Line Camera Nokia 305

This book is open access under a CC BY-NC-ND 4.0 license. This book presents the concept of value as the central component to success and longevity of the global ICT industry player, Huawei. It provides examples of how Huawei focuses on customers to pursue sustainable and profitable growth rather than focusing on capital market valuation which is a familiar scenario among Western companies. It is the business departments that are the creators of value for Huawei, while the finance department is tasked to provide support and services to those business departments during the value creation process. The book illustrates how Huawei Finance sets rules, allocates resources, and builds centers of expertise all over the world to address future uncertainties. More than a decade ago Huawei dedicated seven years to implement the Integrated Financial Services (IFS) Transformation Program with the help of IBM consultants. This book also draws on the leading concepts and successful experience of the IFS Transformation Program. Huawei Finance adopts three types of centralized vertical management from the top down: treasury, accounting, and auditing. It does not transfer such central authority down to lower levels, but delegates all other authority to business organizations across all levels. This management model represents the

focus of this book. Built on Value provides an overview of Huawei's finance management and will help academic researchers in Business/Management, as well as practitioners in industry, an accurate and in-depth understanding of Huawei as a company.

This book constitutes the thoroughly refereed post-conference proceedings of the 5th International Conference on Mobile Computing, Applications, and Services (MobiCASE 2013) held in Paris, France, in November 2013. The 13 full, 5 short and 9 poster papers were carefully reviewed and selected from 64 submissions, and are presented together with 3 papers from the Workshop on Near Field Communication for Mobile Applications (NFS). The conference papers are covering mobile applications development, mobile social networking, novel user experience and interfaces, mobile services and platforms such as Android, iOS, BlackBerry OS, Windows phone, Bada, mobile software engineering and mobile Web, mobile payments and M2M infrastructure, mobile services such as novel hardware add-ons, energy aware services or tools, NFC-based services, authentication services.

Shrinking pixel sizes along with improvements in image sensors, optics, and electronics have elevated DSCs to levels of performance that match, and have the potential to surpass, that of silver-halide film cameras. Image Sensors and

Camera-Based Document Analysis and Recognition

Signal Processing for Digital Still Cameras captures the current state of DSC image acquisition and signal processing technology and takes an all-inclusive look at the field, from the history of DSCs to future possibilities. The first chapter outlines the evolution of DSCs, their basic structure, and their major application classes. The next few chapters discuss high-quality optics that meet the requirements of better image sensors, the basic functions and performance parameters of image sensors, and detailed discussions of both CCD and CMOS image sensors. The book then discusses how color theory affects the uses of DSCs, presents basic image processing and camera control algorithms and examples of advanced image processing algorithms, explores the architecture and required performance of signal processing engines, and explains how to evaluate image quality for each component described. The book closes with a look at future technologies and the challenges that must be overcome to realize them. With contributions from many active DSC experts, Image Sensors and Image Processing for Digital Still Cameras offers unparalleled real-world coverage and opens wide the door for future innovation. Portable Moving Images Image Sensors and Signal Processing for Digital Still Cameras

The Huawei Philosophy of Finance Management
Corporate Governance Board Practices Incentives and Governing Risks
Business Transformation Strategies
Hypercompetition

This book takes a look at fully automated, autonomous vehicles and discusses many open questions: How can autonomous vehicles be integrated into the current transportation system with diverse users and human drivers? Where do automated vehicles fall under current legal frameworks? What risks are associated with automation and how will society respond to these risks? How will the marketplace react to automated vehicles and what changes may be necessary for companies? Experts from Germany and the United States define key societal, engineering, and mobility issues related to the automation of vehicles. They discuss the decisions programmers of automated vehicles must make to enable vehicles to perceive their environment, interact with other road users, and choose actions that may have ethical consequences. The authors further identify

expectations and concerns that will form the basis for individual and societal acceptance of autonomous driving. While the safety benefits of such vehicles are tremendous, the authors demonstrate that these benefits will only be achieved if vehicles have an appropriate safety concept at the heart of their design. Realizing the potential of automated vehicles to reorganize traffic and transform mobility of people and goods requires similar care in the design of vehicles and networks. By covering all of these topics, the book aims to provide a current, comprehensive, and scientifically sound treatment of the emerging field of "autonomous driving".

