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I am a licensed California physician and medical informaticist with an extensive clinical background plus expertise in software development for medical professionals and health consumers. My chief interest and experience is in creating electronic support for clinician-consumer communication and the doctor-patient relationship. As detailed below, my accomplishments include software product management and management of User Experience teams for development of :

- Browser-based applications for electronic medical records and online personal health records
- Consumer health websites
- Doctor-patient communication and e-consultation applications
- User interface design and usability testing for health applications
- Medical applications for handheld devices

work experience

Winter 2008 **Intuit, Mountain View, CA**

- Consulted in the Quicken Solutions group on Intuit's new line of Quicken-branded healthcare products http://web.intuit.com/about_intuit/press_releases/2006/04-12.html

Summer 2007 **Stanford Hospitals and Clinics, Palo Alto, CA, Epic EMR installation**

- Developed Epic-approved training curricula for surgeons and anesthesiologists in preparation for the EpicCare installation.

Spring 2007 **Intuit, Mountain View, CA**

- Consulted in the Quicken Solutions group on Intuit's new line of Quicken-branded healthcare products http://web.intuit.com/about_intuit/press_releases/2006/04-12.html

July 2006 Kosmix, Mountain View, CA

- Consulted on UI for consumer-oriented online health search engine, redesigned navigation bar based on medical domain and UI expertise

October 2004 May 2006 – Healthline, San Francisco, CA

- Consulted on UI for professional view of WebMD-like consumer-oriented online health search application for Healthline, formerly InterMap, and before that, YourDoctor.Com
- Developed mapping of technical medical vocabularies from the National Library of Medicine's Unified Medical Language System to InterMap's proprietary consumer health vocabularies

February 2005 Eastman Kodak, Rochester, NY and Dallas, TX

- Consulted on user interface for Kodak's new EMR and supported introduction at HIMSS (Health Information Management Systems Society) annual conference

**September 2002 - June 2003 University of California San Francisco Medical Center
Usability Consultant**

- Led the usability effort in the upgrade of *HERO*, the web-based EMR for the Positive Health Program
- Wrote, conducted, and reported on three usability tests among physicians, nurse practitioners, pharmacists, and social workers
- Translated user requirements into design and engineering specifications

HERO has over 3,000 patient records and the clinic has been nearly paperless for five years.

**February 2002 Talk Technology, Bensalem, PA
Usability Consultant**

- Evaluated speech recognition product for medical transcription for radiologists.
- Performed a heuristic evaluation of the user interface, the user manual, and ScreenCam demo.

**August 2001 – March 2002 California Healthcare Foundation
Electronic Medical Record Consultant**

- Performed a due diligence evaluation, including clinical site visits, focused on user interface and functionality of an EMR under consideration for statewide implementation
- Evaluated a prototype general purpose EMR for user interface and potential functionality

**November 1999 – January 2001 Healthon/WebMD
Manager, Consumer | Professional Portals Integration**

- Led the implementation of the first portal-to-portal link enabling patients and providers to communicate between WebMD's online personal health record (*MyHealthRecord*) and the physicians' websites (*Group Practice Website*)
- Produced requirements for and worked on day-to-day implementation of MyHealthRecord with over 100,000 registered users.
- Prepared MHR promotion materials for the marketing team

- Led strategic initiatives to examine:
 - Doctor-patient communication
 - Electronic medical records
 - Disease management
- Wrote specifications for :
 - Secure messaging demand management application
 - Drug-herb-nutriceutical interaction checker
 - Doctor-patient condition management module for hypertension

Product Manager, Asthma and Allergy Support Center

- Maintained and improved product specifications for an installed, web-based disease management application for one of the top five pharmaceutical companies worldwide
- Acted as liaison between the pharmaceutical company, WebMD management and engineers, and the physician users of the application

As the fifth product manager brought in to rescue a troubled process and product, I rescoped the project and resuscitated the customer relationship.

August 1997 – April 1999 Philips Medical Systems

Chief Medical Officer, MedGRiD Team

Project Manager and Manager of the User Experience Team

- Provided domain expertise and project leadership in the development of a web-based, cardiology-focused EMR.
- Functioned as the liaison between the engineers, the marketing team, and the clinicians, hospital administrators, and IT managers at our pilot site, Baptist Health Systems of South Florida, where we accomplished a **successful alpha installation**.
- Oversaw ethnographic studies, requirements documentation, UI specifications, and
- Developed the use cases, data model, and object models in Unified Modeling Language, with Rational Rose™ representation for the Interface Definition Language in our CORBA-Java-based project.
- Directed a research team in **medical mobile computing** tasked with evaluating the state-of-the-art in mobile technologies and Philips' technologies and with deploying a subset of the EMR and other physician services on Philips handheld devices.

