Michael Chen
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I am seeking a position where I can apply my user interface design, prototyping, programming and user testing skills to develop innovative and easy-to-use products.

In my 22 years working in the San Francisco / Silicon Valley area, I have helped to design and ship Digital Video Recorders for TiVo and TGC, digital camera software and firmware for Foveon and Sigma, CGI and e commerce enabled websites for Levis and Timberland, and QuickTime Virtual Reality software for Apple Computer. I also have done user interface research and prototypes in the areas of 3D, touch input, pen input, digital cameras, and information management. I am a holder of 6 user interface patents with two pending. I have also published my work in journals such as the ACM SIGCHI and SIGGRAPH. I hold a Master's degree in Electrical Engineering/Human-Computer Interaction at the University of Toronto.

I have a wide skill set. I was a member of Apple's Human Interface Group in Advanced Technology and apply a user-center approach for all my projects. I have experience in creating product definition, gathering user needs, defining the user interface guidelines and specification documents, creating mockups and prototypes, doing customer visits and user testing, managing design and development teams, maintaining schedule, and implementing shipping code. I have also directed remote teams in Asia to do UI research, localization and user testing. I have worked on the PC, Mac, Linux, web, handheld, and embedded environments in languages/applications such as C, C++, MFC, Perl, ASP, Visual Basic, JavaScript, Flash/ActionScript, Runtime Revolution, X/HTML, Photoshop, Fireworks, and Visio.

I work well in an interdisciplinary team environment and believe in the collaborative approach. I am a consensus seeker and consider that a successful project requires the input from everyone. I recognize that making sensible tradeoffs between design, marketing, development, user testing and QA is all part of the job in our fast-paced industry.

A sample of my work can be found at http://www.michaelchen.net/portfolio.html. I look forward to showing my work with you in person.

Best regards,

Michael

Curriculum Vitae

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Objective

Seeking a position where I can combine my user interface design, prototyping, and programming skills to develop innovative and easy-to-use products in a multi-disciplinary environment.

Work Experience

Aug 2010-Present. Senior User Experience Designer, Michael Chen Consulting, Toronto, Canada

Providing design, prototyping and consulting services to TiVo and clients in the Toronto area.

Aug 2007-Present. Senior User Experience Designer, TiVo, Inc., CA, USA

TiVo is a company that develops Digital Video Recorder (DVR) products for the US, Australia, New Zealand, United Kingdom, and Taiwan markets.

- **Internet Video Browsing Concepts**
  Created reports analyzing internet sites offering short- and long-form video contents. Design concepts in wireframes, interactive prototypes, and motion graphic prototypes using PowerPoint, Flash/ActionScript, and video editing software.
- **DVR Enhancements**
  Designed UI for a new promotion system on the DVR software to promote visitation, encourage opt-in and for instant prize notification. Enhanced the UI design and functionality of two PC-based TiVo products: TiVo Desktop and Nero LiquidTV.
- **DVR Localization and New Platform Design**
  Designed localized UI for TiVo's products in Australia and New Zealand including new designs to for country selection, handing for ratings differences, copyright restrictions, and other country-specific features. As the lead designer, currently porting the TiVo product with various new partners, including designing new On Demand (VOD) and Pay-per-view UIs, new remote controls layouts, interaction with DVR front panels, revising the entire set of UI specifications, and creating flow diagram of the entire system.
- **Skills**: TiVo User Interface Specification documentation, Visio, Photoshop, Perforce source control, Runtime Revolution programming, Flash MX programming, and Sony Vegas Pro (video editing).

2004-2007. Senior User Experience and Software Engineer, TGC America, Inc., CA, USA

TGC was a startup that developed hardware and software for Digital Video Recorder (DVR) systems that were sold in the Taiwan and China. The systems were based on the US TiVo system but with localization and enhancements. My main role was the lead user interface designer for the US, Taipei and Shanghai offices.

- **UI Specifications and Branding**
  Sole person in creating and maintaining TGC's UI specifications, including wireframes, navigational flow diagrams and mockups. Collaborated with marketing to establish the TGC branding guidelines on product design, bezel, remote, TV UI, PC UI, website, user manual, advertising, etc. Analyzed and Integrated TiVo designs into the TGC specifications and roadmap as necessary. Created experimental online version of the UI specifications using Perl CGI pages and mySql database.

- **Establishment of UI-Related Skill Set and Services Across Offices**
  Defined standard UI process and guidelines for teams in Shanghai and Taipei. Designed usability lab for the Shanghai office. Lead teams in designs, interactive mockups, experiments, test protocols and data analysis. Gain excellent knowledge in how to collaborate with remote teams across the Pacific and how to share knowledge both in real-time and with staggered work hours.

