

Theo Mandel PhD

pioneering usability research
and consulting since 1983

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Curriculum Vitae

Usability and User Interface Design Consultant, Educator, Speaker and Author

Key Skills

- **Twenty years of experience in software design and development, specializing in user interface design, prototyping, and usability testing of PC and Web applications and Websites. Guidelines development is also a key service offering.**
- **Author of two well-known books, "The Elements of User Interface Design" (John Wiley & Sons, 1997) and "The GUI-OOUI War: The Designer's Guide to Human-Computer Interfaces" (John Wiley & Sons, 1994). Author of magazine articles on Web interface design and journal articles on Graphical User Interfaces (GUIs).**
- **Usability heuristic reviews of prototypes and products, providing quick and inexpensive feedback on key application and Website interface design, interaction, navigation and content.**
- **Usability testing of hardware, software user interfaces, and product documentation**
- **Conference and symposium keynote educator and speaker on software usability and user interface design**
- **Education and training on software user interface design and usability**

Work History

**1994 - present Founder and Principal Consultant
Interface Design and Development, LLC
Scottsdale, AZ | Boulder, CO**

Founder and principal consultant, Interface Design and Development, LLC, a consulting firm specializing in PC and Web application and website software development. Activities included consulting, designing, and instructing major software and Internet companies on graphical and object-oriented interface technologies, Web site and application design, and iterative usability evaluations.

**1999 – 2001 Co-Founder and Chief Usability Officer (CUO)
ReCare, Inc., Austin, TX**

Co-founded ReCare, Inc., a medical software company, and served as the company's Chief Usability Officer (CUO) from 1999 - 2001. ReCare's innovative system created a paperless electronic medical record for the patient, while providing the physician with specialty-specific information, with the ability to cross reference pharmaceutical information and the documentation of patient specific orders. The system was designed for touch screen PC tablet devices. The ReCare solution was to conform to HIPAA (Health Insurance Portability and Accountability Act).

**1993 - 1994 Senior Consultant/Instructor
IS International, Inc., Boca Raton, FL**

Senior consultant, designer, and instructor for software design, development, and education. Activities included consulting, designing, and instructing major software vendors and companies on software usability and Graphical User Interfaces.

**1992 - 1993 Senior Instructor/Developer
Information and Interface Education
IBM Skill Dynamics, Austin, TX**

Member of Systems and Software Information and Interface Education department. Responsible for development, marketing, and delivery of user interface design, CUA, usability, and multimedia curriculum. Provided education and consulting for IBM, external customer and vendor developers on system software design. Developed and taught object-oriented interface design courses.

IBM Performance: Received three "1" yearly evaluations (highest possible: "far exceeds in all areas") during 11-year IBM career. All other career evaluations were "2" ("consistently exceeds in all areas").

**1989 - 1992 Advisory User Interface Architect and Consultant
Advanced CUA Architecture
IBM Programming Systems, Austin, TX**

Member of IBM's Advanced CUA (Common User Access) Architecture department. Conducted research, design, prototyping, testing, and publication of IBM's (CUA) software user interface architecture. The CUA user interface architecture consisted of user interface guidelines and controls for enabling platforms including Windows, OS/2, and OSF/Motif (Unix), software development tools, and key strategic products developed by IBM, vendors, and customers.

Areas of responsibility: Multimedia, kiosks, transaction processing user interfaces, user interface consulting, and education. Worked closely with IBM worldwide development, key IBM vendors and customers. Served as liaison and consultant to key IBM strategic software business partners, including Lotus and Microsoft. Work involved consulting on software product design, conducting product reviews, developing and presenting demonstrations and education on IBM's current and future direction in user interface architecture and design.

**1982 - 1989 User Interface Architect/Consultant,
Human Factors/Usability Engineer
IBM Corporation, Austin, TX**

Designed software products, conducted usability tests and developed and taught interface design and usability courses.

**1981 - 1982 Usability Engineer, 1-year internship
IBM Corporation, Boulder, CO**

Designed software product documentation and conducted usability tests.

**1976 - 1982 Instructor, Teaching and Research Associate
Psychology Graduate School
University of Colorado, Boulder, CO**

Developed and taught undergraduate course, "Fundamentals of Psychological Research." Taught and supervised undergraduate cognitive psychology courses and laboratory sections. Nominated for the Teaching Excellence Award, 1981.

