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Video coding standards Multiplexing and Demultiplexing HEVC Video and AAC Audio and Achieving Lip Synchronization During Playback Digital Video Coding for Next Generation Multimedia Versatile Video Coding Digital Video and Audio Broadcasting Technology High Efficiency Video Coding and Other Emerging Standards Versatile Video Coding: Latest Advances in Video Coding Standards Digital Video Editing Fundamentals High Efficiency Video Coding (HEVC) The Filmmaker's Handbook Greening Video Distribution Networks Advances in Computer Science and Ubiquitous Computing FFMPEG - From Zero to Hero Reference Architectures for Critical Domains Intelligent Computing Theories and Application High Efficiency Video Coding and Other Emerging Standards Recent Advances in Image and Video Coding Advances in Smart Vehicular Technology, Transportation, Communication and Applications Computer Vision and Graphics Digital-Forensics and Watermarking The Future of Television Advanced Video Coding for Next-Generation Multimedia Services Image Analysis and Recognition Intelligent Computing Methodologies The Virtual Ticket Corporate Video Production Approximate Circuits Content Delivery Networks Helping Your Church Live Stream - How to spread the message of God with live streaming GoPro MAX: How To Use GoPro Max GoPro HERO 9 Black: How To Use The GoPro HERO 9 Black Encyclopedia of Information Science and Technology, Third Edition High Efficiency Video Coding Next-Generation Video Coding and Streaming Multimedia Foundations Basic Photographic Materials and Processes Image and Video Compression for Multimedia Engineering Media and Radio Signal Processing for Mobile Communications Microelectronics, Electromagnetics and Telecommunications GoPro HERO 10: How To Use The GoPro HERO 10 Black

Image Analysis and Recognition Jun 12 2021 This two-volume set LNCS 11662 and 11663 constitutes the refereed proceedings of the 16th International Conference on Image Analysis and Recognition, ICIAR 2019, held in Waterloo, ON, Canada, in August 2019. The 58 full papers presented together with 24 short and 2 poster papers were carefully reviewed and selected from 142 submissions. The papers are organized in the following topical sections: Image Processing; Image Analysis; Signal Processing Techniques for Ultrasound Tissue Characterization and Imaging in Complex Biological Media; Advances in Deep Learning; Deep Learning on the Edge; Recognition; Applications; Medical Imaging and Analysis Using Deep Learning and Machine Intelligence; Image Analysis and Recognition for Automotive Industry; Adaptive

Methods for Ultrasound Beamforming and Motion Estimation.

The Virtual Ticket Apr 10 2021 The Virtual Ticket is for anyone who wants to host next-level engaging experiences for online attendees. This book is full of detailed case studies from innovative event planners who are diversifying their revenue streams with virtual ticket sales. Whether you are a business, sports team, non-profit, event venue or a garage band, this book includes everything you need to know about planning live streams that provide audiences with experiences worth paying for. Adding a virtual ticket option for your next event does more than increase profits. Virtual tickets help expose events to global audiences by increasing convenience and accessibility with new broadcasting and translation tools that are now available. Author Paul Richards is the Chief Streaming Officer for the StreamGeeks, who detail effective strategies for transporting audiences into experiences that will keep them coming back for more. The author outlines from start to finish how conferences can add virtual ticket options to their marketing plans to help event managers budget for the new endeavor. In a fun and easy to understand manner, Richards explains how the multi-billion dollar digital experience economy has been growing year after year. Readers unfamiliar with influencer marketing, live streaming, and online community building will be encouraged to get involved to better understand modern consumer behaviors. A paradigm shift in event marketing will help readers understand how to position virtual tickets as exciting experiences worth sharing with their friends. Richards draws on innovative thinkers from books such as “Experience Economy”, “Growth Hacker Marketing”, and “Special Events” to craft a journey that is full of insights and actionable takeaways. If you want to sell virtual access to online experiences, this is the book for you.

Advances in Computer Science and Ubiquitous Computing May 24 2022 This book presents the combined proceedings of the 11th International Conference on Computer Science and its Applications (CSA 2019) and the 14th KIPS International Conference on Ubiquitous Information Technologies and Applications (CUTE 2019), both held in Macau, China, December 18–20, 2019. The aim of these two meetings was to promote discussion and interaction among academics, researchers and professionals in the field of ubiquitous computing technologies. These proceedings reflect the state of the art in the development of computational methods, involving theory, algorithms, numerical simulation, error and uncertainty analysis and novel applications of new processing techniques in engineering, science and other disciplines related to ubiquitous computing.

Recent Advances in Image and Video Coding Dec 19 2021 This book is intended to attract the attention of practitioners and researchers in academia and industry interested in challenging paradigms of image and video coding algorithms with an emphasis on recent technological developments. All the chapters are well demonstrated by various researchers around the world covering the field of image and video processing. This book highlights the current research in the image and video processing area such as image fusion, image segmentation and classification, image compression, machine

vision algorithms and video compression. The entire work available in the book is mainly focusing on researchers who can do quality research in the area of image and video processing and related fields. Each chapter is an independent research which will definitely motivate the young researchers to ponder into. These eleven chapters available in five sections will be an eye-opener for all who are doing systematic research in these fields.

