

Designing Visual Interfaces Communication Oriented Techniques

Ironically, many designers of graphical user interfaces are not always aware of the fundamental design rules and techniques that are applied routinely by other practitioners of communication-oriented visual design -- techniques that can be used to enhance the visual quality of GUIs, data displays, and multimedia documents. This volume focuses on design rules and techniques that are drawn from the rational, functionalist design aesthetic seen in modern graphic design, industrial design, interior design, and architecture -- and applies them to various graphical user interface problems experienced in commercial software development. Describes the basic design principles (the what and why), common errors, and practical step-by-step techniques (the how) in each of six major areas: elegance and simplicity; scale, contrast, and proportion; organization and visual structure; module and program; image and representation; and style. Focuses on techniques that will not only improve the aesthetics of the visual display, but, because they promote visual organization, clarity, and conciseness, will also enhance the usability of the product. Includes a catalog of common errors drawn from existing GUI applications and environments to illustrate practices that should be avoided in developing applications. For anyone responsible for designing, specifying, implementing, documenting, or managing the visual appearance of computer-based information displays.

In the years since Jakob Nielsen's classic collection on interface consistency first appeared, much has changed, and much has stayed the same. On the one hand, there's been exponential growth in the opportunities for following or disregarding the principles of interface consistency--more computers, more applications, more users, and of course the vast expanse of the Web. On the other, there are the principles themselves, as persistent and as valuable as ever. In these contributed chapters, you'll find details on many methods for seeking and enforcing consistency, along with bottom-line analyses of its benefits and some warnings about its possible dangers. Most of what you'll learn applies equally to hardware and software development, and all of it holds real benefits for both your organization and your users. Begins with a new preface by the collection's distinguished editor Details a variety of methods for attaining interface consistency, including central control, user definitions, exemplary applications, shared code, and model analysis Presents a cost-benefits analysis of organizational efforts to promote and achieve consistency Examines and appraises the dimensions of consistency--consistency within an application, across a family of applications, and beyond Makes the case for some unexpected benefits of interface consistency while helping you avoid the risks it can sometimes entail Considers the consistency of interface elements other than screen design Includes case studies of major corporations that have instituted programs to ensure the consistency of their products

Scenario-based usability engineering -- Analyzing requirements -- Activity design -- Information design -- interaction design -- Prototyping -- Usability evaluation -- User documentation -- Emerging paradigms for user interaction -- Usability engineering in practice.

This three volume set provides the complete proceedings of the Ninth International Conference on Human-Computer Interaction held August, 2001 in New Orleans. A total of 2,738 individuals from industry, academia, research institutes, and governmental agencies from 37 countries submitted their work for presentation at the conference. The papers address the latest research and application in the human aspects of design and use of computing systems. Those accepted for presentation thoroughly cover the entire field of human-computer interaction, including the cognitive, social, ergonomic, and health aspects of work with computers. The papers also address major advances in knowledge and effective use of computers in a variety of diversified application areas, including offices, financial institutions, manufacturing, electronic publishing, construction, and health care. The dot.com crash of 2000 was a wake-up call, and told us that the Web has far to go before achieving the acceptance predicted for it in '95. A large part of what is missing is quality; a primary component of the missing quality is usability. The Web is not nearly as easy to use as it needs to be for the average person to rely on it for everyday information, commerce, and entertainment. In response to strong feedback from readers of GUI BLOOPERS calling for a book devoted exclusively to Web design bloopers, Jeff Johnson calls attention to the most frequently occurring and annoying design bloopers from real web sites he has worked on or researched. Not just a critique of these bloopers and their sites, this book shows how to correct or avoid the blooper and gives a detailed analysis of each design problem. Hear Jeff Johnson's interview podcast on software and website usability at the University of Canterbury (25 min.) Discusses in detail 60 of the most common and critical web design mistakes, along with the solutions, challenges, and tradeoffs associated with them. Covers important subject areas such as: content, task-support, navigation, forms, searches, writing, link appearance, and graphic design and layout. Organized and formatted based on the results of its own usability test performed by web designers themselves. Features its own web site (www.web-bloopers.com) with new and emerging web design no-no's (because new bloopers are born every day) along with a much requested printable blooper checklist for web designers and developers to use.