Conducted cognitive and quantitative psychology research in memory, learning, reading comprehension and text processing. Experience in experimental design, software development, computer simulation and statistical analyses. Developed eye movement methodologies for cognitive psychology research.

Education

Ph.D., M.A., Cognitive and Quantitative Psychology

M.A. (1980), Ph.D. (1983)
University of Colorado, Boulder
Teaching Excellence Award, 1981
Faculty-Staff Scholarship Award, 1979-1982

B.S., Psychology

Miami University, Oxford, Ohio, 1974
Grade Point Average: 3.4/4.0
Dean's List (Academic Honor Roll), 1970-1974
Athletic Scholarship (Tennis), 1970-1974
Student Scholar-Athlete Award, 1974
Scholastic Achievement Scholarship, 1971-1972

Publications

Books

The Elements of User Interface Design, Wiley & Sons, 1997

The GUI-OOUI War: A Designer's Guide to Human-Computer Interfaces,
Wiley & Sons, 1994

Object-Oriented Interface Design: IBM Common User Access Guidelines,
QUE, co-author, 1992

User/System Interface Design, Encyclopedia of Information Systems, Academic
Press, 2002

Journal and Magazine Articles

***Resuscitating User Experience: A Touchscreen System for EMS and
Fire/Rescue Professionals***, *User Experience Magazine*, November 2007

***Quality Technical Information: Paving the Way for Usable Print and Web
Interface Design***, *ACM Journal of Computer Documentation* (Aug. 2002)

A Solid Intranet in Eight Steps, *Web Techniques Magazine*, July 2001

Other Publications

CUA Guide to Multimedia User Interface Design, IBM, author, 1992

CUA Guide to User Interface Design, IBM, co-author, 1991

CUA Vision: Bringing the Future into Focus, IBM video, 1991

Eye Movement Investigation of Comprehension Process Models, IBM, 1986

Conference/Seminar Presentations

- 2010** Rocky Mtn. Direct Marketing Association – DM Day (Keynote Session)
- 2009** Keynote Address, User eXperience Russia 2009, Moscow Russia
- 2008** Rocky Mountain HFE Society, Invited Presentation - **Healthcare Usability**
- 2007** Rocky Mtn. Direct Marketing Association – DM Day (Session & Workshop)
Usability Professionals' Association Conference (Panel Presentation)
World Usability Day 2007 – Kickoff Event (Introduction and Case Study)
Direct Marketing Assoc. of So. California (Keynote Session – Web Usability)
- 2003** DCDotComm Conference – Washington, DC (Keynote Session)
- 2002** Seybold Seminars Boston, San Francisco (1-day, two 1/2-day tutorials)
- 2001** Web 2001 Conference - San Francisco (1-Day Web Design tutorial)
Seybold Seminars - Boston, San Francisco (1-Day Web Design tutorial)
- 2000** Web 2000 Conference (New York)
Seybold Seminars – Boston, San Francisco (1-Day Web Design tutorial)
- 1999** Web 99 Conference (San Francisco, Boston, Austin – 2 seminars)
Software Development 99 (San Jose, Washington, DC– 2 seminars)
Seybold Seminars (1-Day Web Design workshop)

Client and Activity List

1994 - present Interface Design & Development, LLC

ACT! (Sage Software), Scottsdale, Arizona

Conducted heuristic usability evaluations and performed several iterations of formal usability lab evaluations with users of ACT!, the #1 selling contact and customer manager software.

AIM Technologies Inc., Austin, Texas

Lead effort to revamp AIM's sports reward program sites, **FanCard™** and **SportsRewards™** and the AIM Technologies corporate web site. AIM Technologies, Inc. provided consumer loyalty solutions to organizations in a variety of industries. Using interactive kiosk technology, AIM enabled its clients to better understand their customers, while also providing a mechanism to increase revenues and communicate on a targeted basis.

Blair.com, Warren, Pennsylvania

Worked closely with the Vice President of E-Commerce and the IT Director to improve the interface design, navigation, and usability of the **Blair.com** and **Crossing Pointe** Websites. Conducted heuristic reviews and developed design prototypes. One of the nation's first and largest direct marketers, Blair Corporation is ranked the 8th largest consumer apparel cataloger in the United States with annual sales of more than \$560 million. Blair's business is built on

over 93 years of offering unique products with a strong value proposition and serves millions of active customers throughout the U.S..

