

# Don Kimber

## *Programmer, Researcher & Imagineer*

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Foster City, CA 94404  
(650) 219-6316  
donkimber@gmail.com

### **TECHNICAL SKILLS**

- Proficient in languages: JavaScript, Java, Python, C++, C, C#, Objective-C, Mathematica, ruby, Lisp, assembler (Macro-10, Macro-11, x86), bliss
- Platforms & Tools: Windows, android, unix/linux, arduino, node.js, jquery, flask, django, ObservableHQ, google earth API, CesiumJS, VRML browsers, OpenSceneGraph, three.js, WebSockets, socket.io, OSC, MQTT, Unity3D, SketchUp, VRML, git, svn, numpy, scikit, matlab, MySQL, MongoDB, firebase, Kinect, OpenCV, OpenVSLAM, OpenPose, ARToolKit, AWS, Heroku, digitalocean
- Experience with software and platform architecture and design, have built numerous interpreters, 3D/XR platforms, scripting environments used for system and application integration in many projects
- Supervised many undergraduate, masters and Ph.D. level interns

### **PROFESSIONAL EXPERIENCE**

#### **FX Palo Alto Laboratory** - *Principal Scientist*

Jun 2005 - June 2020 - *Principal Scientist*

- Research Topics: Mixed, augmented and virtual reality, mirror worlds, activity tracking and modeling, educational workspaces, responsive video interfaces, photogrammetry, structure from motion, focus+context video for remote robotic control, immersive and contextual 360 video playback devices, acoustic & sensor fusion based localization
- Designed and built prototype systems for each of the areas above, used for concept demonstration, research papers, user studies and patent embodiments
- Frequently reviewed patents, served on patent evaluation panel

December 1999 - June 2005 - *Contractor / Consultant*

- Research topics: 360 Video, Spatially indexed video (360 virtual tours), automatic meeting capture.
- Designed and built: Multi camera 360 video, multiresolution active camera video capture and playback systems

#### **Xerox PARC** - *Member Research Staff II*

January 1, 1995 - December 1999 - *MRS II*

- Research topics: Multimedia architecture for meeting and presentation capture, intelligence as general system process, organizational intelligence and creativity, speech and video indexing, probabilistic models for information retrieval.
- Designed and built: TimeStreams multimedia capture platform, web based audio-video access to recorded talks and PARC Forums.

June, 1988 - December 1994 - *Research Intern*

- Research Topics: Applications of Riemannian geometry to non-parametric modeling of dynamical systems, continuous state space modeling for phonetic recognition, supervised & unsupervised speaker segmentation, speech based information retrieval.
- Designed and built: Stochastic modeling system and toolkit, audio manager with speech recognition, word spotting and speaker segmentation capabilities, audio browser tool with variable-speed playback, speaker timeline display and general indexing capability.
- Worked on design and implementation of tracking and documentation database for integrated circuit fabrication using hypertext and LISP.

**University of California, Santa Cruz** - *Teaching Assistant, Research Assistant*

September 1985 - June 1988

- Research on constraint networks, Molecular Automata (method for inference of stochastic finite state machines), and constrained sequence error control codes.
- Teaching assistant for classes in Algorithms, Objective C, Probability, Cybernetics, Signal Processing

**Daisy Systems, Inc., Network Group** - *Systems Analyst*

March 1985 - September 1985

- Implemented local network utilities and Ethernet device driver.

**Excelan, Inc.** - *Member Technical Staff*

May 1983 - February 1985

- Worked on development of Ethernet analyzer and TCP/IP network utilities.

**Timeshare Inc.** - *Systems Programmer II*

December 1980 - May 1983

- Design and implementation of relational database report generation query language.

**Stevens Institute of Technology.** - *Systems and Scientific Programmer*

January 1977 - June 1980

- Responsible for X-ray diffractometer automation. Developed PDP-11 floppy disk operating system, device drivers, LISP interpreter, and data collection software.