Effective interface animation deftly combines form and function to improve feedback, aid in orientation, direct attention, show causality, and express your brand's personality. Designing Interface Animation shows you how to create web animation that balances purpose and style while blending seamlessly into the user's experience. This book is a crash course in motion design theory and practice for web designers, UX professionals, and front-end developers alike.

Top performing dotcoms share a common feature. It isn't a new software plug-in or a design gadget or any other piece of technology. These sites share a passionate focus on usability. This book is written by an international usability consultant, writer and trainer who specializes in the design and evaluation of web-based and wireless applications, e-

commerce sites and interactive television. The author has worked with a number of blue-chip clients that value usability, including Hewlett-Packard, Thomas Cook, Philips, the Financial Times and Motorola. This guide is designed for software developers, project managers, business analysts and user interface designers, and does not require a background in human factors or usability. *E-Commerce Usability: Tools and Techniques to Perfect the On-Line Experience* presents a practical, structured, customer-centered design method that encourages innovation yet helps you make sure your final design is still easy to use.

Brian Kernighan and Rob Pike have written *The Practice of Programming* to help make individual programmers more effective and productive. The practice of programming is more than just writing code. Programmers must also assess tradeoffs, choose among design alternatives, debug and test, improve performance, and maintain software written by themselves and others. At the same time, they must be concerned with issues like compatibility, robustness, and reliability, while meeting specifications. *The Practice of Programming* covers all these topics, and more. This book is full of practical advice and real-world examples in C, C++, Java, and a variety of special-purpose languages.

Designers, developers, and entrepreneurs today must grapple with creating social interfaces to foster user interaction and community, but grasping the nuances and the building blocks of the digital social experience is much harder than it appears. Now you have help. In the second edition of this practical guide, UX design experts Christian Crumlish and Erin Malone share hard-won insights into what works, what doesn't, and why. With more than 100 patterns, design principles, and best practices, you'll learn how to balance opposing forces and grow healthy online communities by co-creating the experience with your users. Understand the overarching principles before applying tactical design patterns Cultivate healthy participation and rein in misbehaving users Learn patterns for adding social components to an existing site Encourage users to interact with one another, whether it's one-to-one or many-to-many Use a rating system to build a social experience around products or services Orchestrate collaborative groups and discover the real power of social networks Explore numerous examples of each pattern, with an emphasis on mobile apps Learn how to apply social design patterns to enterprise environments "This innovative collection of analyses builds a badly needed bridge between solid visual communication research about legacy media and emerging scholarship about Web-based media."---Julianne Newton, Professor of Visual Communication in the School of Journalism and Communication at the University of Oregon; Co-author of *Visual Communication: Integrating Media, Art, and Science* --

For faculty to advance their careers in higher education, publishing is essential. A competitive marketplace, strict research standards, and scrupulous tenure committees are all challenges academicians face in publishing their research and achieving tenure at their institutions. *The Handbook of Research on Scholarly Publishing and Research Methods* assists researchers in navigating the field of scholarly publishing through a careful analysis of multidisciplinary research topics and recent trends in the industry. With its broad, practical focus, this handbook is of particular use to researchers, scholars, professors, graduate students, and librarians.

Describes ways to incorporate domain modeling into software development.

Humans interact with the world through perception, reason about what they see with their front part of their brains, and save what they experience in memory. They also, however, have limitations in their sight, hearing, working memory, and reasoning processes. *Cognitively Informed Intelligent Interfaces: Systems Design and Development* analyzes well-grounded findings and recent insights on human perception and cognitive abilities and how these findings can and should impact the development and design of applications through the use of intelligent interfaces. Many software and systems developers currently address these cognitive issues haphazardly, and this reference will bring together clear and concise information to inform and assist all professionals interested in intelligent interfaces from designers to end users.