- **TGC DVR Product - Localization and Software Integration**
  Supervised Shanghai and Taiwan UI teams in the Simplified and Traditional Chinese translations for the DVR, PC software and user manuals. Ensured that they were properly translated based on the specific technical context. Integrated translations into multiple software branches. Did informal validation and adjusted layout to make sure localization worked under multiple languages and multiple platforms. Main person in designing creating TGC specific graphics and video "loopsets" in MPEG2. Was a trusted part of the Engineering team with full access to the source control system, creating development builds, and doing basic debugging via telnet/serial port. Worked closely with the remote QA teams in Shanghai and Taipei, and was the main bug triage person on the US side.

- **Chinese Input, Searching and Collation**
  Directed cross-office effort to add Chinese input, selection, search and sort capabilities into our DVR. Effort involved evaluating input devices, on-screen keyboard layouts, character candidate selection, and international collation standards. Defined rules on how eastern and western names should be ordered, translated, sorted and displayed. Defined keyword and substring matching rules when a search involves both Chinese and Western characters. Created paper mockups, interactive Flash prototype, experimental design and data analysis to validate the design.

- **HDTV DVR and Conditional Access UI**
  Designed UI for a High-Definition TV DVR with Conditional Access (SmartCard) interface. Designing unified workflow to handling different digital TV transmission protocols, setup and tuning requirements, and whether Conditional Access cards are required or not. Defined specification matrix to correctly handle the combinations of source video format, physical TV aspect ratio, aspect ratio correction, output video format, and output connectors.

- **Content Delivery System**
  Designed UI for handing video download requests. Designed UI for DVR to browse and preview contents, make download requests, validate purchases, get status, and administer user account. Designed UI for content provider to upload and author video contents.

- **Websites, Office Design, Business Cards**
  Designed and maintained the US external and internal websites. Collaborated in the design of the of Taiwan and China websites. Specified contracts and supervised the design of TGC's business card and front entrance of the Shanghai office.

- **Skills**: Perl CGI, Flash MX programming, Red Hat Linux, Perforce source control, VMware, Photoshop, MS Project, Visio, Sony Vegas Pro (video editing) and TiVo User Interface Guidelines.

1998-2003. Senior User Interface and Software Engineer, Foveon, Inc., CA, USA

Foveon is a startup developing high-end digital camera image sensors that can sense full color at each pixel.

- **Foveon Studio Camera System**
  Hired to redesign and implement the user interface for a tethered PC<->camera system. Developed various UI prototypes for evaluation; conducted user tests with internal users and photographers;

documented the design specification; and implemented the camera capture and the image processing applications. Camera and software is used by major photo studio chains in the US.

- **Marketing/Photographers Support for the Foveon Studio Camera System**
  Acted as interface between marketing and engineering; made technical presentations; supported demos and trained photographers on how to use the system at tradeshows, photo studios and printing labs; and provided feedback to engineering on redesigns as necessary.

- **Sigma SD9/10 Digital SLR Camera System**
  Designed the user interface for the Sigma SD9/10 digital camera using the Foveon X3 technology from the ground up. Pulled together a UI design team; worked with marketing to define requirements; designed the on-camera, PC image processing and installer UI; provided recommendation to Sigma on camera button and LCD display design and placement issues; implemented UI prototypes; assisted in informal user testing; documented the UI specifications for all the firmware/software components; and implemented the UI portion of the camera firmware. Two patents pending.

- **Proprietary Image Sensor Development Platform**
  Designed the camera and image processing UI based on the marketing requirements; documented the UI specifications; managed schedule for the GUI portion of the project; and implemented firmware modules for booting, flash ROM programming, and IP socket communication between the hardware and PC.

- **Skills**: MS Visual C++, MFC, Perl, embedded ARM C++ development under Cygwin, ThreadX (embedded RTOS), Perforce (source control system), Doxygen (source code documentation), MS Visual Basic, MS Project, Photoshop, Acrobat, Macromedia Director, and Windows and Macintosh Human Interface Guidelines.

1996-1998. Manager of Engineering / Senior Web Engineer, CKS/USWeb, Inc., CA, USA

CKS/USWeb was an integrated marketing firm that provided services for web, media and print designs.

- **Manager of Development Group**
  Managed 7 developers doing HTML, CGI and database programming. Managed schedule, allocated resource, and tracked budgets for up to 20 concurrent web projects.

- **store.ca.dockers.com**
  Lead engineer in developing the e-commerce front-end for selling Dockers products on-line in Canada. Designed site architecture, programmed ASP pages, accessed database, and managed 2 HTML developers and 1 engineer. Worked with Microsoft engineers to define the API to interface to their e-commerce engine. Worked with internal database engineers to define API and database fields.

- **www.timberland.com**
  Created a database-driven catalog website for displaying Timberland products, designed site architecture, programmed ASP pages, accessed database, managed 2 HTML developers and 1 engineer, and helped deploy the site at Timberland's data center.

- **myhome.apple.com**
  Programmed full dynamic website customized for each user, with personal homepage, bookmarks, news feeds, and promotions. Created software to track user interactions and habits as they navigate through the site. Sole engineer on project.

- **www.fujitsu.com, www.fcpa.com, www.carnationbaby.com, www.prudential.com**
  Programmed CGI pages for sites, and developed private web interface to allow client to post press releases and other updates directly on the web. Sole engineer on project.