Content Delivery Networks Jan 08 2021 The definitive guide to developing robust content delivery networks This book examines the real-world engineering challenges of developing robust content delivery networks (CDNs) and provides the tools required to overcome those challenges and to ensure high-quality content delivery that fully satisfies operators' and consumers' commercial objectives. It is informed by the author's two decades of experience building and delivering large, mission-critical live video, webcasts, and radio streaming, online and over private IP networks. Following an overview of the field, the book cuts to the chase with in-depth discussions—laced with good-natured humor—of a wide range of design considerations for different network topologies. It begins with a description of the author's own requirement filtration processes. From there it moves on to initial sketches, through considerations of stakeholder roles and responsibilities, to the complex challenges of managing change in established teams. Agile versus waterfall considerations within large blue chip companies, security, commercial models, and value chain alignment are explored in detail. Featured throughout the book are numerous "what if" scenarios that help provide a clear picture of the wide spectrum of practical contexts for which readers may be tasked with building and implementing a CDN. In addition, the book:
Discusses delivery of live, catch-up, scheduled on-demand, TVOD and SVOD Offers insights into the decisions that can to be made when architecting a content distribution system over IP-based networks Covers CDN topologies, including Edge-Caching, Streaming-Splitting, Pure-Play, Operator, Satellite, and Hybrid Examines computer hosting and orchestration for dedicated appliances and virtualization Includes real-world cases covering everything from IETF, regulatory considerations, and policy formation, to coding, hardware vendors, and network operators Considers the future of CDN technologies and the market forces driving its evolution Written by a back-room engineer for back-room engineers, *Content Delivery Networks* gets readers up to speed on the real-world challenges they can face as well as tried-and-true strategies for addressing those challenges in order to ensure the delivery of the high-quality content delivery networks that clients demand and users expect.

Greening Video Distribution Networks Jun 24 2022 This insightful text presents a guide to video distribution networks (VDNs), providing illuminating perspectives on reducing power consumption in IP-based video networks from an authoritative selection of experts in the field. A particular focus is provided on aspects of architectures, models, Internet protocol television (IPTV), over-the-top (OTT) video content, video on demand (VoD) encoding and decoding, mobile terminals, wireless multimedia sensor networks (WMSNs), software defined networking (SDN), and

techno-economic issues. Topics and features: reviews the fundamentals of video over IP distribution systems, and the trade-offs between network/service performance and energy efficiency in VDNs; describes the characterization of the main elements in a video distribution chain, and techniques to decrease energy consumption in software-based VoD encoding; introduces an approach to reduce power consumption in mobile terminals during video playback, and in data center networks using the SDN paradigm; discusses the strengths and limitations of different methods for measuring the energy consumption of mobile devices; proposes optimization methods to improve the energy efficiency of WMSNs, and a routing algorithm that reduces energy consumption while maintaining the bandwidth; presents an economic analysis of the savings yielded by approaches to minimize energy consumption of IPTV and OTT video content services. The broad coverage and practical insights offered in this timely volume will be of great value to all researchers, practitioners and students involved with computer and telecommunication systems.?

Versatile Video Coding: Latest Advances in Video Coding Standards Oct 29 2022

Video is the main driver of bandwidth use, accounting for over 80 per cent of consumer Internet traffic. Video compression is a critical component of many of the available multimedia applications, it is necessary for storage or transmission of digital video over today's band-limited networks. The majority of this video is coded using international standards developed in collaboration with ITU-T Study Group and MPEG. The MPEG family of video coding standards begun on the early 1990s with MPEG-1, developed for video and audio storage on CD-ROMs, with support for progressive video. MPEG-2 was standardized in 1995 for applications of video on DVD, standard and high definition television, with support for interlaced and progressive video. MPEG-4 part 2, also known as MPEG-2 video, was standardized in 1999 for applications of low-bit rate multimedia on mobile platforms and the Internet, with the support of object-based or content based coding by modeling the scene as background and foreground. Since MPEG-1, the main video coding standards were based on the so-called macroblocks. However, research groups continued the work beyond the traditional video coding architectures and found that macroblocks could limit the performance of the compression when using high-resolution video. Therefore, in 2013 the high efficiency video coding (HEVC) also known and H.265, was released, with a structure similar to H.264/AVC but using coding units with more flexible partitions than the traditional macroblocks. HEVC has greater flexibility in prediction modes and transform block sizes, also it has a more sophisticated interpolation and de blocking filters. In 2006 the VC-1 was released. VC-1 is a video codec implemented by Microsoft and the Microsoft Windows Media Video (WMV) 9 and standardized by the Society of Motion Picture and Television Engineers (SMPTE). In 2017 the Joint Video Experts Team (JVET) released a call for proposals for a new video coding standard initially called Beyond the HEVC, Future Video Coding (FVC) or known as Versatile Video Coding (VVC). VVC is being built on top of HEVC for application on Standard Dynamic Range (SDR), High Dynamic Range (HDR) and 360° Video. The VVC is planned to

be finalized by 2020. This book presents the new VVC, and updates on the HEVC. The book discusses the advances in lossless coding and covers the topic of screen content coding. Technical topics discussed include: Beyond the High Efficiency Video CodingHigh Efficiency Video Coding encoderScreen contentLossless and visually lossless coding algorithmsFast coding algorithmsVisual quality assessmentOther screen content coding algorithmsOverview of JPEG Series

Digital Video and Audio Broadcasting Technology Dec 31 2022 This practical guide offers all important digital television, sound radio, and multimedia standards such as MPEG, DVB, DVD, DAB, ATSC, T-DMB, DMB-T, DRM and ISDB-T. It provides an in-depth look at these subjects in terms of practical experience. In addition explains the basics of essential topics like analog television, digital modulation, COFDM or mathematical transformations between time and frequency domains. The fourth edition addresses many new developments and features of digital broadcasting. Especially it includes Ultra High Definition Television (UHDTV), 4K, HEVC / H.265 (High Efficiency Video Coding), DVB-T2 measurement techniques and practice, DOCSIS 3.1, DVB - S2X, and 3DTV, as well as VHF-FM radio, HDMI, terrestrial transmitters, and stations. In the center of the treatments are always measuring techniques and of measuring practice for each case consolidating the knowledge imparted with numerous practical examples. The book is directed primarily at the specialist working in the field, on transmitters and transmission equipment, network planning, studio technology, playout centers and multiplex center technology and in the development departments for entertainment electronics or TV test engineering. Since the entire field of electrical communications technology is traversed in a wide arc, those who are students in this field are not excluded either.

