual reality will change the whole context in which our knowledge and awareness of life are rooted. And along the way, Heim covers such intriguing topics as how computers have altered our thought habits, how we will be able to distinguish virtual from real reality, and the appearance of virtual reality in popular culture and the arts.

Howard Rheingold turns the “face the challenge of knowing ourselves and determining how the technology should develop and ultimately affect the society in which it grows.”

Howard Rheingold, the author of “The Virtual Community” of online networking, Howard Rheingold has been called the First Citizen of the Internet. In this book he tours the “virtual community” of online networking. He describes a community that is as real and as much a mixed bag as any physical community—where people talk, argue, seek information, organize politically, fall in love, and dupe others. At the same time that he tells moving stories about people who have received online emotional support during devastating illnesses, he acknowledges a darker side to people’s behavior in cyberspace. Indeed, contends Rheingold, people relate to each other online much the same as they do in physical communities. Originally published in 1993, The Virtual Community is more timely than ever. This edition contains a new chapter, in which the author revisits his ideas about online social communication now that so much more of the world’s population is wired. It also contains an extended bibliography.

As the healthcare industry continues to expand, a higher volume of new professionals must be integrated into the field. Providing these professionals with a quality education will likewise ensure the further progress and advancements in the medical field. Medical Education and Ethics: Concepts, Methodologies, Tools, and Applications presents a compendium of the primary research in the field of augmented reality (AR) in its entirety and sets out to distinguish AR from other intermediate technologies like virtual reality (VR) and mixed reality (MR). The author presents AR from its initial philosophies and early developments, to its current technologies and its impact on our modern society, to its possible future developments, providing readers with the tools to understand issues relating to defining, building, and using our perception of what is represented in our perceived reality, and ultimately how we assimilate and react to this information. Augmented Reality: Where We Will All Live can be used as a comprehensive guide to the field of AR and provides valuable insights for technologists, marketers, business managers, educators and academics who are interested in the field of augmented reality; its concepts, history, practices and the science behind this rapidly advancing field of research and development.

Possible Worlds

Clinical Technologies: Concepts, Methodologies, Tools and Applications

Concepts, Methodologies, Tools, and Applications

American Literature in Transition, 1990-2000

Reality Check

Virtual Reality 1.0 - The 90's

A comprehensive overview of developments in augmented reality, virtual reality, and mixed reality—and how they could affect every part of our lives. After years of hype, extended reality—augmented reality (AR), virtual reality (VR), and mixed reality (MR)—has entered the mainstream. Commercially available, relatively inexpensive VR headsets transport wearers to other realities—fantasy worlds, faraway countries, sporting events—in ways that even the most ultra-high-definition screen cannot. AR glasses receive data in visual and auditory forms that are more useful than any laptop or smartphone can deliver. Immersive MR environments blend physical and virtual reality to create a new reality. In this volume in the MIT Press Essential Knowledge series, technology writer Samuel Greengard offers an accessible overview of developments in extended reality, explaining the technology, considering the social and psychological ramifications, and discussing possible future directions. Greengard describes the history and technological development of augmented and virtual realities, including the latest research in the field, and surveys the various shapes and forms of VR, AR, and MR, including head-mounted displays, mobile systems, and goggles. He examines the way these technologies are shaping and reshaping some professions and industries, and explores how extended reality affects psychology, morality, law, and social constructs. It’s not a question of whether extended reality will become a standard part of our world, he argues, but how, when, and where these technologies will take hold. Will extended reality help create a better world? Will it benefit society as a whole? Or will it merely provide financial windfalls for a select few? Greengard’s account equips us to ask the right questions about a transformative technology.

Virtual reality is the next frontier of communication. As technology exponentially evolves, so do the ways in which humans interact and depend upon it. It only follows that to educate and stimulate the next generation of industry leaders, one must use the most innovative tools available. By coupling education with the most immersive technology available, teachers may inspire students in exciting new ways. Emerging Tools and Applications of Virtual Reality in Education explores the potential and practical uses of virtual reality in classrooms with a focus on pedagogical and instructional outcomes and strategies. This title features current experiments in the use of augmented reality in teaching and highlights the effects it had on students. The authors also illustrate the use of technology in teaching the humanities, as students well-rounded in the fields of technology and communication are covetable in the workforce. This book will inspire educators, administrators, librarians, students of education, and virtual reality software developers to push the limits of their craft.