In online education, there is a challenge to not only meet the pedagogical aspects of digital education but also to understand the user experience within learning platforms and student interaction. Through online functions and advanced technology, a student's learning style can be enhanced. *Learner Experience and Usability in Online Education* provides emerging research on the design, implementation, and evaluation of user experience in online learning systems. While highlighting topics such as computer-based assessments, educational digital technologies, and immersive learning environments, this publication explores the human-computer interaction in the educational realm. This book is an important resource for educators, school administrators, academicians, researchers, and students seeking current research on the role of positive user experience in educational learning systems.

The authors of *Thoughtful Interaction Design* go beyond the usual technical concerns of usability and usefulness to consider interaction design from a design perspective. The shaping of digital artifacts is a design process that influences the form and functions of workplaces, schools, communication, and culture; the successful interaction designer must use both ethical and aesthetic judgment to create designs that are appropriate to a given environment. This book is not a how-to manual, but a collection of tools for thought about interaction design. Working with information technology—called by the authors "the material without qualities"—interaction designers create not a static object but a dynamic pattern of interactivity. The design vision is closely linked to context and not simply focused on the technology. The authors' action-oriented and context-dependent design theory, drawing on design theorist Donald Schön's concept of the reflective practitioner, helps designers deal with complex design challenges created by new technology and new knowledge. Their approach, based on a foundation of thoughtfulness that acknowledges the designer's responsibility not only for the functional qualities of the design product but for the ethical and aesthetic qualities as well, fills the need for a theory of interaction design that can increase and nurture design knowledge. From this perspective they address the fundamental question of what kind of knowledge an aspiring designer needs, discussing the process of design, the designer, design methods and techniques, the design product and its qualities, and conditions for interaction design.

In test driven development, you first write an executable test of what your application code must do. Only then do you write the code itself and, with the test spurring you on, you improve your design. In acceptance test driven development (ATDD), you use the same technique to implement product features, benefiting from iterative development, rapid feedback cycles, and better-defined requirements. TDD and its supporting tools and techniques lead to better software faster. *Test Driven* brings under one cover practical TDD techniques distilled from several years of community experience. With examples in Java and the Java EE environment, it explores both the techniques and the mindset of TDD and ATDD. It uses carefully chosen examples to illustrate TDD tools and design patterns, not in the abstract but concretely in the context of the technologies you face at work. It is accessible to TDD beginners, and it offers effective and less well-known techniques to older TDD hands. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. *What's Inside* Learn hands-on to test drive Java code How to avoid common TDD adoption pitfalls Acceptance test driven development and the Fit framework How to test Java EE components-Servlets, JSPs, and Spring Controllers Tough issues like multithreaded programs and data access code *Designing User Interfaces for an Aging Population: Towards Universal Design* presents age-friendly design guidelines that are well-established, agreed-upon, research-based, actionable, and applicable across a variety of modern technology platforms. The book offers guidance for product engineers, designers, or students who want to produce technological products and online

services that can be easily and successfully used by older adults and other populations. It presents typical age-related characteristics, addressing vision and visual design, hand-eye coordination and ergonomics, hearing and sound, speech and comprehension, navigation, focus, cognition, attention, learning, memory, content and writing, attitude and affect, and general accessibility. The authors explore characteristics of aging via realistic personas which demonstrate the impact of design decisions on actual users over age 55. Presents the characteristics of older adults that can hinder use of technology Provides guidelines for designing technology that can be used by older adults and younger people Review real-world examples of designs that implement the guidelines and the designs that violate them

Once, human-computer interaction was limited to a privileged few. Today, our contact with computing technology is pervasive, ubiquitous, and global. Work and study is computer mediated, domestic and commercial systems are computerized, healthcare is being reinvented, navigation is interactive, and entertainment is computer generated. As technology has grown more powerful, so the field of human-computer interaction has responded with more sophisticated theories and methodologies. Bringing these developments together, *The Wiley Handbook of Human-Computer Interaction* explores the many and diverse aspects of human-computer interaction while maintaining an overall perspective regarding the value of human experience over technology.