High Efficiency Video Coding (HEVC) Aug 27 2022 This book provides developers, engineers, researchers and students with detailed knowledge about the High Efficiency Video Coding (HEVC) standard. HEVC is the successor to the widely successful H.264/AVC video compression standard, and it provides around twice as much compression as H.264/AVC for the same level of quality. The applications for HEVC will not only cover the space of the well-known current uses and capabilities of digital video – they will also include the deployment of new services and the delivery of enhanced video quality, such as ultra-high-definition television (UHDTV) and video with higher dynamic range, wider range of representable color, and greater representation precision than what is typically found today. HEVC is the next major generation of video coding design – a flexible, reliable and robust solution that will support the next decade of video applications and ease the burden of video on world-wide network traffic. This book provides a detailed explanation of the various parts of the standard, insight into how it was developed, and in-depth discussion of algorithms and architectures for its implementation.

GoPro HERO 10: How To Use The GoPro HERO 10 Black Dec 27 2019 The newest release from JORDAN HETRICK- THE #1 AMAZON BEST SELLING AUTHOR on GoPro cameras with everything you need to know about the GoPro HERO 10 BLACK.

This inspiring book will encourage you to be adventurous and create better footage than you ever thought possible! It's the perfect, easy step-by-step guide to get you out there using your GoPro HERO 10 like a pro! Packed with color images and real-life examples, Jordan Hetrick gives you the confidence to understand how to share your passions and your adventures using easy, cinematic techniques. From understanding your camera all the way through sharing your masterfully edited photos and videos, tap into the amazing power of this camera and become an expert storyteller! This book is perfect for beginners, but also provides in depth knowledge that will transform intermediate camera users into expert content creators. Through the SEVEN EASY STEPS in this book, you will learn everything you need to know about using your GoPro HERO 10 camera, including:

- How to operate your camera
- How to choose your settings and presets
- Tips for the most useful GoPro mounts
- Vital photography/cinematography knowledge
- Creative photo, video and time lapse editing techniques
- and How to share your first edited videos and photos. Let's get started!

Digital Video Editing Fundamentals Sep 27 2022 Gain concepts central to digital video using the affordable Corel Video Studio Ultimate X9 software package as well as open source digital video editing package EditShare Lightworks 12. This compact visual guide builds on the essential concepts of digital imaging, audio, illustration, and painting, and gets more advanced as chapters progress, covering what digital video new media formats are best for use with Android Studio, Java and JavaFX, iOS, and HTML5. Furthermore, Digital Video Editing Fundamentals covers the key factors of the data footprint optimization work process, streaming versus captive assets, and why these are important. What You'll Learn Create a digital video editing and effects pipeline Gain knowledge of the concepts behind digital video editing Work with resolution, aspect ratio, bit rate, and color depth Use pixel editing, color correction, layers, and compression Optimize data footprints Who This Book Is For Website developers, musicians, digital signage, e-learning content creators, Android developers, and iOS developers.

Digital Video Coding for Next Generation Multimedia Mar 02 2023 This book is devoted to the theory and design of different algorithms used in the video codecs to obtain efficient implementation and reconstruction of codec outputs. It also addresses the most recent codecs being developed, i.e., VVC and EVC along with the reference codecs, i.e., H.264 and HEVC.

High Efficiency Video Coding and Other Emerging Standards Nov 29 2022 High Efficiency Video Coding and Other Emerging Standards provides an overview of high efficiency video coding (HEVC) and all its extensions and profiles. There are nearly 300 projects and problems included, and about 400 references related to HEVC alone. Next generation video coding (NGVC) beyond HEVC is also described. Other video coding standards such as AVS2, DAALA, THOR, VP9 (Google), DIRAC, VC1, and AV1 are addressed, and image coding standards such as JPEG, JPEG-LS, JPEG2000, JPEG XR, JPEG XS, JPEG XT and JPEG-Pleno are also listed. Understanding of these standards and their implementation is facilitated by overview papers, standards

documents, reference software, software manuals, test sequences, source codes, tutorials, keynote speakers, panel discussions, reflector and ftp/web sites – all in the public domain. Access to these categories is also provided.

Intelligent Computing Theories and Application Feb 18 2022 This two-volume set of LNCS 12836 and LNCS 12837 constitutes - in conjunction with the volume LNAI 12838 - the refereed proceedings of the 17th International Conference on Intelligent Computing, ICIC 2021, held in Shenzhen, China in August 2021. The 192 full papers of the three proceedings volumes were carefully reviewed and selected from 458 submissions. The ICIC theme unifies the picture of contemporary intelligent computing techniques as an integral concept that highlights the trends in advanced computational intelligence and bridges theoretical research with applications. The theme for this conference is “Advanced Intelligent Computing Methodologies and Applications.” The papers are organized in the following subsections: Evolutionary Computation and Learning, Image and signal Processing, Information Security, Neural Networks, Pattern Recognition Swarm Intelligence and Optimization, and Virtual Reality and Human-Computer Interaction.

Advances in Smart Vehicular Technology, Transportation, Communication and Applications Nov 17 2021 This book presents papers from the First International Conference on Smart Vehicular Technology, Transportation, Communication and Applications (VTCA 2017). Held from 6 to 8 November 2017 in Kaohsiung, Taiwan, the conference was co-sponsored by Springer, Fujian University of Technology in China, Fujian Provincial Key Laboratory of Digital Equipment, Fujian Provincial Key Lab of Big Data Mining and Applications, and National Kaohsiung University of Applied Sciences in Taiwan. The book is a valuable resource for researchers and professionals engaged in all areas of smart vehicular technology, vehicular transportation, vehicular communication, and applications.

Digital-Forensics and Watermarking Sep 15 2021 This book constitutes revised selected papers from the 14th International Workshop on Digital-Forensics and Watermarking, IWDW 2015, held in Tokyo, Japan, in October 2015. The 35 papers presented in this volume were carefully reviewed and selected from 54 submissions. The contributions are organized in topical sections named: digital forensics; steganography and steganalysis; digital watermarking; reversible data hiding; and visual cryptography.