**COMMUNITY AND NONPROFIT**

## **WorldViews, LLC - Founder**

December 2015 - present

- Design and implemented 360 panoramic video touring system, participated in community events, provided live remote virtual tours for disabled participants

## **Kinetech Arts - Board of directors, Secretary**

June 2017 - present

- Kinetech Arts is a 501c3 non profit educational community organization in the area of Arts & Technology

## **EDUCATION**

### **Stanford University, Stanford, California**

*Ph.D., Electrical Engineering, 1989 - 1995*

Advisor Tom Cover, Thesis topic: Nonparametric geometric modeling of dynamical systems, with applications to speech recognition

### **University of California, Santa Cruz, California**

*M.S., Computer and Information Science, 1985 - 1988*

Advisor Robert Levinson, Thesis topic: Molecular automata (a method for learning models of stochastic sequences using statistical mechanics and simulated annealing)

### **Stevens Institute of Technology, Hoboken, New Jersey**

*B.E. Electrical Engineering with Honors, June 1976 - 1980*

## **PUBLICATIONS**

### **Reactive Video: Adaptive Video Playback Based on User Motion for Supporting Physical Activity**

Christopher Clarke, Doga Cavdir, Patrick Chiu, Laurent Denoue, Don Kimber

*UIST '20: Proceedings of the 33rd Annual ACM Symposium on User Interface Software and Technology, October 2020 Pages 196–208*

### **InFo: Indoor localization using Fusion of Visual Information from Static and Dynamic Cameras**

Chelhwon Kim, Chidansh Bhatt, Mitesh Patel, Don Kimber, Yulius Tjahjadi

*Indoor Positioning and Indoor Navigation, 9/30/2019*

### **Investigating the Relationship between Connection, Agency and Autonomy for Controlling a Robot Arm for Remote Social Physical Interaction**

Ryuya Sato, Don Kimber, Yanxia Zhang

*HCI International 2019*

### **Use Your Head! Exploring Interaction Modalities for Hat Technologies**

Christine Dierk, Scott Carter, Patrick Chiu, Tony Dunnigan, Don Kimber

*DIS: Designing Interactive Systems, 6/23/2019*

### **Depth Based Shadow Pointing Interface for Public Display**

Jun Shingu, Patrick Chiu, Sven Kratz, Jim Vaughan, Don Kimber

*UIST 2016 (Demo)*

**Look Where You're Going: Visual Interfaces for Robot Teleoperation**

Jim Vaughan, Sven Kratz, Don Kimber  
*RO-MAN, 2016 (Best Paper)*

**WorldViews: Connecting the world through easy sharing of views**

Don Kimber, Enock Glidden, Jennifer Marlow  
*International Workshop on Interactive Content Consumption, 6/22/2016*

**Polly Wanna Show You: Examining Viewpoint-Conveyance Techniques for a Shoulder-Worn Telepresence System [Industrial Case Study]**

Sven Kratz, Daniel Avrahami, Don Kimber, Jim Vaughan, Patrick Proppe  
*MobileHCI, 8/24/2015*

**'Good Enough' is not Good Enough: Challenges of Social Interaction in Video-Mediated Telepresence**

Jennifer Marlow, Daniel Avrahami, Jacob Biehl, Scott Carter, Matthew Cooper, Don Kimber, Sven Kratz  
*"Everyday Telepresence" workshop at CHI 2015*

**Evaluating Stereoscopic Video with Head Tracking for Immersive Teleoperation of Mobile Telepresence Robots**

Sven Kratz, Jim Vaughan, Don Kimber  
*Human-Robot Interaction (HRI) 2015*

**Polly: "Being There" through the Parrot and a Guide**

Weiqing Su, Sven Kratz, Don Kimber  
*MobileHCI 2014 (Industrial Case Study)*

**Polly: Telepresence from a Guide's Shoulder**

Don Kimber, Patrick Proppe, Sven Kratz, Jim Vaughan, Bee-Yian Liew  
*Assistive Computer Vision and Robotics Workshop of ECCV, 9/12/2014*

**Mirror Worlds for Indoor Navigation and Awareness**

Don Kimber, Jacob Biehl, Matthew Cooper, David Lee, Jim Vaughan, Jun Shingu  
*IPIN2012*

**Indoor localization using controlled ambient sounds**

Ish Rishabh, Don Kimber, John Adcock  
*IPIN2012*

**Through the Looking-Glass: Mirror Worlds for Augmented Awareness & Capability**

Don Kimber, Jun Shingu, Jim Vaughan, Dave Arendash, David Lee, Maribeth Back, Shingo Uchihashi  
*ACM MM 2012*