This book will help readers comprehend technical and policy elements of telecommunication particularly in the context of 5G. It first presents an overview of the current research and standardization practices and lays down the global frequency spectrum allocation process. It further lists solutions to accommodate 5G spectrum requirements. The readers will find a considerable amount of information

on 4G (LTE-Advanced), LTE-Advance Pro, 5G NR (New Radio); transport network technologies, 5G NGC (Next Generation Core), OSS (Operations Support Systems), network deployment and end-to-end 5G network architecture. Some details on multiple network elements (end products) such as 5G base station/small cells and the role of semiconductors in telecommunication are also provided. Keeping trends in mind, service delivery mechanisms along with state-of-theart services such as MFS (mobile financial services), mHealth (mobile health) and IoT (Internet-of-Things) are covered at length. At the end, telecom sector's burning challenges and best practices are explained which may be looked into for today's and tomorrow's networks. The book concludes with certain high level suggestions for the growth of telecommunication, particularly on the importance of basic research, departure from ten-year evolution cycle and having a 20-30 year plan. Explains the conceivable six phases of mobile telecommunication's ecosystem that includes R&D, standardization, product/network/device &

application development, and burning challenges and best practices Provides an overview of research and standardization on 5G Discusses solutions to address 5G spectrum requirements while describing the global frequency spectrum allocation process Presents various case studies and policies Provides details on multiple network elements and the role of semiconductors in telecommunication Presents service delivery mechanisms with special focus on IoT

The definitive book on sensory branding, shows how companies appeal to consumers' five senses to sell products. Did you know that the gratifying smell that accompanies the purchase of a new automobile actually comes from a factory-installed aerosol can containing "new car" aroma? Or that Kellogg's trademarked "crunch" is generated in sound laboratories? Or that the distinctive click of a just-opened jar of Nescafé freeze-dried coffee, as well as the aroma of the crystals, has been developed in factories over the past decades? Or that many adolescents recognize a

pair of Abercrombie & Fitch jeans not by their look or cut but by their fragrance? In perhaps the most creative and authoritative book on how our senses affect our everyday purchasing decisions, global branding guru Martin Lindstrom reveals how the world's most successful companies and products integrate touch, taste, smell, sight, and sound with startling and sometimes even shocking results. In conjunction with renowned research institution Millward Brown, Lindstrom's innovative worldwide study unveils how all of us are slaves to our senses—and how, after reading this book, we'll never be able to see, hear, or touch anything from our running shoes to our own car doors the same way again. An expert on consumer shopping behavior, Lindstrom has helped transform the face of global marketing with more than twenty years of hands-on experience. Firmly grounded in science, and disclosing the secrets of all our favorite brands, Brand Sense shows how we consumers are unwittingly seduced by touch, smell, sound, and more. Competitive Dynamics and Competitive Advantage

Built on Value U.S. Innovation Policy for the Global Economy Mobile Computing, Applications, and Services The Global Smartphone Mobile Solutions and Their Usefulness in Everyday Life Digital Entrepreneurship

This book views Samsung Electronics in terms of corporate life cycle as well as product portfolio and strategy. It also examines the issues Samsung faces as it proceeds further into the 21st century. Written from the perspective of an experienced commentator on Korean and global business, this book presents not simply a narrative or an adulatory and uncritical account of Samsung's rise, but a considered analysis of the secrets of success that both business students and CEOs will want to read and consider applying to their own companies.

This book provides an insight into recent technological trends and innovations in solutions and platforms to improve mobility of visually impaired people. The authors' goal is to help to contribute to the social and societal inclusion of the visually impaired. The book's topics include, but are not limited to, obstacle detection systems, indoor and outdoor navigation, transportation sustainability systems, and hardware/devices to aid visually impaired people. The book has a strong focus on practical applications tested in a real environment. Applications include city halls, municipalities, and companies that must keep up to date with recent trends in platforms, methodologies and technologies to promote urban mobility. Also discuss are broader realms including education, health, electronics, tourism, and transportation. Contributors include a variety of researchers and

practitioners around the world.

This book provides a solid overview of mobile phone programming for readers in both academia and industry. Coverage includes all commercial realizations of the Symbian, Windows Mobile and Linux platforms. The text introduces each programming language (JAVA, Python, C/C++) and offers a set of development environments "step by step," to help familiarize developers with limitations, pitfalls, and challenges.