FFMPEG - From Zero to Hero Apr 22 2022 If you ever wondered how the developers of YouTube or Vimeo cope with billions of video uploads or how Netflix processes its catalogue at scale or, again, if you want to discover how to create and develop your own video platform, you may want to know more about FFMPEG. FFMPEG stands for “Fast-Forward-Moving-Picture-Expert Group”. This book contains a basic guide, a basic dictionary and many working formulas along with step-by-step syntax explanations of FFMPEG and a lot of other softwares for audio, video, image and subtitles processing. This book describes and explains also several tools that works along with FFMPEG, such as ImageMagick, Bento4, GhostScript, WebP Tools

amongst others. The book contains also a dedicated step-by-step guide for FFMPEG's various installation options for MacOS X, Ubuntu and Windows platforms. Whether you are at the very beginning or an experienced developer, you will find several effective ways to execute many tasks for your audio/video/streaming needs.

Contents • Acknowledgments • What is FFMPEG • Basic Definitions • Basic FFMPEG Workflow • How to Install FFMPEG • Basic Syntax Concepts of FFMPEG • Keyframes: Basic Concepts • Metadata and FFPROBE • Extracting Metadata with FFMPEG • Extracting Specific Streams • Extracting Audio Only from a Video • Extracting Video Only without Audio • Cutting Videos with FFMPEG • Producing h264/AVC videos • Different h264 encoding approaches • Producing h265/HEVC Videos • h266 - Versatile Video Codec (VVC) • Producing VP8 Videos • Producing VP9 videos • The OPUS Audio Codec • The FLAC Audio Codec • Producing AV1 Video • Netflix/Intel AV1 SVT-AV1 • AV1AN - All-in-one Tool • Streaming on Social Media with RTMP • Pre-Process Files in Batch • Re-Stream to multiple destinations • Concatenate Video Playlists • Producing HLS with FFMPEG and Bento4 • Producing DASH Streaming • Batch Processing for DASH and HLS Delivery • Batch Processing for HLS Only • Streaming Mp4 Files - The Moov Atom • Producing Adaptive WebM DASH Streaming • Scaling with FFMPEG • Overlay Images on Video • Overlay Images on Pictures • ImageMagick • Batch Process - Overlay to Multiple Images with Same Size • Batch Process - Overlay to Multiple Images with Different Sizes • Batch Resize Images • Batch Resize, Lower Quality and Convert Pictures • Convert Images to WebP • Remove Black Bars/Borders from Images and Trim • Batch Convert Pictures from RAW to JPEG format • Ghostscript for PDF processing • Extract Images from PDF • Generate Waveforms from Audio • Generate Animated Video from Audio • Create Animated Slides from Still Pictures • Extract Images from Video • Extract Audio from Video • Replace Audio of a Video • Batch Convert Audio Files to a specific format • Batch Convert Audio Files in Multiple Formats • Audio Loudness Normalization for TV Broadcast • Audio Loudness Normalization for Amazon Alexa and Google Assistant (Audiobooks/Podcasts) • Batch Audio Loudness Normalization for Amazon Alexa (AudioBooks/Podcasts) • De-Interlacing Filter - 13 FFMPEG solutions • How to make a high-quality GIF from a video • How to add an Overlay Banner and burn subtitles onto a video • How to extract VTT files (Web Video Text Track) and burn it onto a video as a subtitle • Automatic Transcriptions and Subtitles • Additional Notes and Syntax Definitions • Bibliography • Recommended Resources • About Me • Alphabetical Index Features • Over 80 chapters • Over 200 tested formulas and syntax explanations • Navigable Index • Tested for MacOS X, Ubuntu 18.04, Ubuntu 20.04 and Windows 10 platforms FAQ Which audience this book is intended for? This book is designed to address anyone who is just above the “raw beginner” level. This book will explain some basic process such as entering commands and execute simple code instructions using a Command-Line-Interface (CLI) instead of using high resource-intensive Graphical User Interfaces (GUI). You may review some basic definitions and concepts, or skip directly to the

working Formulas, as you'll prefer. It is a book intended for both the beginner and the expert developer, but suitable also for creatives, social media managers, webmasters, writers, musicians, photographers, video-makers, audio engineers, archival and restoration technicians, radio/tv broadcasters, streamers, You-Tubers, etc. and anyone who needs to automate and speed-up the manipulation, editing and conversion of many different audio/video/pictures formats. What's the difference between this book and other basic books about FFMPEG? FFMPEG has a pretty steep learning curve and the books currently around lacks on the very basics terms and syntax explanations of the commands. This book contains lots of explanations about the basic BASH terms, which unleash the functionalities and the true power of FFMPEG. Also: this book will cover other great tools for content creation, editing and automation, such as ImageMagick, Bento4, Ghostscript along with scripting automation formulas and examples. Why a book on the basics of FFMPEG? Because FFMPEG can be powerful and can be very easy for anyone, once it's core technology and syntax are understood. If you would like to know more about a ultra-fast way that gives you for free the same results that you achieve with expensive subscription-based softwares for content creation/video editing/image or audio manipulation/conversion, then this is the right book for you.

High Efficiency Video Coding and Other Emerging Standards Jan 20 2022 High Efficiency Video Coding and Other Emerging Standards provides an overview of high efficiency video coding (HEVC) and all its extensions and profiles. There are nearly 300 projects and problems included, and about 400 references related to HEVC alone. Next generation video coding (NGVC) beyond HEVC is also described. Other video coding standards such as AVS2, DAALA, THOR, VP9 (Google), DIRAC, VC1, and AV1 are addressed, and image coding standards such as JPEG, JPEG-LS, JPEG2000, JPEG XR, JPEG XS, JPEG XT and JPEG-Pleno are also listed. Understanding of these standards and their implementation is facilitated by overview papers, standards documents, reference software, software manuals, test sequences, source codes, tutorials, keynote speakers, panel discussions, reflector and ftp/web sites – all in the public domain. Access to these categories is also provided.

