



# Curriculum Vitae

## User Experience Design, User Research, Consumer Psychology, and Expert Witness Consulting

### Highlights

- Over 40 years of experience and leadership in application, website and mobile app design, prototyping, user research and usability testing, applying psychology and consumer design principles
- User research and usability testing of wireframes, prototypes, and products, providing quick and actionable feedback on product design, marketing, branding, interaction, navigation, content, and overall user experience
- Extensive experience creating corporate UX and UI guidelines and standards
- Expert witness experience in numerous cases, representing major clients such as the Federal Trade Commission (FTC). Expert witness consulting specialties include software patent, intellectual property, breach of contract, and trademark litigation. Provided testimony in Federal Court
- Eleven-year career in IBM's leading-edge Common User Access (CUA) User Interface Architecture group. IBM team designed and prototyped IBM's OS/2 object-oriented user interface. Consistently rated an outstanding performer
- Author of *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). Co-author of IBM's *Object-Oriented Interface Design: IBM Common User Access Guidelines* (QUE, 1992)
- Author of numerous magazine and journal articles on Graphical User Interfaces (GUIs), software and Web interface design, usability, and user research
- Conference and symposium keynote speaker and workshop presenter on user experience design, user research, consumer psychology and usability

# Work History

**1993 – present**  
**(30 years)**                      **Founder and Principal Consultant**  
**Interface Design and Development, LLC**  
**Scottsdale, AZ | Boulder, CO**

Founder and principal consultant, Interface Design and Development, LLC. Mandel specializes in software, website, and mobile app design, development, and user research. Activities included design, prototyping and user research for international software, web and mobile app companies using user experience methodologies, consumer psychology, and iterative user research methods

**2021 – 2022**  
**(1 year, 2 mo.)**                      **Lead Senior UX Researcher**  
**Stride (Formerly K12)**  
**Herndon, VA**

Lead a research team conducting generative and evaluative research on a new high school and young adult learner platform to allow them to pursue careers, learning paths, courses, and certifications to ultimately connect with employers for internships and jobs. Worked directly with company executives to formulate current and future user research strategies. Responsibilities included planning, conducting, data analysis, and report creation for remote usability testing, interviews, branding studies, diary studies, focus groups, and surveys

**2021**  
**(8 months)**                      **Lead Senior UX Researcher**  
**Keap**  
**Chandler, AZ**

Keap is a CRM, sales and marketing automation SaaS platform that serves over 30,000 small business and over 100,000 users. As Lead UX Researcher, I conducted user research on Keap's web and mobile applications. Responsibilities included:

- Conducting UX research of new onboarding and first-time use experiences
- Conducting UX research on information architecture and navigation design
- Researching and implementing new research tool

**2017 – 2020**  
**(3 years)**                      **Vice President, User Experience & Usability**  
**BioTrak Therapeutics**  
**Boulder, CO**

BioTrak Therapeutics is a clinical-stage digital therapeutic company developing an innovative approach to managing stress-related diseases. Behavioral therapy is deployed as an adjunct to pharmaceuticals to enhance efficacy, reduce side effects, and produce long-lasting improvements. The company's first product, Halo™, monitored user tension levels and provided professional-quality biofeedback training in a portable system designed to reach a large yet under-served migraine and headache population. The company now focuses on a mobile app

**2012 - 2018**  
**(6 years)**                      **User Experience Researcher**  
**Pearson Education, US Locations**

User research consultant with the world's largest education company. Designed and upgraded Pearson's internal usability lab. Mandel conducts usability tests on education websites, applications, and mobile apps. Research participants include K-

12 grade students, parents, teachers, and administrators. Mandel works with Pearson product executives to define test charter, test plan, conduct tests, analyze data, and report findings

**1999 – 2001**                      **Co-Founder and Chief Usability Officer (CUO)**  
**(2 years)**                              **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 physicians with specialty-specific information. The system also cross-referenced pharmaceutical information and documented patient-specific orders

**1992 - 1993**                      **Senior Instructor/Course Developer**  
**(1 year)**                              **Information and Interface Education**  
   **IBM Skill Dynamics, Austin, TX**

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

**1989 - 1992**                      **Advisory User Interface Architect and Consultant**  
**(3 years)**                              **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 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**  
**(7 years)**                              **Human Factors/Usability Engineer**  
   **IBM Corporation, Austin, TX**

Designed software products, conducted usability tests, and developed and taught interface design and usability courses. IBM Performance: Received three "1" yearly evaluations (highest possible: "far exceeds in all areas") during 11-year IBM career

**1981 – 1982**                      **Usability Engineer Internship**  
**(1 year)**                              **IBM Corporation, Boulder, CO**

Designed software product documentation and conducted usability studies

# Expert Witness/Litigation Experience

## **Dun & Bradstreet, Inc. v. Tropare, Inc, 2021 (Ongoing)**

Mandel is a software user experience (UX) expert for Dun & Bradstreet, Inc. (plaintiff) in a software contract dispute filed against Tropare, Inc. (defendant). The case is ongoing.