**Augmented Perception through Mirror Worlds**

Don Kimber, Jim Vaughan, Eleanor Rieffel  
*Augmented Human 2011*

**The Virtual Chocolate Factory: Mixed Reality Industrial Collaboration and Control**

Maribeth Back, Don Kimber, Eleanor Rieffel, Tony Dunnigan, Bee-Yian Liew, Sagar Gattepally, Jonathan Foote, Jun Shingu, Jim Vaughan  
*ACM Multimedia 2010 - Industrial Exhibits*

**Camera Pose Navigation using Augmented Reality**

Jun Shingu, Eleanor Rieffel, Don Kimber, Jim Vaughan, Pernilla Qvarfordt, Kathleen Tuite  
*ISMAR 2010*

**The Virtual Chocolate Factory: Building a real world mixed-reality system for industrial collaboration and control**

Maribeth Back, Tony Dunnigan, Sagar Gattepally, Don Kimber, Bee-Yian Liew, Eleanor Rieffel, Jun Shingu, Jim Vaughan  
*ICME 2010, Singapore, July 19-23 2010*

**Geometric reconstruction from point-normal data**

Eleanor Rieffel, Don Kimber, Jim Vaughan  
*SIAM MI'09 monograph. Related talks: SIAM GPM'09, SIAM MI'09, and BAMA (Bay Area Mathematical Adventures), 05/01/2010*

**The Virtual Factory: Exploring 3D worlds as industrial collaboration and control environments**

Maribeth Back, Tony Dunnigan, Sagar Gattepally, Don Kimber, Bee-Yian Liew, Eleanor Rieffel, Jun Shingu, Jim Vaughan  
*IEEE Virtual Reality 2010 conference*

**Marking up a World: Physical Markup for Virtual Content Creation (Video)**

Eleanor Rieffel, Sagar Gattepally, Don Kimber, Jun Shingu, Jim Vaughan, John Doherty  
*ACM Multimedia, 10/21/2009*

**Interactive Models from Images of a Static Scene**

Eleanor Rieffel, Don Kimber, Jim Vaughan, Sagar Gattepally, Jun Shingu  
*Computer Graphics and Virtual Reality (CGVR '09)*

**High Accuracy and Language Independent Document Retrieval with a Fast Invariant Transform**

Qiong Liu, Hironori Yano, Don Kimber, Chunyuan Liao, Lynn Wilcox  
*2009 IEEE International Conference on Multimedia and Expo (ICME)*

**Image-based Lighting Adjustment Method for Browsing Object Images**

Jun Shingu, Shingo Uchihashi, Tetsuo Iyoda, Don Kimber, Eleanor Rieffel, Jim Vaughan  
*2009 IEEE International Conference on Multimedia and Expo (ICME)*

**Marking up a World: Visual Markup for Creating and Manipulating Virtual Models**

Don Kimber, Eleanor Rieffel, Jun Shingu, Jim Vaughan  
*Immerscom 2009*

**Rethinking the Podium**

Maribeth Back, Patrick Chiu, Surapong Lertsithichai, Don Kimber, John Boreczky, Qiong Liu, Jonathan Foote, Takashi Matsumoto  
*Chapter in "Interactive Artifacts and Furniture Supporting Collaborative Work and Learning", ed. P. Dillenbourg, J. Huang, and M. Cherubini. Published Nov. 28, 2008, Springer. Computer Supported Collaborative Learning Series Vol. 10.*

**Virtual Physics Circus (video)**

Don Kimber, Eleanor Rieffel, Jim Vaughan, John Doherty  
*ACM Multimedia 2008*

**Context and Observation Driven Latent Variable Model for Human Pose Estimation**

Abhinav Gupta, Trista Chen, Francine Chen, Don Kimber, Larry Davis  
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2008*

**Collaboration Support Using Environment Images and Videos**

Qiong Liu, Don Kimber, Patrick Chiu  
*The 3rd International Conference on Collaborative Computing: Networking, Applications and Worksharing, 11/12/2007*

**DOTS: Support for Effective Video Surveillance**

Andreas Girgensohn, Don Kimber, Jim Vaughan, Tao Yang, Frank Shipman, Thea Turner, Eleanor Rieffel, Lynn Wilcox, Francine Chen, Tony Dunnigan  
*Fuji Xerox Technical Report No. 17, pp. 83-100, 11/01/2007*