Mobile Phone Programming

Rising to the Challenge

The Independent Guide to IBM-standard Personal Computing

PC Magazine

Disrupting the Digital World

Issue 1,8283 July 21 2010

Beyond a youth technology

Currently we are at the beginnings of widespread wireless connectivity and ubiquitous computing. The Web is merging with a variety of technologies: cell phones, laptop computers, hand held organisers, information appliances, and GPS and other sensors. The capability for access anytime and anywhere is here. The increasing frequency of cell phone calls at inappropriate times testifies that people no longer can easily control access. Devices can determine where they are located and can make a range of information available to users as well as make users available to others or their devices. We have proposed a general technique that promises to assist in mediating access. It capitalises on advantages afforded by computation(Hollan & Stometta, 1992). We first described the negotiation technique in the context of problems involved in scheduling meetings and then showed that similar issues, which at first

may seem unrelated but in fact have much in common, arise in other contexts. One such activity, gaining immediate access, is currently of growing importance because of expanding connectivity via wireless technology. Cell phones and related technologies make it possible to be constantly available for synchronous interaction. At times, this can be advantageous but the associated costs and benefits result in a complex tradeoff space for designers as well as users.

America's position as the source of much of the world's global innovation has been the foundation of its economic vitality and military power in the post-war. No longer is U.S. pre-eminence assured as a place to turn laboratory discoveries into new commercial products, companies, industries, and high-paying jobs. As the pillars of the U.S. innovation system erode through wavering financial and policy support, the rest of the world is racing to improve its capacity to generate new technologies and products, attract and grow existing industries, and build positions in the high technology industries of tomorrow. Rising to the Challenge: U.S. Innovation Policy for Global Economy emphasizes the importance of sustaining global leadership in the commercialization of innovation which is vital to America's security, its role as a world power, and the welfare of its people. The second decade of the 21st century is witnessing the rise of a global competition that is based on innovative advantage. To this end, both advanced as well as emerging nations are developing and pursuing policies and programs that are in many cases less constrained by ideological limitations on the role of government and the concept of free market economics. The rapid transformation of the global innovation landscape presents tremendous challenges as well as important opportunities for the United States. This report argues that far more vigorous attention be paid to capturing the outputs of innovation - the commercial products, the industries, and particularly highquality jobs to restore full employment. America's economic and national security future depends on our succeeding in this endeavor.

General Motors and IBM have been battered to their cores. Jack Welch, the chairman of General Electric, called the frenzied competition of the 1980's "a white knuckle decade" and said the 1990s would be worse. In this pathbreaking book that will define this new age of "hypercompetition," Richard D'Aveni reveals how competitive moves and countermoves escalate with such ferocity today that the traditional sources of competitive advantage can no longer be sustained. To compete in this dynamic environment, D'Aveni argues that a company must fundamentally shift its strategic focus. He constructs a brilliant operational model that shows how firms move up "escalation ladders" as advantage is continually created, eroded, destroyed, and recreated through strategic maneuvering in four arenas of competition. Using this "Four Arena" analysis, D'Aveni explains how competitors engage in a struggle for control by seeking leadership in the arenas of "price and quality," "timing and know-how," "stronghold creation/invasion," and "deep pockets." Winners set the pace in each of these four competitive battlegrounds. Using hundreds of detailed examples from hypercompetitive industries such as computers, software, automobiles, airlines, pharmaceuticals, toys and soft drinks, D'Avenie demonstrates how hypercompetitive firms succeed in dynamic markets by disrupting the status quo and creating a continuous series of temporary advantages. They seize the initiative, D'Aveni explains, by employing a set of strategies he calls the "New 7-S's" Superior Stakeholder Satisfaction, Strategic Soothsaying, Speed, Surprise, Shifting the Rules of Competition, Signaling Strategic Intent, and Simultaneous and Sequential Thrusts. Paradoxically, firms must destroy their competitive advantages to gain advantage, D'Aveni shows. Long-term success depends not on sustaining an advantage through a static, long-term strategy, but instead on formulating a dynamic strategy for the creating, destruction, and recreation of short-term advantages. America must embrace the new reality of hypercompetition, D'Aveni concludes in a compelling analysis of the potential chilling effect of American antitrust laws on competitiveness. This

masterful book, essentially an operating manual of strategy and tactics for a new era, will be required reading for managers, planners, consultants, academics, and students of hypercompetitive industries.