Bristol-Myers Squibb, Hopewell, New Jersey

Developed information architecture and user interface design for BMS identity management system and request submission application. Created HTML prototypes for user feedback and usability evaluation.

Calendars.com, Austin, Texas

Reviewed e-Commerce website for America's largest calendar company. Developed customer surveys and conducted usability evaluations.

C-COR Corporation, State College, Pennsylvania

Designed network management software for NOC (Network Operations Center) operators of cable companies. Also designed mobile software solutions for cable technicians in the field. Created a corporate interface style guide across divisions and products for C-COR. C-COR develops broadband management systems (BMS) software for voice, video, and high-speed data over advanced HFC (Hybrid Fiber Coax) broadband networks.

CSC Continuum Corporation, Austin, Texas

Reviewed software products and developed User Interface Style Guide for insurance industry software development company. Determined user interface design guidelines for PC-based and World Wide Web-based software. Designed sample Web Java application user interfaces.

Detroit Edison, DTE Energy, Detroit, Michigan

Usability consultant for one of the largest energy companies in America. Worked with CEO, CIO and Information Technology to design, prototype and create internal applications for call center representatives and employees of this deregulated electric and gas corporation.

Dex Media (Division of R. H. Donnelley), Denver, Colorado

Designed, prototyped and conducted usability evaluations of software applications for sales and marketing representatives of hardcopy and online yellow pages advertising. Users with minimal computer skills use tablet and laptop PCs in the field and home office to sell advertising. Dex is a division of R.H. Donnelley, the nation's third largest Yellow Pages publisher with significant online and local search capabilities.

ePropose, San Francisco, California

Designed PC- and web-based interfaces for ePropose's developer toolkit to build e-Commerce Websites. ePropose provides an advanced solution for building and operating B2B eMarkets that work the way eBusiness should work. Collaborated with cofounder, John Tibbetts, on many client projects, including IBM, DTE Energy and USAA Insurance.

Exterprise, Inc., Austin, Texas

Architecting and designed user interfaces for a startup company in Austin's Technology Incubator. Exterprise pioneers E-Business applications for the automation of Enterprise Marketing Management (EMM) processes. Developed the user interface architecture and style guide for Exterprise's PC and web-based products.

First American Corporation, St. Petersburg, Florida

Conducted user/task analysis, design, prototype, and usability tests for Human Resources intranet Website.

Holt, Rinehart and Winston, Austin, Texas

Customized education on user interface design principles and techniques for one of the largest educational CD-ROM multimedia publishers. Holt, Rinehart and Winston is the education publishing subsidiary of Harcourt Brace.

HOME Account Network, Charleston, South Carolina

Designed Java applet user interfaces for Internet Banking software. Reviewed and designed user interfaces, developed interface guidelines, and planned usability testing. Conducted pilot and customer usability testing.

IBM Global Services, Network Computing Development, Service Delivery Technology Center, Austin, Texas

Improve the usability and interface design of IBM AssetWorks products. Reviewed and designed PowerBuilder-based and Web-based software AssetWorks products, documentation and Web presence. Developed user interface guidelines for PC and Web-based software products.

Johnson & Johnson Information Technology, New York, New York

Designed and prototyped web-based interface for enterprise-wide remote access authentication tool. Johnson & Johnson is the world's most comprehensive and broadly based manufacturer of health care products, as well as a provider of related services, for the consumer, pharmaceutical, and medical devices and diagnostics markets.

Lloyds TSB Bank, Geneva Switzerland

Designed and prototyped Web sites for Lloyds TSB International Private Banking division. Created sites where international customers can view portfolios, make transactions, and communicate with account representatives.

MediaPrise, Austin, Texas

Built an interface style and metaphor for all user types of MediaPrise's Web site and application. MediaPrise revolutionizes the presentation, merchandising, and sale of B2B products and services on-line.

Motive, Inc., Austin, Texas

Helped Motive assess their usability process and initiate a usability directive within the company. Motive powers online customer care by offering software solutions that automatically connect online users to a company's answers and experts when they have problems. These products are used to build unique e-service networks that help companies foster customer loyalty, drive revenue, supercharge service capacity, and increase market share. Motive's software solutions are used by leading companies in many industries including all.com, Compaq, Dell, EDS, Gateway, Hewlett-Packard Company, Intuit, Kmart, Merrill Lynch, Netscape, pcsupport.com, Peregrine, SAIC and Target Corp.