**Geometric Tools for Multi-camera Surveillance Systems**

Eleanor Rieffel, Andreas Girgensohn, Don Kimber, Trista Chen, Qiong Liu  
*ICDSC 2007, pp. 132-139*

**DOTS: Support for Effective Video Surveillance**

Andreas Girgensohn, Don Kimber, Jim Vaughan, Tao Yang, Frank Shipman, Thea Turner, Eleanor Rieffel, Lynn Wilcox, Francine Chen, Tony Dunnigan  
*ACM Multimedia 2007, pp. 423-432*

**Trailblazing: Video Playback Control by Direct Object Manipulation**

Don Kimber, Tony Dunnigan, Andreas Girgensohn, Frank Shipman, Thea Turner, Tao Yang  
*ICME 2007, pp. 1015-1018*

**Robust People Detection and Tracking in a Multi-camera Indoor Visual Surveillance System**

Tao Yang, Francine Chen, Don Kimber, Jim Vaughan  
*ICME 2007, pp. 675-678*

**Featured Wand for 3D Interaction**

Feng Guo, Don Kimber, Eleanor Rieffel  
*ICME 2007*

**On Redirecting Documents with a Mobile Camera**

Qiong Liu, Don Kimber, Patrick Chiu, Paul McEvoy, Hanning Zhou  
*Proceedings of IEEE Multimedia Signal Processing 2006*

**Unusual Event Detection via Multi-camera Video Mining**

Hanning Zhou, Don Kimber  
*International Conference on Pattern Recognition. 08/20/2006*

**Framework for effective use of multiple displays**

Qiong Liu, Don Kimber, Frank Zhao, Jeffrey Huang  
*Proceedings of SPIE International Symposium ITCOM 2005 on Multimedia Systems and Applications VIII, Boston, Massachusetts, USA, October 2005.*

**Region of Interest Extraction and Virtual Camera Control Based on Panoramic Video Capturing**

Xinding Sun, Jonathan Foote, Don Kimber, B. Manjunath  
*IEEE Trans. Multimedia, Vol. 7 No. 5, pp. 981-990, 10/11/2005*

**The Convertible Podium: A rich media teaching tool for next-generation classrooms**

Maribeth Back, Surapong Lertsithichai, Patrick Chiu, John Boreczky, Jonathan Foote, Don Kimber, Qiong Liu, Frank Zhao, Takashi Matsumoto  
*Paper presented at SIGGRAPH 2005, Los Angeles., 9/29/2005*

**The Convertible Podium: a rich media control station**

Maribeth Back, Surapong Lertsithichai, Patrick Chiu, Jonathan Foote, John Boreczky, Qiong Liu, Don Kimber, Frank Zhao  
*Short presentation in UbiComp 2005 workshop in Tokyo, Japan.*

**Mediated Meeting Interaction for Teleconferencing**

Kazumasa Murai, Don Kimber, Jonathan Foote, Qiong Liu, John Doherty  
*ICME 2005*

**An Online Video Composition System**

Qiong Liu, Xiaojin Shi, Don Kimber, Frank Zhao, Frank Raab

*IEEE International Conference on Multimedia & Expo July 6-8, 2005, Amsterdam*

**Reach-Through-the-Screen: A New Metaphor for Remote Collaboration**

Jonathan Foote, Qiong Liu, Don Kimber, Patrick Chiu, Frank Zhao

*Springer Lecture Notes in Computer Science - Advances in Multimedia Information*

*Processing, Proc. PCM 2004 5th Pacific Rim Conference on Multimedia, Tokyo, Japan Aizawa,*

*K., Nakamura, Y., Satoh, S. (Eds.), Vol. 3333, 2005, ISBN 3-540-23985-5, pp 73--80*

**Remote Interactive Graffiti**

Jonathan Foote, Don Kimber, Kazutaka Hirata

*Proc. ACM Multimedia 2004*

**An EPIC Enhanced Meeting Environment**

Qiong Liu, Frank Zhao, John Doherty, Don Kimber

*Proc. of ACM Multimedia 2004, October 10, 2004*

**A Tele-robot Assistant for Remote Environment Management**

Chunyuan Liao, Qiong Liu, Don Kimber, Surapong Lertsithichai

*Proceedings of 2004 IEEE International Conference on Multimedia and Expo (ICME 2004).*