Strategy As Action

Security

Sensory Secrets Behind the Stuff We Buy

Computational Photography

The Mirror

Commerce Business Daily

5th International Conference, MobiCase 2013, Paris, France, November 7-8, 2013, Revised Selected Papers

Computational Photography combines plentiful computing, digital sensors, modern optics, actuators, probes, and smart lights to escape the limitations of traditional film cameras and enables novel imaging applications. This book provides a practical guide to topics in image capture and manipulation methods for generating compelling pictures for graphics, special effects, scene comprehension, and art. The computational techniques discussed cover topics in exploiting new ideas in manipulating optics, illumination, and sensors at time of capture. In addition, the authors

describe sophisticated reconstruction procedures from direct and indirect pixel measurements that go well beyond the traditional digital darkroom experience. This open access book explores the global challenges and experiences related to digital entrepreneurial activities, using carefully selected examples from leading companies and economies that shape world business today and tomorrow. Digital entrepreneurship and the companies steering it have an enormous global impact; they promise to transform the business world and change the way we communicate with each other. These companies use digitalization and artificial intelligence to enhance the quality of decisions and augment their business and customer operations. This book demonstrates how cloud services are continuing to evolve; how cryptocurrencies are traded in the banking industry; how platforms are created to commercialize business, and how, taken together, these developments provide new opportunities in the digitalized era. Further, it discusses a wide range of digital factors changing the way businesses $\frac{1478}{1478}$

operate, including artificial intelligence, chatbots, voice search, augmented and virtual reality, as well as cyber threats and data privacy management. "Digitalization mirrors the Industrial Revolution's impact. This book provides a complement of perspectives on the opportunities emanating from such a deep seated change in our economy. It is a comprehensive collection of thought leadership mapped into a very useful framework. Scholars, digital entrepreneurs and practitioners will benefit from this timely work." Gina O'Connor, Professor of Innovation Management at Babson College, USA "This book defines and delineates the requirements for companies to enable their businesses to succeed in a post-COVID19 world. This book deftly examines how to accomplish and achieve digital entrepreneurship by leveraging cloud computing, AI, IoT and other critical technologies. This is truly a unique "mustread" book because it goes beyond theory and provides practical examples." Charlie Isaacs, CTO of Customer Connection at Salesforce.com, USA "This book provides

digital entrepreneurs useful quidance identifying, validating and building their venture. The international authors developed new perspectives on digital entrepreneurship that can support to create impact ventures." Felix Staeritz, CEO FoundersLane, Member of the World Economic Forum Digital Leaders Board and bestselling author of FightBack, Germany Provides an overview of the sustainable energy crisis that is threatening the world's natural resources, explaining how energy consumption is estimated and how those numbers have been skewed by various factors and discussing alternate forms of energy that can and should be used. Issue 2653 October 22 2005 The Future X Network The Transformation of the Semiconductor Industry and its Application to Wireless Networking PCI Express System Architecture Fundamentals and Applications of CMOS and CCD sensors Fabless

High Performance Silicon Imaging covers the fundamentals of silicon image sensors, with a focus on existing performance issues and potential solutions. The book considers several applications for the technology as well. Silicon imaging is a fast growing area of the semiconductor industry. Its use in cell phone cameras is already well established, and emerging applications include web, security, automotive, and digital cinema cameras. Part one begins with a review of the fundamental principles of photosensing and the operational principles of silicon image sensors. It then focuses in on charged coupled device (CCD) image sensors and complementary metal oxide semiconductor (CMOS) image sensors. The performance issues considered include image quality, sensitivity, data transfer rate, system level integration, rate of power consumption, and the potential for 3D imaging. Part two then discusses how CMOS technology can be used in a range of areas, including in mobile devices, image sensors for automotive applications, sensors for several forms of scientific imaging, and sensors for medical applications.

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High Performance Silicon Imaging is an excellent resource for both academics and engineers working in the optics, photonics, semiconductor, and electronics industries. Covers the fundamentals of silicon-based image sensors and technical advances, focusing on performance issues Looks at image sensors in applications such as mobile phones, scientific imaging, TV broadcasting, automotive, and biomedical applications

In its 114th year, Billboard remains the world's premier weekly music publication and a diverse digital, events, brand, content and data licensing platform. Billboard publishes the most trusted charts and offers unrivaled reporting about the latest music, video, gaming, media, digital and mobile entertainment issues and trends. This publication examines how effectively boards manage to align executive and board remuneration with the longer-term interests of their companies.