Encyclopedia of Information Science and Technology, Third Edition Sep 03 2020

"This 10-volume compilation of authoritative, research-based articles contributed by thousands of researchers and experts from all over the world emphasized modern issues and the presentation of potential opportunities, prospective solutions, and future directions in the field of information science and technology"--Provided by publisher.

GoPro MAX: How To Use GoPro Max Nov 05 2020 Learn everything you need to know to master your GoPro MAX 360 camera in this guide book from the #1 AMAZON BEST SELLING AUTHOR on how to use GoPro cameras. Written specifically for GoPro Max, this is the perfect guide book for anyone who wants to learn how to use the GoPro Max camera to capture unique 360 and traditional videos and photos. Packed with color images, this book provides clear, step-by-step lessons to get you out there using your GoPro MAX camera to document your life and your adventures. This book covers everything you need to know about using your GoPro

MAX camera. The book teaches you: *how to operate your GoPro Max camera; *how to choose settings for full 360 spherical video; *how you can tap into the most powerful, often overlooked settings for traditional video; *tips for the best GoPro mounts to use with GoPro Max; *vital 360 photography/cinematography knowledge; *simple photo, video and time lapse editing techniques for 360 and traditional output and *the many ways to share your edited videos and photos. Through the SEVEN STEPS laid out in this book, you will understand your camera and learn how to use mostly FREE software to finally do something with your results. This book is perfect for beginners, but also provides in depth knowledge that will be useful for intermediate camera users. Written specifically for the GoPro MAX camera.

Computer Vision and Graphics Oct 17 2021 This book constitutes the refereed proceedings of the International Conference on Computer Vision and Graphics, ICCVG 2012, held in Warsaw, Poland, in September 2012. The 89 revised full papers presented were carefully reviewed and selected from various submissions. The papers are organized in topical sections on computer graphics, computer vision and visual surveillance.

Intelligent Computing Methodologies May 12 2021 This two-volume set of LNCS 13393 and LNCS 13394 constitutes - in conjunction with the volume LNAI 13395 - the refereed proceedings of the 18th International Conference on Intelligent Computing, ICIC 2022, held in Xi'an, China, in August 2022. The 209 full papers of the three proceedings volumes were carefully reviewed and selected from 449 submissions. This year, the conference concentrated mainly on the theories and methodologies as well as the emerging applications of intelligent computing. Its aim was to unify the picture of contemporary intelligent computing techniques as an integral concept that highlights the trends in advanced computational intelligence and bridges theoretical research with applications. Therefore, the theme for this conference was "Advanced Intelligent Computing Technology and Applications". Papers focused on this theme were solicited, addressing theories, methodologies, and applications in science and technology.

Advanced Video Coding for Next-Generation Multimedia Services Jul 14 2021 This book aims to bring together recent advances and applications of video coding. All chapters can be useful for researchers, engineers, graduate and postgraduate students, experts in this area, and hopefully also for people who are generally interested in video coding. The book includes nine carefully selected chapters. The chapters deal with advanced compression techniques for multimedia applications, concerning recent video coding standards, high efficiency video coding (HEVC), multiple description coding, region of interest (ROI) coding, shape compensation, error resilient algorithms for H.264/AVC, wavelet-based coding, facial video coding, and hardware implementations. This book provides several useful ideas for your own research and helps to bridge the gap between the basic video coding techniques and practical multimedia applications. We hope this book is enjoyable to read and will further contribute to video coding.

Microelectronics, Electromagnetics and Telecommunications Jan 26 2020 The volume contains 94 best selected research papers presented at the Third International Conference on Micro Electronics, Electromagnetics and Telecommunications (ICMEET 2017) The conference was held during 09-10, September, 2017 at Department of Electronics and Communication Engineering, BVRIT Hyderabad College of Engineering for Women, Hyderabad, Telangana, India. The volume includes original and application based research papers on microelectronics, electromagnetics, telecommunications, wireless communications, signal/speech/video processing and embedded systems.

Corporate Video Production Mar 10 2021 In this updated edition of Corporate Video Production, Stuart Sweetow teaches aspiring and seasoned videographers how to make imaginative corporate videos with eye-catching designs, rhythmic editing tricks, and essential scriptwriting and interview techniques. Readers will learn how to shoot on location or in a studio, work with employees-turned-actors, find new clients, and produce online videos and podcasts for corporations, government agencies, and non-profit organizations. Additionally, this new edition has been updated to include discussion questions, chapter summaries, and professional tips, and to cover live webcasting, mobile devices, shooting in 4K, micro-videos, micro-cameras, and storytelling techniques for corporate social responsibility programs. A companion website features downloadable forms and further resources.

GoPro HERO 9 Black: How To Use The GoPro HERO 9 Black Oct 05 2020 The newest release from JORDAN HETRICK- THE #1 AMAZON BEST SELLING AUTHOR on GoPro cameras with everything you need to know about the GoPro HERO 9 BLACK. This inspiring book will encourage you to be adventurous and create better footage than you ever thought possible! It's the perfect, easy step-by-step guide to get you out there using your GoPro HERO 9 like a pro! Packed with color images and real-life examples, Jordan Hetrick gives you the confidence to understand how to share your passions and your adventures using easy, cinematic techniques. From understanding your camera all the way through sharing your masterfully edited photos and videos, tap into the amazing power of this camera and become an expert storyteller! This book is perfect for beginners, but also provides in depth knowledge that will transform intermediate camera users into expert content creators. Through the SEVEN EASY STEPS in this book, you will learn everything you need to know about using your GoPro HERO 9 Black camera, including: • How to operate your camera • How to choose your settings and presets • Tips for the most useful GoPro mounts • Vital photography/cinematography knowledge • Creative photo, video and time lapse editing techniques • and How to share your first edited videos and photos. Let's get started!