**A Presentation Authoring Tool for Media Devices Distributed Environments**

Hangjin Zhang, Qiong Liu, Surapong Lertsithichai, Chunyuan Liao, Don Kimber

*Proceedings of 2004 IEEE International Conference on Multimedia and Expo (ICME 2004).*

**Immersive Conferencing Directions at FX Palo Alto Laboratory**

Jonathan Foote, Qiong Liu, Don Kimber, Patrick Chiu

*JOINT AMI/PASCAL/IM2/M4 Workshop on Multimodal Interaction and Related Machine Learning Algorithms, 6/22/2004*

**Shared Interactive Video for Teleconferencing**

Chunyuan Liao, Qiong Liu, Don Kimber, Patrick Chiu, Jonathan Foote, Lynn Wilcox

*Proc. ACM Multimedia 2003, pp. 546-554, 11/02/2003*

**Learning Automatic Video Capture from Human's Camera Operations**

Qiong Liu, Don Kimber

*Proc. IEEE Intl. Conf. on Image Processing, 09/14/2003*

**Manipulating and annotating slides in a multi-display environment**

Patrick Chiu, Qiong Liu, John Boreczky, Jonathan Foote, Tohru Fuse, Don Kimber, Surapong

Lertsithichai, Chunyuan Liao

*Proceedings of INTERACT '03, pp. 583-590., 9/01/2003*

**Multichannel Video/Audio Acquisition for Immersive Conferencing**

Qiong Liu, Don Kimber, Jonathan Foote, Chunyuan Liao

*2003 International Conference on Multimedia and Expo, 7/06/2003*

**FLYSPEC: A Multi-User Video Camera System with Hybrid Human and Automatic Control**

Qiong Liu, Don Kimber, Jonathan Foote, Lynn Wilcox, John Boreczky

*ACM Multimedia 2002*

**Managing a Camera System to Serve Different Video Requests**

Qiong Liu, Don Kimber, Lynn Wilcox, Matthew Cooper, Jonathan Foote, John Boreczky

*IEEE International Conference on Multimedia and Expo 2002*



**Detecting Path Intersections in Panoramic Video**

Xinding Sun, Don Kimber, Jonathan Foote, B. Manjunath  
*IEEE International Conference on Multimedia and Expo 2002*

**Capturing and Presenting Shared Multi-Resolution Video**

Don Kimber, Qiong Liu, Jonathan Foote, Lynn Wilcox  
*SPIE ITCOM 2002*

**Panoramic Video Capturing and Compressed Domain Virtual Camera Control.**

Xinding Sun, Jonathan Foote, Don Kimber, B. Manjunath  
*Proc. ACM Multimedia 2001, Ottawa, CA, Oct. 2001.*

**FlyAbout:Spatially Indexed Panoramic Video.**

Don Kimber, Jonathan Foote  
*Proc. ACM Multimedia 2001, Ottawa,CA, Oct. 2001.*

**Recording the Region of Interest from FlyCam Panoramic Video**

Xinding Sun, Jonathan Foote, Don Kimber, B. Manjunath  
*Proc. International Conference on Image Processing, Thessaloniki, Greece, September 2001.*

**LiteMinutes: An Internet-Based System for Multimedia Meeting Minutes**

Patrick Chiu, John Boreczky, Andreas Girgensohn, Don Kimber  
*In Proceedings of Tenth World Wide Web Conference (2001), Hong Kong, May 1-5, 2001, pp. 140-149., Available at [www10.org](http://www10.org), 05/01/2001*

**Enhancing Distance Learning with Panoramic Video**

Jonathan Foote, Don Kimber  
*In Proceedings of the Thirty-fourth Annual Hawaii International Conference on System Sciences (HICSS), Big Island, Hawaii. January 7-12, 2001.*

**FlyCam: Practical Panoramic Video.**

Jonathan Foote, Don Kimber  
*In Proceedings of IEEE International Conference on Multimedia and Expo, vol. III, pp. 1419-1422, 7/30/2000*