Proceedings of HCI 2000

A Media History of Storage Formats

5th International Workshop, CBDAR 2013, Washington, DC, USA, August 23, 2013, Revised Selected Papers

And the Struggle For Leadership of the Electronics Industry High Performance Silicon Imaging

The Strategic Leader as Innovation Manager

Mastering New Techniques for Lenses, Lighting, and Sensors This media history explores a series of portable small cameras, playback devices, and storage units that have made the production of film and video available to everyone. Covering several storage formats from 8mm films of the 1900s, through the analogue videotapes of the 1970s, to the compression algorithms of the 2000s, this work examines the effects that the shrinkage of complex machines, media formats, and processing operations has had on the dissemination of moving images. Using an archaeological approach to technical standards of media, the author provides a genealogy of portable storage formats for film, analog video, and digitally encoded video. This book is a step forward in decoding the storage media formats, which up to now have been the domain of highly specialised technicians.

PCMag.com is a leading authority on technology, delivering Labs-based, independent reviews of the latest products and services. Our expert industry analysis and practical solutions help you make better buying

decisions and get more from technology.

••PCI EXPRESS is considered to be the most general purpose bus so it should appeal to a wide audience in this arena.•Today's buses are becoming more specialized to meet the needs of the particular system applications, building the need for this book.•Mindshare and their only competitor in this space, Solari, team up in this new book. Incentives and Governing Risks

Concepts and Technologies

Off the Network

Autonomous Driving

Technical, Legal and Social Aspects

Samsung Electronics

Brand Sense

A resource for industry professionals and consultants, this book on corporate strategy lays down the theories and models for revitalizing companies in the face of global recession. It discusses cutting-edge concepts, constructs, paradigms, theories, models, and cases of corporate strategic leadership for bringing about transformation and innovation in companies. Each chapter in the book is appended with transformation exercises that further explicate the concepts.

The purpose of this book is to illustrate the magnificence of the fabless semiconductor ecosystem, and to give credit where credit is due. We trace the history of the

semiconductor industry from both a technical and business perspective. We argue that the development of the fabless business model was a key enabler of the growth in semiconductors since the mid-1980s. Because business models, as much as the technology, are what keep us thrilled with new gadgets year after year, we focus on the evolution of the electronics business. We also invited key players in the industry to contribute chapters. These "In Their Own Words" chapters allow the heavyweights of the industry to tell their corporate history for themselves, focusing on the industry developments (both in technology and business models) that made them successful, and how they in turn drive the further evolution of the semiconductor industry.

The smartphone is often literally right in front of our nose, so you would think we would know what it is. But do we? To find out, 11 anthropologists each spent 16 months living in communities in Africa, Asia, Europe and South America, focusing on the take up of smartphones by older people. Their research reveals that smartphones are technology for everyone, not just for the young. The Global Smartphone presents a series of original perspectives deriving from this global and comparative research project. Smartphones have become as much a place within which we live as a device we use to provide 'perpetual opportunism', as they are always with us. The authors show how the smartphone is more than an 'app device' and explore differences between what people say about smartphones and how they use them. The smartphone is unprecedented in the degree to which we can transform it. As a result, it quickly assimilates personal values. In order to comprehend it,

we must take into consideration a range of national and cultural nuances, such as visual communication in China and Japan, mobile money in Cameroon and Uganda, and access to health information in Chile and Ireland – all alongside diverse trajectories of ageing in Al Quds, Brazil and Italy. Only then can we know what a smartphone is and understand its consequences for people's lives around the world.

PC Mag

People and Computers XIV — Usability or Else!

Impact on Business and Society

Software-Defined Radio for Engineers

Daily Graphic

Modern Photography

Billboard

There are not many books about how people get younger. It doesn't happen very often. But Ageing with Smartphones in Ireland documents a radical change in the experience of ageing. Based on two ethnographies, one within Dublin and the other from the Dublin region, the book shows that people, rather than seeing themselves as old, focus on crafting a new life in retirement. Our research participants apply new ideals of sustainability both to themselves and to their environment. They go for long walks, play bridge,

do yoga and keep as healthy as possible. As part of Ireland's mainstream middle class, they may have more time than the young to embrace green ideals and more money to move to energy-efficient homes, throw out household detritus and protect their environment. The smartphone has become integral to this new trajectory. For some it is an intimidating burden linked to being on the wrong side of a new digital divide. But for most, however, it has brought back the extended family and old friends, and helped resolve intergenerational conflicts though facilitating new forms of grandparenting. It has also become central to health issues, whether by Googling information or looking after frail parents. The smartphone enables this sense of getting younger as people download the music of their youth and develop new interests. This is a book about acknowledging late middle age in contemporary Ireland. How do older people in Ireland experience life today? Praise for Ageing with Smartphones in Ireland 'An innovative and thorough description and analysis of how one small piece of technology has changed the way Irish people live their lives.' Tom Inglis, Professor Emeritus of Sociology in University College Dublin