Whether you're designing consumer electronics, medical devices, enterprise Web apps, or new ways to check out at the supermarket, today's digitally-enabled products and services provide both great opportunities to deliver compelling user experiences and great risks of driving your customers crazy with complicated, confusing technology. Designing successful products and services in the digital age requires a multi-disciplinary team with expertise in interaction design, visual design, industrial design, and other disciplines. It also takes the ability to come up with the big ideas that make a desirable product or service, as well as the skill and perseverance to execute on the thousand small ideas that get your design into the hands of users. It requires expertise in project management, user research, and consensus-building. This comprehensive, full-color volume addresses all of these and more with detailed how-to information, real-life examples, and exercises. Topics include assembling a design team, planning and conducting user research, analyzing your data and turning it into personas, using scenarios to drive requirements definition and design, collaborating in design meetings, evaluating and iterating your design, and documenting finished design in a way that works for engineers and stakeholders alike.

Computing Handbook, Third Edition: Information Systems and Information Technology demonstrates the richness and breadth of the IS and IT disciplines. The second volume of this popular handbook explores their close links to the practice of using, managing, and developing IT-based solutions to advance the goals of modern organizational environments. Established leading experts and influential young researchers present introductions to the current status and future directions of research and give in-depth perspectives on the contributions of academic research to the practice of IS and IT development, use, and management Like the first volume, this second volume describes what occurs in research laboratories, educational institutions, and public and private organizations to advance the effective development and use of computers and computing in today's world. Research-level survey articles provide deep insights into the computing discipline, enabling readers to understand the principles and practices that drive computing education, research, and development in the twenty-first century.

This is the first of a two-volume set that constitutes the refereed proceedings of the Symposium on Human Interface 2007, held in Beijing, China in July 2007. It covers design and evaluation methods and techniques, visualizing information, retrieval, searching, browsing and navigation, development methods and techniques, as well as advanced interaction technologies and techniques.

The design of various virtual environments should be based on the needs of a diverse population of users around the globe. Interface design should be user centric and should strive for making the user's interaction as simple, meaningful, and efficient as possible. *User Interface Design for Virtual Environments: Challenges and Advances* focuses on challenges that designers face in creating interfaces for users of various virtual environments. Chapters included in this book address various critical issues that have implications for user interface design from a number of different viewpoints. This book is written for professionals who want to improve their understanding of challenges associated with user interface design issues for globally-dispersed users in various virtual environments.

The first encyclopedia in the field, the *International Encyclopedia of Ergonomics and Human Factors* provides a comprehensive and authoritative compendium of current knowledge on ergonomics and human factors. It gives specific information on concepts and tools unique to ergonomics. About 500 entries, published in three volumes and on CD-ROM, are pre-Technological advances in hardware and software provide powerful tools with the potential to design interfaces that are powerful and easy to use. Yet, the frustrations and convoluted "work-arounds" often encountered make it clear that there is substantial room for improvement. Drawn from more than 60 years of combined experience studying, implementing, and teaching about performance in human-technology systems, *Display and Interface Design: Subtle Science, Exact Art* provides a theoretically-based yet practical guide for ecological display and interface design. Written from the perspective of cognitive systems engineering and ecological interface design, the book delineates how to design interfaces tailored to specific work demands, leverage the powerful perception-action skills of the human, and use powerful interface technologies wisely. This triadic approach (domain, human, interface) to display and interface design stands in sharp contrast to traditional dyadic (human, interface) approaches. The authors describe general principles and specific strategies at length and include concrete examples and extensive design tutorials that illustrate quite clearly how these principles and strategies can be applied. The coverage spans the entire continuum of interfaces that might need to be developed in today's work places. The reason that good interfaces are few and far between is really quite simple: they are extremely difficult to design and build properly. While there are many books available that address display design, most of them focus on aesthetic principles but lack scientific rigor, or are descriptive but not prescriptive. Whether you are exploring the principles of interface design or designing and implementing interfaces, this book elucidates an overarching framework for design that can be applied to the broad spectrum of existing domains.

With a variety of emerging and innovative technologies combined with the active participation of the human element as the major connection between the end user and the digital realm, the pervasiveness of human-computer interfaces is at an all time high. *Emerging Research and Trends in Interactivity and the Human-Computer Interface* addresses the main issues of interest

within the culture and design of interaction between humans and computers. By exploring the emerging aspects of design, development, and implementation of interfaces, this book will be beneficial for academics, HCI developers, HCI enterprise managers, and researchers interested in the progressive relationship of humans and technology.