Helping Your Church Live Stream - How to spread the message of God with live streaming Dec 07 2020 Finally, a complete guide for your church to start live streaming with an included online course on UDEMY.com. Inside this book, you will find insights for ministry leaders who are considering the use of live streaming as an

outreach tool for their church. This book will help church leaders understand how they can leverage the power of live streaming as a visual bridge connecting your church to the world. This book will provide perspective on best practices for live streaming church services and helpful reflections on real-life case studies from churches and pastors who are happily filling their pews with new members each week. Learn how to set up a digital donations strategy and enable your social media accounts to accept donations directly through YouTube and Facebook. This book will include actionable checklists for ministry leaders considering live streaming at their organization. It should become clear to you how your church can use live streaming and social media to reach new members and extend your reach to shut-ins. This book is accompanied by an online training course for technology directors and volunteers alike who may become the next “champions” of your live streaming program. Our online training course also includes a PowerPoint presentation template you can use to present the benefits of live streaming to your church leadership. At the end of this book, you will find a glossary of terms that will help you and your team familiarize yourselves with the type of technological vocabulary frequently used in live streaming. For many pastors, learning this type of information is like learning a new language. If you are interested in learning about church media and live streaming this book will be a walk in the park. Feel free to download the audio version of this book and literally take a walk in the park as you listen. Finally, this book was written to inspire readers to use modern tools to tell their organizations unique story about their faith. At the end of the day, live streaming is a storytelling tool helping organizations reach those who may need guidance, education, or simply a nudge in the right direction. Social media has become a medium for empowering individuals to like and share the things they believe in. We live in a world that is more connected than ever before. Understanding that everyone on earth is connected in some way, within six degrees of separation, will be an important stepping stone in our thinking about social media. Your church now has the power to reach people in large connected networks which include groups of family members and friends. These are the people that are most important and most influential in lives of your church’s current members and their extended online network. One of the main reasons why western religion has succeeded so greatly to this day is because it has always taken advantage of emerging technologies... The medium isn’t the message; it’s the medium that you use to communicate the message. In the 1500s, we saw the printing press emerge, and bibles were being printed for the first time in history. We saw an explosion of what was being made available in written form, with new translations that were suddenly available all over the world... Over the past one hundred years, we have churches moving on to the radio with the early evangelical churches that have now moved into TV and televangelism... and now today we are moving into a new form of communication, where you can distribute your message on digital platforms using social media. The churches that are the most successful and most resonate with people are the ones delivering their message in the places that people are listening. Those who are producing content in a form that is consumable and

makes sense in the day and age that we live in, we be to prosper from the fruits of new communication pathways.

The Future of Television Aug 15 2021 This book presents a collection of chapters that focus on the convergence of television today, approached using an interdisciplinary perspective. Clearly, the importance of technological advances describes only one aspect of this evolutionary process. In this book, convergence is also examined from other equally important perspectives, which include a historical case study on convergence and culture-viewer evolution and the changes that interactivity has introduced as opposed to static content. Because this publication focuses on all aspects that transform the medium, users, content, broadcasting, and interactive technology, it becomes evident that convergence is a highly interdisciplinary subject that must always be addressed from various perspectives.

High Efficiency Video Coding Aug 03 2020 The video coding standard High Efficiency Video Coding (HEVC) targets at improved compression performance for video resolutions of HD and beyond, providing Ultra HD video at similar compressed bit rates as for HD video encoded with the well-established video coding standard H.264/AVC. Based on known concepts, new coding structures and improved coding tools have been developed and specified in HEVC. The standard is expected to be taken up easily by established industry as well as new endeavors, answering the needs of today's connected and ever-evolving online world. This book presents the High Efficiency Video Coding standard and explains it in a clear and coherent language. It provides a comprehensive and consistently written description, all of a piece. The book targets at both, newbies to video coding as well as experts in the field. While providing sections with introductory text for the beginner, it suits as a well-arranged reference book for the expert. The book provides a comprehensive reference for the technical details of the employed coding tools; it further outlines the algorithmic advances compared to H.264/AVC. In addition to the technical aspects, the book provides insight to the general concepts of standardization, how specification text is written, and how these concepts apply to the HEVC specification.

Media and Radio Signal Processing for Mobile Communications Feb 27 2020 A unique, top-down treatment of the principles and practice of signal processing used in real mobile communications systems.

Basic Photographic Materials and Processes Apr 30 2020 Basic Photographic Materials and Processes describes the three crucial stages of creating the perfect photograph—capture, processing and output—by providing a thorough technical investigation of modern, applied photographic technologies. This new edition has been fully revised and updated to explore digital image capture, processing and output. It covers a wide range of topics including: the scientific principles of measuring and recording light, the inner workings of digital cameras, image processing concepts, color management and photographic output to screen and print media. With these topics come in-depth discussions of extending dynamic range, image histograms, camera characterization, display capabilities, printer and paper technologies. It also includes

applied exercises that provide the reader with a deeper understanding of the material through hands-on experiments and demonstrations, connecting theoretical concepts to real-world use. This comprehensive text provides photography students, educators and working professionals with the technical knowledge required to successfully create images and manage digital photographic assets. It is an essential resource for mastering the technical craft of photography.