**Metadata for Mixed Media Access.**

F Chen, Marti Hearst, Don Kimber, J Kupiec, J Pedersen, Lynn Wilcox  
*In Managing Multimedia Data: Using Metadata to Integrate and Apply Digital Data. A. Sheth and W. Klas (eds.), McGraw Hill, 1997*

**Acoustic Segmentation for Audio Browsers**

Don Kimber, Lynn Wilcox  
*Proceedings Interface Conference (Sydney, Australia, July 1996).*

**Information, The Universe and Everything: Aspects of an Information Theoretic Metaphysics**

Don Kimber  
*Proceedings of SCI-98.*

**Acoustic Segmentation for Audio Browsers**

Don Kimber & Lynn Wilcox  
*Computing Science and Statistics, 28, 295-304., 1997*

**Analysis of Gesture and Action in Technical Talks for Video Indexing**

S. Ju, M. Black, S. Minneman, D. Kimber  
*IEEE Conf. On Computer Vision and Pattern Recognition, CVPR-97, Puerto Rico, June 1997; also in AAAI Spring Symposium'97 on Intelligent Integration and Use of Text, Image, Video and Audio Corpora, March 1997*



**“I’ll Get That Off the Audio”: A Case Study of Salvaging Multimedia Meeting Records**

T. Moran, L. Palen, S. Harrison, P. Chiu, D. Kimber, S. Minneman, W. van Melle, P. Zellweger  
*Proceedings of CHI-97, ACM*

**Metadata for Mixed Media Access**

F. Chen, M. Hearst, D. Kimber, J. Kupiec, J. Pedersen, & L. Wilcox  
*Chapter in Managing Multimedia Data Using Metadata to Integrate and Apply Digital Data, A. Sheth and W. Klas (eds.), McGraw Hill, 1997*

**Speaker Segmentation for Browsing Recorded Audio**

Don Kimber, Lynn Wilcox, Francine Chen & Thomas Moran  
*Proceedings of CHI-95, ACM*

**On-Line Learning of Smooth Functions of a Single Variable**

Don Kimber & Phil Long  
*Journal of Theoretical Computer Science, 1995*

**Audio Indexing Using Speaker Identification**

L. Wilcox, D. Kimber & F. Chen  
*SPIE-94*

**Speech-Based Retrieval Using Semantic Co-Occurrence Filtering**

J. Kupiec, D. Kimber & V. Balasubramanian  
*ARPA HLT-94*

**Segmentation of Speech Using Speaker Identification**

L Wilcox, F. Chen, D. Kimber & V. Balasubramanian  
*ICASSP-94*

**Situated State Hidden Markov Models**

D. Kimber & M.A. Bush  
*ICASSP-93*

**The Learning Complexity of Smooth Functions of a Single Variable**

D. Kimber & P. Long  
*COLT-92*

**Speaker-Independent Vowel Classification using Hidden Markov Models and LVQ2**

D. Kimber, M.A. Bush & G. N. Tajchman  
*ICASSP-90*

## THESES

**Geometric Methods for Non-parametric Modeling of Dynamical Systems**

*Ph. D. thesis, Stanford University, 1995*

**Molecular Automata**

*M.S. Thesis, University of California, Santa Cruz, 1988*

## REFERENCES

Lynn Wilcox, Jim Vaughan, Larry Rowe, Stephan Crawford, Laurent Denoue, Chris Clarke, Qiong Liu, Steve Omohundro, Weidong Yang, Derrick Kikuchi

## **PATENTS**

*Filed while at FXPAL, pending:*

### **Earballs: Transmodal Translation of Feature Vectors to Audio for Assistive Devices**

Andrew Port, Doga Cavdir, Chelhwon Kim, Mitesh Patel, Don Kimber, Qiong Liu

*Provisional Application Filed, 2020*

### **A web-based remote assistance system with context & content-aware 3D hand gesture visualization**

Chelhwon Kim, Patrick Chiu, Yulius Tjahjadi, Don Kimber, Qiong Liu

*Application Filed 2019*

### **Reactive Video**

Don Kimber, Laurent Denoue, Maribeth Back, Patrick Chiu, Chelhwon Kim, Yanxia Zhang