Written by the author of the best-selling *HyperText & HyperMedia*, this book is an excellent guide to the methods of usability engineering. The book provides the tools needed to avoid usability surprises and improve product quality. Step-by-step information on which method to use at various stages during the development lifecycle are included, along with detailed information on how to run a usability test and the unique issues relating to international usability. * Emphasizes cost-effective methods that developers can implement immediately * Instructs readers about which methods to use when, throughout the development lifecycle, which ultimately helps in cost-benefit analysis. * Shows readers how to avoid the four most frequently listed reasons for delay in software projects. * Includes detailed information on how to run a usability test. * Covers unique issues of international usability. * Features an extensive bibliography allowing readers to find additional information. * Written by an internationally renowned expert in the field and the author of the best-selling *HyperText & HyperMedia*.

This book covers the full development life cycle for professional GUI design in Java, from cost estimation and design to coding and testing. Focuses on building high quality industrial strength software in Java Ready-to-use source code is given throughout the text based on industrial-strength projects undertaken by the author.

In the era of technological ubiquity and online interaction, the importance of proper computer training cannot be understated. Following established standards and practices boosts the value of communication in digital environments for all users. The *Handbook of Research on Interactive Information Quality in Expanding Social Network Communications* examines the strategic elements involved in ICT training within the context of online networks. Combining scientific, theoretical, and practical perspectives on the importance of communicability in such networks, this book is an essential reference source for researchers, students, teachers, designers, ICT specialists, engineers, and computer programmers interested in social networking technologies.

User Interfaces for All is the first book dedicated to the issues of Universal Design and Universal Access in the field of Human-Computer Interaction (HCI). Universal Design (or Design for All) is an inclusive and proactive approach seeking to accommodate diversity in the users and usage contexts of interactive products, applications, and se

This book constitutes the thoroughly refereed post-proceedings of the 8th International Workshop on the Design, Specification, and Verification of Interactive Systems, DSV-IS 2001, held in Glasgow, Scotland, UK, in June 2001. The 12 revised full papers presented have gone through two rounds of reviewing, selection, and revision. The book offers topical sections on mobile interface design, context-sensitive interfaces, supervision and control systems, temporal and stochastic issues, and new perspectives.

Jump in and build working Android apps with the help of more than 230 tested recipes. The second edition of this acclaimed cookbook includes recipes for working with user interfaces, multitouch gestures, location awareness, web services, and specific device features such as the phone, camera, and accelerometer. You also get useful info on packaging your app for the Google Play Market. Ideal for developers familiar with Java, Android basics, and the Java SE API, this book features recipes contributed by more than three dozen Android developers. Each recipe provides a clear solution and sample code you can use in your project right away. Among numerous topics, this cookbook helps you: Get started with the tooling you need for developing and testing Android apps Create layouts with Android's UI controls, graphical services, and pop-up mechanisms Build location-aware services on Google Maps and OpenStreetMap Control aspects of Android's music, video, and other multimedia capabilities Work with accelerometers and other Android sensors Use various gaming and animation frameworks Store and retrieve persistent data in files and embedded databases Access RESTful web services with JSON and other formats Test and troubleshoot individual components and your entire application

Creating a Web site is easy. Creating a well-crafted Web site that provides a winning experience for your audience and enhances your profitability is another matter. It takes research, skill, experience, and careful thought to build a site that maximizes retention and repeat visits.