Strategy as Action presents an action plan for how firms can build, improve, and defend their competitive advantage at every stage of their life cycle. For Page 23/28

start-up firms entering a market, it provides a model for exploiting competitive uncertainty and blind spots; for growth firms who have established some market advantages, it provides an action plan for exploiting relative resources; for mature firms, it explains how to exploit market position; finally, for firms that have no decisive resource advantage, it provides an action plan based on firm co-operative reactions. Based on the popular Artech House classic, Digital Communication Systems Engineering with Software-Defined Radio, this book provides a practical approach to quickly learning the software-defined radio (SDR) concepts needed for work in the field. This up-to-date volume guides readers on how to quickly prototype wireless designs using SDR for real-world testing and experimentation. This book explores advanced wireless communication techniques such as OFDM, LTE, WLA, and hardware targeting. Readers will gain an understanding of the core concepts behind wireless hardware, such as the radio frequency front-end, analog-to-digital and digital-to-analog converters, as well as various processing technologies. Moreover, this volume includes chapters on timing estimation, matched filtering, frame synchronization message decoding, and source coding. The orthogonal frequency division multiplexing is explained and details about HDL code

generation and deployment are provided. The book concludes with coverage of the WLAN toolbox with OFDM beacon reception and the LTE toolbox with downlink reception. Multiple case studies are provided throughout the book. Both MATLAB and Simulink source code are included to assist readers with their projects in the field.

5G Mobile Communications

A Bell Labs Perspective

Ageing with Smartphones in Ireland

Issue 149569 October 26 2005

Sustainable Energy--without the Hot Air

When life becomes craft

This book constitutes the thoroughly refereed post-workshop proceedings of the 5th International Workshop on Camera-Based Document Analysis and Recognition, CBDAR 2013, held in Washington, DC, USA, in August 2013. The 14 revised full papers presented were carefully selected during two rounds of reviewing and improvement from numerous original submissions. Intended to give a snapshot of the state-of-the-art research in the field of camera based document analysis and recognition, the papers are

organized in topical sections on text detection and recognition in scene images and camera-based systems.

The digital world profoundly shapes how we work and consume and also how we play, socialize, create identities, and engage in politics and civic life. Indeed, we are so enmeshed in digital networks—from social media to cell phones—that it is hard to conceive of them from the outside or to imagine an alternative, let alone defy their seemingly inescapable power and logic. Yes, it is (sort of) possible to quit Facebook. But is it possible to disconnect from the digital network—and why might we want to? Off the Network is a fresh and authoritative examination of how the hidden logic of the Internet, social media, and the digital network is changing users' understanding of the world—and why that should worry us. Ulises Ali Mejias also suggests how we might begin to rethink the logic of the network and question its ascendancy. Touted as consensual, inclusive, and pleasurable, the digital network is also, Mejias says, monopolizing and threatening in its capacity to determine, commodify, and commercialize so many aspects of our lives. He shows how the network broadens participation yet also exacerbates

disparity—and how it excludes more of society than it includes. Uniquely, Mejias makes the case that it is not only necessary to challenge the privatized and commercialized modes of social and civic life offered by corporate-controlled spaces such as Facebook and Twitter, but that such confrontations can be mounted from both within and outside the network. The result is an uncompromising, sophisticated, and accessible critique of the digital world that increasingly dominates our lives. We are at the dawn of an era in networking that has the potential to define a new phase of human existence. This era will be shaped by the digitization and connection of everything and everyone with the goal of automating much of life, effectively creating time by maximizing the efficiency of everything we do and augmenting our intelligence with knowledge that expedites and optimizes decision-making and everyday routines and processes. The Future X Network: A Bell Labs Perspective outlines how Bell Labs sees this future unfolding and the key technological breakthroughs needed at both the architectural and systems levels. Each chapter of the book is dedicated to a major area of change and the network and systems

innovation required to realize the technological revolution that will be the essential product of this new digital future.