- **Skills**: ASP, IIS 3.0, MS SQL server, Apache, Perl, JavaScript, CGI, hand-coding HTML for cross-browser compatibility, HTML/website validation tools, MSQL, & Unix.

1987-1996. Apple Human Interface Group / Senior Engineer, Apple Computer, Inc., CA, USA

- **QuickTime VR 2.0**
  Programmed QuickTime VR 2.0 object movie component, wrote human interface and internal architecture specification document, implemented node-linking software, supervised the integration of the components of QuickTime VR, and presented QuickTime VR 2.0 at the Apple Developers Conference.

- **QuickTime VR 1.0**
  Performed all videography and post-production on QuickTime VR object movies including their use in *Star Trek: The Next Generation Interactive Technical Manual CD-ROM*, programmed QuickTime VR 1.0 object movie component; created build process for software releases, designed user interfaces for navigation in QTVR panoramas and objects, and presented QuickTime VR 1.0 at trade shows and conferences. Patent received: 5,568,603 & 5,812,142.

- **Asian Art Museum of San Francisco, Mongolia Exhibition Web Site**
  Architected structure of the website, photographed QuickTime VR panoramas of the exhibit (85 nodes total), supervised the production of stitching and retouching panorama nodes, designed and supervised process to photograph exhibit artifacts as QuickTime VR object movies, supervised production of the audio tour, co-designed human interfaces for web site navigation, and implemented automation system to assemble the website from raw media and text databases.

- **Note-taking Application for Pen & Stamping Interface**
  Co-authored human interface for an application that integrates pen note-taking and information tagging via a "stamping" interface within HyperCard, wrote the engineering requirements document, implemented XCMDs, supervised 4 implementation and testing contractors, managed and assigned bugs, and maintained project schedule. Patent received: 5,898,434.

- **3D User Interfaces**
  Promoted the use of 3D interfaces developed during Master's degree (patent 5,588,098) within projects at Apple, published sample code in Apple's developers journal, developed and published new 3D manipulation techniques. The 3D rotation UI is incorporated in QuickTime 3D.

- **Apple Science CD**
  Created SuperCard front-end for scientist to access to access scientific visualization software and data sets on the CD, conducted user test, implemented database to collect submissions for the CD, implemented automated process to assemble the front-end using the database.

- **Other Apple Human Interface Group Projects**
  Designed digital camera UI's, pen-based UI's, multi-modal input devices, & PDA UI's. Patent received: 5,642,303.

- **Skills**: C, C++, MacApp, HyperCard XCMDs, HyperTalk, QuickTime component, MPW, Radar, Applescript, SGI 3D GL, Macromedia Director, Photoshop, Macintosh Human Interface Guidelines, rapid hardware and software prototyping, & user centered design approaches.

Education

1985-1988. Masters in Electrical Engineering/Human-Computer Interaction, University of Toronto
- Supervisors: K.C. Smith & Bill Buxton.
- Thesis: A System for Direct Manipulation of 3D Objects Using 2D Input Devices.
- US patent received: 5,019,809 – Two-dimensional emulation of three-dimensional trackball.

1982-1985. Bachelors in Engineering Science, University of Toronto
- Concentration in Electrical/Computer Engineering.
- Graduated with honors.

1980-1982. University of California, Santa Barbara
- Course work in Electrical Engineering.

Publications

- A Technique for Specifying Rotation in Three Dimensions Using a 2D Input Device, IEEE Montech '87 – COMPINT '87
- A Study in Interactive 3-D Rotation Using 2-D Control Devices, ACM SIGGRAPH 1988. Exemplified in Computer Graphics: Principles and Practice (Foley, van Dam, et al.) as a basic user interface technique for 3D interaction.
- A Design for Supporting New Input Devices, in The Art of Human-Computer Interface Design (Brenda Laurel ed.), Addison-Wesley, 1990.
- Designing the Image Browser for the Apple Science CD, International Conference on Multimedia Information Systems '91, McGraw Hill.
- A Framework for Describing Interactions with Graphical Widgets, ACM CHI '93 & INTERACT '93.
- 3-D Rotation Using a 2-D Input Device, develop - The Apple Technical Journal, 1993.

Patents

- 5,019,809 Two-dimensional emulation of three-dimensional trackball.
- 5,642,303 Time and location based computing.
- 5,588,098 Method and apparatus for direct manipulation of 3-D objects on computer displays.
- 5,568,603 Method and system for transparent mode switching between two different interfaces.
- 5,812,142 Motion movement cueing through synchronized display port and image.
- 5,898,434 User interface system having programmable user interface elements.
- Two patents pending.

Skills

- Fluent in Cantonese, and knowledgeable in Mandarin.
- "Survival" knowledge of French & Spanish.
- Member of the band Silk Road which plays a fusion of Flamenco and pop music. Flamenco guitarist, vocalist, co-producer, photographer, cover designer and mastering engineer of our album.
- Advanced user in digital audio, video, and DVD production.

References

- Available upon request.