Winner of a 2013 CHOICE Outstanding Academic Title Award The third edition of a groundbreaking reference, *The Human-Computer Interaction Handbook: Fundamentals, Evolving Technologies, and Emerging Applications* raises the bar for handbooks in this field. It is the largest, most complete compilation of HCI theories, principles, advances, case st

This book explores the design process for user experience and engagement, which expands the traditional concept of usability and utility in design to include aesthetics, fun and excitement. User experience has evolved as a new area of Human Computer Interaction research, motivated by non-work oriented applications such as games, education and emerging interactive Web 2.0. The chapter starts by examining the phenomena of user engagement and experience and setting them in the perspective of cognitive psychology, in particular motivation, emotion and mood. The perspective of aesthetics is expanded towards interaction and engagement to propose design treatments, metaphors, and interactive techniques which can promote user interest, excitement and satisfying experiences. This is followed by reviewing the design process and design treatments which can promote aesthetic perception and engaging interaction. The final part of the chapter provides design guidelines and principles drawn from the interaction and graphical design literature which are cross-referenced to issues in the design process. Examples of designs and design treatments are given to illustrate principles and advice, accompanied by critical reflection. Table of Contents: Introduction / Psychology of User Engagement / UE Design Process / Design Principles and Guidelines / Perspectives and Conclusions

"This book identifies solutions and suggestions for the design and development of adaptive applications and systems that provides more usable and qualitative content and services adjusted to the needs and requirements of the various users"--Provided by publisher.

The previous edition of the *International Encyclopedia of Ergonomics and Human Factors* made history as the first unified source of reliable information drawn from many realms of science and technology and created specifically with ergonomics professionals in mind. It was also a winner of the Best Reference Award 2002 from the Engineering Libraries Division, American Society of Engineering Education, USA, and the Outstanding Academic Title 2002 from Choice Magazine. Not content to rest on his laurels, human factors

and ergonomics expert Professor Waldemar Karwowski has overhauled his standard-setting resource, incorporating coverage of tried and true methods, fundamental principles, and major paradigm shifts in philosophy, thought, and design. Demonstrating the truly interdisciplinary nature of this field, these changes make the second edition even more comprehensive, more informative, more, in a word, encyclopedic. Keeping the format popularized by the first edition, the new edition has been completely revised and updated. Divided into 13 sections and organized alphabetically within each section, the entries provide a clear and simple outline of the topics as well as precise and practical information. The book reviews applications, tools, and innovative concepts related to ergonomic research. Technical terms are defined (where possible) within entries as well as in a glossary. Students and professionals will find this format invaluable, whether they have ergonomics, engineering, computing, or psychology backgrounds. Experts and researchers will also find it an excellent source of information on areas beyond the range of their direct interests.

Provides information on designing easy-to-use interfaces.

Designing Visual Interfaces Communication Oriented Techniques Prentice Hall

Blend the art of innovation with the rigor of engineering Great technology alone is rarely sufficient to ensure a product's success. Scenario-Focused Engineering is a customer-centric, iterative approach used to design and deliver the seamless experiences and emotional engagement customers demand in new products. In this book, you'll discover the proven practices and lessons learned from real-world implementations of this approach, including why delight matters, what it means to be customer-focused, and how to iterate effectively using the Fast Feedback Cycle. In an engineering environment traditionally rooted in strong analytics, the ideas and practices for Scenario-Focused Engineering may seem counter-intuitive. Learn how to change your team's mindset from deciding what a product, service, or device will do and solving technical problems to discovering and building what customers actually want. Improve the methods and mindsets you use to: Select a target customer to maximize carryover Discover your customer's unarticulated needs Use storytelling to align your team and partners Mitigate tunnel vision to generate more innovative ideas Use experimentation to fail fast and learn Solicit early and ongoing feedback Iterate using a funnel-shaped approach Manage your projects around end-to-end experiences Build a team culture that puts the customer first

Keeping Found Things Found: The Study and Practice of Personal Information Management is the first comprehensive book on new 'favorite child' of R&D at Microsoft and elsewhere, personal information management (PIM). It provides a comprehensive overview of PIM as both a study and a practice of the activities people do, and need to be doing, so that information can work for them in their daily lives. It explores what good and better PIM looks like, and how to measure improvements. It presents key questions to consider when evaluating any new PIM informational tools or systems. This book is designed for R&D professionals in HCI, data mining and data management, information retrieval, and related areas, plus developers of tools and software that include PIM solutions. Focuses exclusively on one of the most interesting and challenging problems in today's world Explores what good and better PIM looks like, and how to measure improvements Presents key questions to consider when evaluating any new PIM informational tools or systems

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