## **Katzkin Leather, Inc. v. Roadwire, LLC, 2020 – 2022**

Mandel is a software user experience (UX) and consumer psychology expert for Katzkin Leather, Inc. (plaintiff) in an intellectual property and trademark dispute filed against Roadwire, LLC and Classic Soft Trim, Inc. The case was settled.

### **Expert Activities:**

- Expert Report (August 2021)
- Deposition (October 2019)

## **Karl Storz Endoscopy-America, Inc. v. Steris Corporation, 2019**

Mandel was a user experience (UX) expert for the Steris Corporation (defendant) in a patent dispute filed by Karl Storz Endoscopy-America, Inc. Case Number: 1:2018cv01691, filed July 20, 2018. The case settled in September 2019. The case was settled.

### **Expert Activities:**

- Expert Rebuttal Reply Report (February 2019)
- Deposition (April 2019)
- Expert Declaration (September 2019)

## **Federal Trade Commission v. DIRECTV, Inc., et al, 2013 – 2018**

Mandel was a UX and consumer psychology expert for the Federal Trade Commission (FTC) regarding deceptive website practices by DIRECTV, Inc. The case was dismissed.

### **Expert Activities:**

- Expert Report (September 16, 2016)
- Expert Rebuttal Reply Report (November 28, 2016)
- Depositions (October 5, 2016, December 9, 2016)
- Trial testimony (August 16, 2017)

## **Synca Direct Inc. v. Scil Animal Care Company & Vet Novations, 2016 – 2017**

Dr. Mandel served as a software expert witness representing the defendant, Scil Animal Care Company in a software contract licensing dispute. The case was settled.

### **Expert Activities:**

- Expert Report (July 21, 2016)
- Expert Rebuttal Reply Report (August 12, 2016)

## **Microsoft Corporation v. Motorola, Inc., 2011**

Dr. Mandel served as an expert research consultant for Motorola, Inc. in Microsoft v. Motorola lawsuit (Patent 5664133, September 1997). Mandel conducted research on the patent infringement and provided discovery materials. Mandel, as an IBM employee, published materials that pre-dated and invalidated the Microsoft's design patent

### **Expert Activities:**

- Deposition with Microsoft Corp., Motorola, Inc., and IBM Corp. (June 2011)

# Education

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

### **University of Colorado, Boulder**

Ph.D. (1983), M.A. (1980)

Teaching Excellence Award, 1981

Faculty-Staff Scholarship Award, 1979-1982

## **B.A., 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**

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

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

***The GUI-OOUI War: A Designer's Guide to Human-Computer Interfaces***, Van Nostrand Reinhold, 1994

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

## **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*, 2002, Vol. 26 (3)

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

***Summarizing scrambled stories***, *Memory & Cognition* 1977, Vol. 5 (5), 547-55

## **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

- 2015** UXPA 2015 International Conference – Presentation
- 2014** Internet User Experience (IUE) Conference – Keynote Presentations
- 2013** IxDA Phoenix Design Week – UX Methods and Madness Panelist
- 2013** Internet User Experience (IUE) Conference – Keynote 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** Web2001 Conference - San Francisco (1-Day Web Design tutorial)  
Seybold Seminars - Boston, San Francisco (1-Day Web Design tutorial)
- 2000** Web2000 Conference (New York)  
Seybold Seminars – Boston, San Francisco (1-Day Web Design tutorial)
- 1999** Web99 Conference (San Francisco, Boston, Austin – 2 seminars each)  
Software Development 99 (San Jose, Washington, DC – 2 seminars each)  
Seybold Seminars (1-Day Web Design workshop)

## Key Client Work

### **Detroit Edison (DTE Energy), Detroit, Michigan**

Long-term user experience and usability consultant for one of the largest energy companies in the US. Worked with DTE's CEO, CIO and Information Technology groups to design, prototype and test public-facing websites and applications and internal applications for call center representatives and employees of the deregulated electric and gas corporation.

### **General Motors Corporation, Detroit, Michigan**

Iteratively designed and prototyped passenger touchscreen displays for autonomous vehicles. Designed and created introduction video for first-time passengers. Planned and conducted usability research on passenger touchscreen displays with potential autonomous vehicle passengers.