Next-Generation Video Coding and Streaming Jul 02 2020 Reviews the new High Efficiency Video Coding (HEVC) standard and advancements in adaptive streaming technologies for use in broadband networks and the Internet This book describes next-generation video coding and streaming technologies with a comparative assessment of the strengths and weaknesses. Specific emphasis is placed on the H.265/HEVC video coding standard and adaptive bit rate video streaming. In addition to evaluating the impact of different types of video content and powerful feature sets on HEVC coding efficiency, the text provides an in-depth study on the practical performance of popular adaptive streaming platforms and useful tips for streaming optimization. Readers will learn of new over-the-top (OTT) online TV advancements, the direction of the broadband telecommunications industry, and the latest developments that will help keep implementation costs down and maximize return on infrastructure investment. Reviews the emerging High Efficiency Video Coding (HEVC) standard and compares its coding performance with the MPEG-4 Advanced Video Coding (AVC) and MPEG-2 standards Provides invaluable insights into the intra and inter coding efficiencies of HEVC, such as the impact of hierarchical block partitioning and new prediction modes Evaluates the performance of the Apple and Microsoft adaptive streaming platforms and presents innovative techniques related to aggregate stream bandwidth prediction, duplicate chunk Includes end-of-chapter homework problems and access to instructor slides Next-Generation Video Coding and Streaming is written for students, researchers, and industry professionals working in the field of video communications. Benny Bing has worked in academia for over 20 years. He has published over 80 research papers and 12 books, and has 6 video patents licensed to industry. He has served as a technical editor for several IEEE journals and an IEEE Communications Society Distinguished lecturer. He also received the National Association of Broadcasters (NAB) Technology Innovation Award for demonstrations of advanced media technologies.

Video coding standards May 04 2023 The requirements for multimedia (especially video and audio) communications increase rapidly in the last two decades in broad areas such as television, entertainment, interactive services, telecommunications, conference, medicine, security, business, traffic, defense and banking. Video and audio coding standards play most important roles in multimedia communications. In order to meet these requirements, series of video and audio coding standards have been developed such as MPEG-2, MPEG-4, MPEG-21 for audio and video by ISO/IEC, H.26x for video and G.72x for audio by ITU-T, Video Coder 1 (VC-1) for video by the Society of Motion Picture and Television Engineers (SMPTE) and RealVideo (RV) 9

for video by Real Networks. AVS China is the abbreviation for Audio Video Coding Standard of China. This new standard includes four main technical areas, which are systems, video, audio and digital copyright management (DRM), and some supporting documents such as consistency verification. The second part of the standard known as AVS1-P2 (Video - Jizhun) was approved as the national standard of China in 2006, and several final drafts of the standard have been completed, including AVS1-P1 (System - Broadcast), AVS1-P2 (Video - Zengqiang), AVS1-P3 (Audio - Double track), AVS1-P3 (Audio - 5.1), AVS1-P7 (Mobile Video), AVS-S-P2 (Video) and AVS-S-P3 (Audio). AVS China provides a technical solution for many applications such as digital broadcasting (SDTV and HDTV), high-density storage media, Internet streaming media, and will be used in the domestic IPTV, satellite and possibly the cable TV market. Comparing with other coding standards such as H.264 AVC, the advantages of AVS video standard include similar performance, lower complexity, lower implementation cost and licensing fees. This standard has attracted great deal of attention from industries related to television, multimedia communications and even chip manufacturing from around the world. Also many well known companies have joined the AVS Group to be Full Members or Observing Members. The 163 members of AVS Group include Texas Instruments (TI) Co., Agilent Technologies Co. Ltd., Envivio Inc., NDS, Philips Research East Asia, Aisino Corporation, LG, Alcatel Shanghai Bell Co. Ltd., Nokia (China) Investment (NCIC) Co. Ltd., Sony (China) Ltd., and Toshiba (China) Co. Ltd. as well as some high level universities in China. Thus there is a pressing need from the instructors, students, and engineers for a book dealing with the topic of AVS China and its performance comparisons with similar standards such as H.264, VC-1 and RV-9.

Multimedia Foundations May 31 2020 Understand the core concepts and skills of multimedia production and digital storytelling using text, graphics, photographs, sound, motion, and video. Then, put it all together using the skills that you have developed for effective project planning, collaboration, design, and production. Presented in full color with hundreds of vibrant illustrations, *Multimedia Foundations, Second Edition* trains you in the principles and skill sets common to all forms of digital media production, enabling you to create successful, engaging content, no matter what tools you are using. The second edition has been fully updated and features a new chapter on video production and new sections on user-centered design, digital cinema standards (2K, 4K, and 8K video), and DSLR and video camcorder recording formats and device settings. The companion website, which features a wealth of web resources, glossary terms, and video tutorials, has also been updated with new content for both students and instructors.

Versatile Video Coding Feb 01 2023 Video is the main driver of bandwidth use, accounting for over 80 per cent of consumer Internet traffic. Video compression is a critical component of many of the available multimedia applications, it is necessary for storage or transmission of digital video over today's band-limited networks. The majority of this video is coded using international standards developed in collaboration

with ITU-T Study Group and MPEG. The MPEG family of video coding standards begun on the early 1990s with MPEG-1, developed for video and audio storage on CD-ROMs, with support for progressive video. MPEG-2 was standardized in 1995 for applications of video on DVD, standard and high definition television, with support for interlaced and progressive video. MPEG-4 part 2, also known as MPEG-2 video, was standardized in 1999 for applications of low-bit rate multimedia on mobile platforms and the Internet, with the support of object-based or content based coding by modeling the scene as background and foreground. Since MPEG-1, the main video coding standards were based on the so-called macroblocks. However, research groups continued the work beyond the traditional video coding architectures and found that macroblocks could limit the performance of the compression when using high-resolution video. Therefore, in 2013 the high efficiency video coding (HEVC) also known as H.265, was released, with a structure similar to H.264/AVC but using coding units with more flexible partitions than the traditional macroblocks. HEVC has greater flexibility in prediction modes and transform block sizes, also it has a more sophisticated interpolation and de blocking filters. In 2006 the VC-1 was released. VC-1 is a video codec implemented by Microsoft and the Microsoft Windows Media Video (WMV) 9 and standardized by the Society of Motion Picture and Television Engineers (SMPTE). In 2017 the Joint Video Experts Team (JVET) released a call for proposals for a new video coding standard initially called Beyond the HEVC, Future Video Coding (FVC) or known as Versatile Video Coding (VVC). VVC is being built on top of HEVC for application on Standard Dynamic Range (SDR), High Dynamic Range (HDR) and 360° Video. The VVC is planned to be finalized by 2020. This book presents the new VVC, and updates on the HEVC. The book discusses the advances in lossless coding and covers the topic of screen content coding. Technical topics discussed include: Beyond the High Efficiency Video Coding High Efficiency Video Coding encoder Screen content Lossless and visually lossless coding algorithms Fast coding algorithms Visual quality assessment Other screen content coding algorithms Overview of JPEG Series