National Council of Teachers of Mathematics, Reston, Virginia

Designed and prototyped companion Web site (tightly-coupled with hardcopy book) for non-profit organization's Principles & Standards training materials.

Newgistics, Inc., Austin, Texas

Designed interfaces for Newgistics' ValetProcessor, used by package return processors in retail distribution centers. Newgistics is an innovative supply chain management company that integrates technology with established logistics systems to create operational efficiencies for multiple business verticals. Clients include retailers Spiegel and Newport News.

OKbridge, San Diego, California

OKbridge, Inc. is an online bridge club dedicated to serving the worldwide community of bridge players by providing superior software and service. Today, OKbridge has more than 18,000 members from over 90 countries, making it the world's largest member-supported online bridge club. Reviewed and redesigned the site's registration process. Conducted heuristic evaluations of the OKbridge website and online game. Then worked closely with the founder and development staff to design and prototype the next generation of the online program. Focusing on the needs and requirements of both expert-level and novice bridge players through user evaluations, successfully designed the Java-based application for maximum enjoyment and usability.

Premier Mounts, Anaheim, California

Conducted usability heuristic reviews of catalog and e-commerce website. Premier Mounts is the industry leader in mounting solutions for projectors, plasma displays and LCD flat-panel monitors.

ProStore (eBlox), Austin, Texas

Conducted heuristic evaluations, mentored ProStore user analysts, and created the user interface prototype for ProStore's Virtual Company Store. eBlox is the leading provider of e-commerce services for the \$20 billion promotional products industry. ProStore is a patented virtual online store for promotional products distributors and their clients.

Sun Microsystems, Broomfield, Colorado

Conducted usability tests of current and prototype Internet and intranet Websites for Sun Microsystems. Used streaming video technology to broadcast usability sessions live or archived to any Sun location in the world.

Swiss Bank Corporation, Basel, Switzerland

Developed User Interface Style Guide for SBC's software development. Designed interfaces for bank clerks to sell services and collect customer data.

Target Corporation, Minneapolis, Minnesota

Developed Intranet User Interface Guidelines for Target Corporation, the fourth largest retailer in the United States. Created guidelines as a site on the company intranet site. Tested the guidelines in a usability lab. Designed and developed libraries of Web layouts, frames, and graphics and forms templates for use across the corporation (5 retail chains). Defined usability test plans and strategies to encourage developers to use guidelines to design Intranet sites.

Terawave Communications, Hayward, California

Conducted Heuristic evaluation and prototype design for leading network management software company.

TCSI Corporation, Alameda, California

Designed a Web-based prototype of new user interface style for a network management software company.

Unitedhealth Group, Minneapolis, Minnesota

Designed, prototyped and conducted usability evaluations of new healthcare software application for use by clinicians and case managers in the field. Large-scale project involved building a new architecture and user interface from scratch to replace three separate but integrated enterprise applications. Users are healthcare professionals with minimal computer skills using tablet and laptop PCs working in hospitals, care facilities, and patient homes. United HealthCare is one of the largest health insurance companies in the U.S.

ZOLL Data Systems, Broomfield, Colorado

Guided the interface design and usability of the next generation of a PC touch-screen and pen-based EMS field data collection and management program, **RescueNet TabletPCR**. The software is used by EMS and Fire/Rescue ambulance teams in the field to document patient information, history, vital signs, medical and trauma assessments, interventions, and treatment during the entire patient care process up to delivering the patient to a hospital Emergency Room. To understand how users work with the program, I rode along in ambulances for four days, watching medical technicians and paramedics use the hardware and software in the field. Customers and users were intimately involved in designing the new version of the product.

ZOLL Data Systems (formerly known as Pinpoint Technologies) has been providing Windows-based Emergency Medical Services (EMS) software solutions since 1994, longer than any other vendor in the EMS market. ZOLL Data Systems is a software division of **ZOLL Medical Corporation**, one of the leading manufacturers of cardiac resuscitation devices.

1993 - 1994 Senior Consultant/Instructor, IS International

NYNEX (New York and New England Telephone Company), Boston/NY

Task analysis, interface design, implementation, prototyping, and usability testing of Customer Service system. The project migrated the enterprise application to a client-server architecture using OS/2's graphical user interface.