September 1988 - July 1997 Apple Computer, Inc

Physician, Preventive Medicine Clinic

- Performed annual multiphasic physical examinations on Apple employees, spouses, and dependents

Consultant, Advanced Technology Group, MedFly Newton PDA Project

- Prototyped medical applications for writing prescriptions, receiving lab results, and browsing the EMR on the Apple Newton

Consultant, Ergonomic Design and Environmental Health & Safety Divisions

- Evaluated Apple's input devices, including the NARSI ergonomic keyboard, the PowerBook track ball, and the PowerBook touch pad
- Performed periodic occupational exposure surveillance examinations on Apple employees in the manufacturing divisions

October 1987 – June 1990 Stanford Center for Research in Disease Prevention

Research Physician, Department of Cardiology, Stanford Medical Center

- Performed physical examinations in subjects in several NIH and other clinical studies, including research in multiple cardiovascular risk factor intervention, the effects of exercise on aging, and the first nicotine patch

September 1985 – September 1987 Sunnyvale Medical Clinic Occupational Health

Occupational Health Clinician, Sunnyvale, CA

- Performed evaluation and treatment of occupational injuries and exposures
- Performed pre-employment, DMV, and annual "executive" physical examinations

July 1984 – June 1986 Medical Pavilion

Clinician, private practice of sports medicine, San Francisco, CA

- Practiced general and sports medicine in an out-patient multispecialty group practice

medical education

1973 - 78 University of California San Francisco School of Medicine: MD degree
1973 - 75 University of California Berkeley: premedical curriculum
1968 - 70 Barnard College, Columbia University: fine arts major

postgraduate training and certification

1978 - 2009 Physician Licensure, State of California
1981 - 1988 Board Certified in Family Practice
1984 - 1985 Fellowship, Sports Medicine, London University Hospital; UK
1981 - 1982 Fellowship, Obstetrics, Children's Hospital; San Francisco, CA
1978 - 1981 Family Practice Residency, San Francisco General Hospital

design & testing experience

EMRs **Project/Program Manager**, MIRACLE (Medical Information Retrieval Application for Clinical Enhancement) **CORBA-Java** based web-based electronic medical record (See [Philips Medical Systems](#) in current document.)

PDA's **Member, research team**, MedFly Project: prototype of wireless PDA to web-based EMRs, Apple Computer

UI Design **Product Manager**, **WebMD**, Interportal web design for doctor-patient communication (See [WebMD](#) in current document.)
Consultant, **Interval Research** interactive music project
Consultant, Apple User-Aided Design Group, usability studies of mouse and trackball (See [Apple Computer](#) in current document.)
Participant, Apple Computer, usability testing of Apple Photo CD
Team member, MIAU: Machine Interface for Animal Users, Apple Computer

- Consultant**, Office of Alternative Medicine, NIH, for website development
- Expert Systems** **Developer**, LIMES: Lipid Management Expert System HyperCard interface to NEXPERT Object expert system tool
- Ergonomics** **Consultant**, Apple NORSI ergonomic keyboard Consultant, Apple PowerBook track ball and touch pad

computer science education

- Usability Testing** Mayo Clinic Tutorial, Annual Symposium of the American Medical Informatics Association
- Interface Design** Apple University
- Designing Usable Interfaces** Tutorial ACM SIGCHI (Association of Computing Machinery Special Interest Group in Computer-Human Interfaces)
- LISP Programming** University of California Berkeley and Santa Cruz Extension
- Expert Systems Design**
- Neural Networks Theory**
- Fortran IV programming** MIT 1964 and Columbia University 1968

memberships & appointments

- Medical Advisory Board, Healthline Networks, Inc; San Francisco, CA
- Chair-Emeritus, Internet Working Group, American Medical Informatics Association (AMIA)
- Chair, AMIA Task Force to Develop Guidelines for the Use of Clinic-Patient Electronic Mail. Phase II Guidelines to address clinical use of websites.
- Current Member, Association for Computing Machinery Special Interest Group in Computer-Human Interaction, Bay Area (BayCHI)
- Past Editorial Board Member, Society of Internet Medicine Quarterly; UK
- Founding Member, Internet Special Interest Group, Apple Computer
- Founder, Special Interest Group in Medicine, Apple Computer: mandate to research and evaluate Apple's role in developing a clinical workstation for the electronic medical record.
- Member, Lewis Carroll Society of North America

computer languages & tools

- Power User, Macintosh and Windows platforms for WWW, Word, PowerPoint, mail clients, web authoring
- Familiar with Excel, Adobe Photoshop, DreamWeaver, peer-to-peer technology
- Non-programming familiarity with Java, CORBA, Unix, rules-based systems
- Programming familiarity with LISP, HTML

personal

- Citizenship:** Native U.S.
- Languages:** Conversational French, Medical Spanish
- Interests:** Horsemanship, physical fitness & outdoors, complementary medicine, metaphysics

selected publications

- Kane B. Clinical Use of Electronic Mail. in MacKenzie B, ed: Medicine and the Internet, 3rd edition, Oxford University Press; September 2002
- Kane B. Clinical Use of Electronic Mail. In MacKenzie B, ed: Medicine and the Internet, 3rd edition, Oxford University Press; Q2 2001. In press.
- Kane B. Portal-to-Portal Roadmap for Patient-Provider Communication. Technical publication. WebMD. 16 November 2000
- Kane B and Sands DZ. Guidelines for the clinical use of electronic mail with patients. *JAMIA*. January 1998
- Kane B. Clinical Use of Electronic Mail. in MacKenzie B, ed: Medicine and the Internet, 2nd edition, Oxford University Press; June 1997
- Kane B. LIMES: A hypertext interface to a cholesterol management expert system. *Artificial Intelligence in Medicine*. 1990; 2:2
- Kane B. MetaCard Metathesaurus of the National Library of Medicine. *Macworld*. April 1990.
- Kane B and Kleiman RJ. Eight expert systems shells for the Macintosh family. *Computer Language*. 1988; 5:6, 105-8
- Kane B and Rucker DW. AI in medicine. *AI Expert*. 1988; 3:11, 48-55
- Kane B. Computer health issues. *Computer Press Association Network News*. 1988; Part I: 2:1 6-7; Part II: 2:2, 4-5
- Kane B. Neural networks think big. *Intelligent Systems Analyst*. 1988; 8:1, 6-9