### **Hunter Douglas, Broomfield, Colorado**

Conducted expert UX and usability evaluation of Hunter Douglas PowerView motorization system, an evolutionary new system that automatically moves shades, so homeowners don't have to. The system includes motorized shades, a network controller, remote controls and a smartphone or tablet app for homeowners to create and schedule customized rooms and scenes that allow shades to operate on their own throughout the day. Link:

<https://www.hunterdouglas.com/operating-systems/powerview-motorization>

**K12 Education, USA**

Conducted user research for K12, the largest Education Management Organization (EMO) in the US on a mobile app for parents, students, and learning coaches. Designed study methodology, conducted usability sessions, analyzed results, and presented results to K12 design and executive teams

**Lloyds TSB Bank, Geneva Switzerland**

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

**Microsoft Corporation, Redmond, Washington**

Conducted UX expert reviews and led international user experience research project on Microsoft's key customer productivity, customer relationship management (CRM) and Cloud products compared to their major industry competitors. Created user research strategy, designed test plan, test methodology and defined usability study tasks and measurements. Conducted and managed usability studies in 4 different countries

**PayPal, Scottsdale, Arizona and San Jose, California**

User experience and interaction design for PayPal's redesigned web presence. Designed and prototyped consumer- and merchant-facing desktop and mobile web experiences. Worked in remote, agile, and lean product teams. Designed usability evaluations on design prototypes and products

**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

**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 design and usability testing of next-generation touch-screen pen-based EMS field data collection and management program, **RescueNet TabletPCR**. Used by EMS and Fire/Rescue 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 conduct field research, I rode in ambulances for four days, watching medical techs and paramedics use the hardware and software in the field. ([www.zolldata.com/ems-software/epcr](http://www.zolldata.com/ems-software/epcr)). Zoll Medical Systems also acquired another healthcare client of mine, emsCharts

## **Other Client Work**

### **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. Worked on ACT! 7 and ACT! 10

### **AIM Technologies Inc., Austin, Texas**

Revamped AIM's sports reward program sites, **FanCard™** and **Sports Rewards™** and AIM's web site. AIM provided consumer loyalty solutions to organizations. Using interactive kiosk technology, AIM enabled clients to better understand customers, while increasing revenues and communications

### **Blair.com, Warren, Pennsylvania**

Worked closely with VP and IT Director to improve 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 a top-ranked consumer apparel cataloger in the United States with annual sales of more than \$560 million

### **Calendars.com, Austin, Texas**

Conducted expert reviews, customer surveys, and usability testing of Calendars.com, America's largest calendar company

### **C-COR Corporation, State College, Pennsylvania**

C-COR develops broadband management systems for voice, video, and high-speed data. Designed Network Operations Center network management software for NOC operators. Designed mobile software solutions for field cable technicians. Created a corporate interface style guide across divisions and products

### **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



**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

**emsCharts, Pittsburgh, Pennsylvania**

Redesigned a touchscreen system for tablet PCs and notebook computers. emsCharts mobile3 allows emergency service personnel to collect electronic patient information in real-time using mobile software. emsCharts has been acquired by Zoll Medical Corporation, another client of mine

**Exterprise, Inc., Austin, Texas**

Architected and designed user experience 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 Enterprise'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

**Freescale Semiconductor, Phoenix, Arizona**

Conducted user research, wireframed and prototyped designs for Freescale's website home page. Goals were to reduce clutter, increase font size, focus on Freescale's positioning statement, and update the site design

**HealthLock, Scottsdale, Arizona**

Website design and user research on consumer healthcare website to monitor and audit medical bills and insurance companies. HealthLock automatically analyzes claims for fraud and overbilling—and can help get consumers money back through audits and negotiation with providers and insurance companies.

**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

**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

**MedImpact Direct, San Diego, California**

User experience and usability consultant for new subsidiary of MedImpact, a Pharmacy Benefits Manager (PBM). MedImpact Direct offers mail-order, home delivery pharmacy services. MedImpact Direct is a consumer-oriented business rather than the business-to-business model for the parent corporation. I designed the public website, registration and log-in workflow and the secure consumer portal for managing prescriptions and ordering refills. I also created a consumer-focused user experience process and a usability testing process

**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

**Novartis Pharmaceuticals, Emeryville, California**

Conducted user task analyses, user research and usability testing on Novartis Smiths Detection hardware and software. Developed product requirements document (PRD). Task analyses conducted to identify potential risks exposed by user actions in the normal course of performing typical tasks. Key objectives were to identify attributes of the UI that could lead to safety or data integrity issues and to allow customers to set up systems without the need of a Field Engineer

**OKbridge, San Diego, California**

OKbridge is an online bridge club dedicated to serving the worldwide bridge community by providing superior software and service. With more than 20,000 members from over 90 countries, it is the world's largest member-supported online bridge club. Reviewed and redesigned the OKbridge website registration process. Conducted heuristic evaluations of OKbridge website and online game. Collaborated closely with founder and development staff to design and prototype the next generation of the online game experience. Focused on research of needs and requirements of both expert-level and novice bridge players

**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