Canada Gas Consortium/IBM Canada, Toronto and Vancouver, Canada

Review and analysis of user interface for Customer Service System. Product required development of a graphical/object-oriented user interface on OS/2.

1989 - 1993 IBM CUA Liaison

Worked with major US corporations to design new software user interfaces:

Advantage Systems, Inc.
American Management Systems
American Software
CGI Informatique
Check Solutions, Inc.
Computer Associates Int., Inc.
Comshare, Inc.
Dun & Bradstreet Software
Early, Cloud & Company
Fields Software Group
Financial Technologies Int., L.P.
GTE Government Info. Services
GTE Health Systems
HealthQuest
HTE, Inc.
Hogan Systems, Inc.
IBAX Healthcare Systems
IBS AB
Information Builders, Inc.

Integral Systems, Inc.
InterBold
J. D. Edwards & Company
Marcam Corporation
Marcam Canada
Paxus Corporation
PDA, Inc.
Mr. James Lenahan
Premenos
SAP AG
SAS Institute Inc.
Seer Technologies Inc.
Sema Group
Shared Medical Systems
Software 2000, Inc.
Sterling Software, Dylakor Division
Surecomp Development, Ltd.
Tesseract Corporation
The Continuum Company, Inc

1982 - 1993 IBM Product Development and CUA Interface Architecture

IBM Academy Workshop on "Future of User Interfaces"

"Expanding the CUA User Audience" presentation and publication at workshop sponsored by the IBM Scientific Academy in March 1992. Workshop goal was to guide the future direction of IBM in computer user interfaces.

America 2000 Education Project

Participated in IBM's proposal for a revolutionary approach to redesign the US education system by year 2000. Commissioned by IBM's CEO, John Akers, represented the User Interface Design/Human Factors areas of IBM.

IBM Corporation Multimedia Strategy

Participated in IBM Corporate Strategy Development and Assessment team to define a corporate strategy for IBM multimedia. Presented to IBM Scientific Advisory Council under direction of Dr. John Armstrong, IBM VP/Chief Scientist.

IBM/Blockbuster Video Kiosk

Proposed, designed and jointly developed a touch-screen kiosk user interface for IBM/Blockbuster video system for customers to view movie previews in a store and to search a database to find movies and information based on selection of stars, directors and topics. The interface allows customers to see movies available in the store for rental or purchase and where in the store the videos are located. The kiosk system was installed in a test Blockbuster store in Boca Raton, Florida. Prototyped and tested variations of the user interface.

IBM Solutions Manager Configurator (IBM Toronto)

Software user interface design consulting with the IBM Solutions Manager project on the Hardware Configuration for all IBM Marketing, a large-scale multi-site, multiphase project.

Lotus Development Corporation

IBM CUA liaison to Lotus User Interface Architecture group. Focus is on sharing IBM user interface directions and guiding the user interface direction for Lotus products such as Lotus 1-2-3 and Lotus Ami Pro (word processing product).

CUA Field TV Network (FTN) Broadcast

Invited to discuss and demonstrate CUA user interface architecture and prototype in 1991 IBM broadcast to IBM Branch Offices and Customers.

IBM European (E/ME/A) Strategy, Architecture and Technology

Invited by IBM Europe, Middle East and Asia (E/ME/A) Strategy, Architecture and Technology organization to present to the Managers meeting, Uithoorn,

Holland. Also presented to Uithoorn HF/Usability, the IBM Uithoorn Lab, ESAT Director, ESAT PWS Steering Committee, and to key IBM European customers.

COMDEX Fall '91: CUA '91 Presentation and Demonstration

Presented and demonstrated CUA '91 user interface architecture and user interface future directions at COMDEX Fall 1991 in Las Vegas.

IBM Multimedia User Interface Design Publication

Co-author of published IBM book titled, "SAA CUA Guide to Multimedia User Interface Design."

University of Texas Computer Science Short Course

Co-developed and co-taught 3-day course titled "Human-Computer Interface Evaluation and Design" for the University of Texas Computer Science department in 1992. Course covered human-computer interaction as a science, evolution of computer user interfaces, and human factors and usability evaluation of interfaces. Course received excellent student evaluation ratings.

SHARE 78 Presentation and Demonstration

Specifically invited by IBM customers at SHARE Corporation (Worldwide IBM User Group) to present and demonstrate CUA '91 user interface architecture, kiosk interfaces and multimedia user interface directions at SHARE 78, 1992.