Multiplexing and Demultiplexing HEVC Video and AAC Audio and Achieving Lip Synchronization During Playback Apr 03 2023 High efficiency video coding (HEVC) /H.265 [5], is the latest digital video coding standard which has proven to be superior to earlier standards in terms of compression ratio, quality and error resilience. In order for the end user to understand the video meaningfully, there should be an associated audio with it. Any video is incomplete without a proper audio. Advanced audio coding (AAC) [8] is the digital audio codec standard defined in MPEG-2 and later in MPEG-4 with few changes. The audio quality of an AAC stream is widely used as the audio coding standard in various applications. It would be a great advantage to the user to adopt HEVC as video codec and AAC as the audio coding, for transmission of digital multimedia through air (ATSC, DVB) or through the internet (video streaming, IPTV). However, multiplexing is required for these applications in order to combine and create a single bit stream from separate audio and video bit streams for

transmission purposes. The objective of the thesis is to propose a method for effectively multiplexing the audio and video coded streams for transmission followed by demultiplexing the streams at the receiver and achieving lip synchronization between the audio and video during the playback. The proposed method uses the fact that frames are constant throughout the length of audio and video. The first step of the process is the packetization of elementary audio and video bit streams. The frame number information is stored in the header of the packets which is used as the vital information to synchronize the video and audio during playback. Then second layer of packetization is carried out from the first layer in order to meet the requirements of MPEG-2 transport stream. Proposed method uses playback time as the criteria for allocating data packets during multiplexing in order to prevent buffer overflow or underflow at the demultiplexer. The information required during the demultiplexer process to ensure error free is put in the header. Flow and results of the thesis are discussed in detail in the chapters.

Approximate Circuits Feb 06 2021 This book provides readers with a comprehensive, state-of-the-art overview of approximate computing, enabling the design trade-off of accuracy for achieving better power/performance efficiencies, through the simplification of underlying computing resources. The authors describe in detail various efforts to generate approximate hardware systems, while still providing an overview of support techniques at other computing layers. The book is organized by techniques for various hardware components, from basic building blocks to general circuits and systems.

The Filmmaker's Handbook Jul 26 2022 The authoritative guide to producing, directing, shooting, editing, and distributing your video or film. Whether you aspire to be a great filmmaker yourself or are looking for movie gifts, this comprehensive guide to filmmaking is the first step in turning a hobby into a career. Widely acknowledged as the “bible” of video and film production, and used in courses around the world, *The Filmmaker's Handbook* is now updated with the latest advances in HD and digital formats. For students and teachers, professionals and novices, this indispensable handbook covers all aspects of movie making. • Techniques for making dramatic features, documentaries, corporate, broadcast, and experimental videos and films • Shooting with DSLRs, video, film, and digital cinema cameras • In-depth coverage of lenses, lighting, sound recording, editing, and mixing • Understanding HDR, RAW, Log, 4K, UHD, and other formats • The business aspects of funding and producing your project • Getting your movie shown in theaters, on television, streaming services, and online

Reference Architectures for Critical Domains Mar 22 2022 This book presents reference architecture as a key blueprint to develop and evolve critical software-intensive systems, emphasizing both the state of the art in research and successful industrial cases. After outlining the theoretical foundations of reference architecture and presenting an overview of a number of reference architectures proposed over the recent years, this book dives into a set of critical application domains, including

defense, health, automotive, avionics, and Industry 4.0, highlighting the respective most relevant reference architectures that have impacted these domains, the experience and lessons learned, insights gained, benefits and drawbacks, and factors that make these architectures sustainable. The book finishes with the most relevant directions for future advances in reference architectures. The content of this book is useful for researchers and advanced professionals in industry in the areas of computing and engineering, as well as in critical application domains that increasingly require interconnected, large, and complex software-intensive systems.

Image and Video Compression for Multimedia Engineering Mar 29 2020 The latest edition provides a comprehensive foundation for image and video compression. It covers HEVC/H.265 and future video coding activities, in addition to Internet Video Coding. The book features updated chapters and content, along with several new chapters and sections. It adheres to the current international standards, including the JPEG standard.

- [Video Coding Standards](#)
- [Multiplexing And Demultiplexing HEVC Video And AAC Audio And Achieving Lip Synchronization During Playback](#)
- [Digital Video Coding For Next Generation Multimedia](#)
- [Versatile Video Coding](#)
- [Digital Video And Audio Broadcasting Technology](#)
- [High Efficiency Video Coding And Other Emerging Standards](#)
- [Versatile Video Coding Latest Advances In Video Coding Standards](#)
- [Digital Video Editing Fundamentals](#)
- [High Efficiency Video Coding HEVC](#)
- [The Filmmakers Handbook](#)
- [Greening Video Distribution Networks](#)
- [Advances In Computer Science And Ubiquitous Computing](#)
- [FFMPEG From Zero To Hero](#)
- [Reference Architectures For Critical Domains](#)
- [Intelligent Computing Theories And Application](#)
- [High Efficiency Video Coding And Other Emerging Standards](#)
- [Recent Advances In Image And Video Coding](#)
- [Advances In Smart Vehicular Technology Transportation Communication And Applications](#)
- [Computer Vision And Graphics](#)
- [Digital Forensics And Watermarking](#)
- [The Future Of Television](#)
- [Advanced Video Coding For Next Generation Multimedia Services](#)
- [Image Analysis And Recognition](#)
- [Intelligent Computing Methodologies](#)

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