*Application Filed 2019*

### **Indoor localization using Fusion of Visual Information from Static and Dynamic Camera Images**

Chelhwon Kim, Chidansh Bhatt, Mitesh Patel, Don Kimber

*Application Filed 2018*

### **Smart hat device for interacting with remote devices and displays**

Christine Dierk, Scott Carter, Patrick Chiu, Tony Dunnigan, Chelhwon Kim, Don Kimber, Nami Tokunaga, Hajime Ueno

*Application Filed 2018*

*Issued while at FXPAL:*

### **A method for steering speaker array and microphone array with encoded light rays**

Qiong Liu, Don Kimber, Shang Ma

*U.S. Patent 10,516,939 2018*

### **Panoramic Portals for Connecting Remote Spaces**

Don Kimber, Jim Vaughan, Tony Dunnigan, Pernilla Qvarfordt

*U.S. Patent 10,356,319 2018*

### **System and method for printing on large surface with portable printing devices**

Qiong Liu, Shang Ma, Don Kimber, Patrick Chiu, Sven Kratz

*U.S. Patent 9,849,693 2015*

### **Focus+Context views for telepresence and robotic teleoperation**

Ryota Mizutani, Don Kimber, Sven Kratz, Jim Vaughan

*U.S. Patent 10,012,982 2015*

### **“Look at That”: Sharing views in collaborative viewing tasks**

Don Kimber, Sven Kratz, Patrick Proppe, Maribeth Back, Bee-Yian Liew, Tony Dunnigan

*U.S. Patent 10,250,813 2014*

### **Method for creating 3D models by stitching multiple unordered partial 3D models**

Don Kimber, Jim Vaughan, David Lee

*U.S. Patent 9,129,435 2014*

### **Localization Using Modulated Ambient Sounds**

Don Kimber, John Adcock

*U.S. Patent 9,146,301 2012*

**System and method for detecting and acting on multiple people crowding a small display for display sharing**

Don Kimber, Pernilla Qvarfordt

*U.S. Patent 9,131,147 2011*

**AR Navigation for Repeat Photography and Difference Extraction**

Don Kimber, Eleanor Rieffel, Jim Vaughan, Jun Shingu, Kathleen Tuite

*U.S. Patent 8,803,992 2010*

**Marking up a World: Visual Markup for Creating and Manipulating Virtual Models**

Don Kimber, Eleanor Rieffel, Jim Vaughan, Jun Shingu, Chong Chen

*U.S. Patent 8,411,086 2008*

**Observation-Driven Probability-Based Latent Models for Human Pose Estimation**

Don Kimber, Francine Chen, Trista Chen, Abhinav Gupta

*U.S. Patent 7,925,081 2007*

**An HMM-based Model for Camera Handoff**

Francine Chen, Tao Yang, Don Kimber

*U.S. Patent 8,432,449 2007*

**Fast and Reliable Feature Level Foreground Segmentation for Intelligent Visual Surveillance**

Don Kimber, Francine Chen, Tao Yang

*U.S. Patent 7,916,944 2007*

**Featured wands for camera calibration and as a gesture based 3D interface device**

Don Kimber, Eleanor Rieffel, Kazumasa Murai, Steve Omohundro, Feng Guo

*U.S. Patent 7,775,439 2006*

**Reach through capture: a method and system for interacting with objects via a camera**

Qiong Liu, Don Kimber, Patrick Chiu, Hanning Zhou, Jack Yang, Laurent Denoue

*U.S. Patent 7,830,417 2006*

**Unusual Event Detection via Collaborative Video Mining**

Don Kimber, Hanning Zhou

*U.S. Patent 8,009,193 2005*

**An Immersive User Interface for Analyzing and Monitoring Videos from Multiple Cameras**

Matthew Cooper, Don Kimber, Lynn Wilcox, Qiong Liu, Hanning Zhou

*U.S. Patent 7,787,011 2005*

**System and Method for User Monitoring Interface of 3D Videos**

Matthew Cooper, Don Kimber, Lynn Wilcox, Qiong Liu, Hanning Zhou

*U.S. Patent 7,944,454 2005*

**Methods and Interfaces for Visualizing Activity across Video Frames in an Action Keyframe**

Andreas Girgensohn, Don Kimber, Lynn Wilcox, Frank Shipman

*U.S. Patent 7,623,677 2005*

**A Method and System for Analyzing Fixed-Camera Video via the Selection, Visualization, and Interaction with Storyboard Keyframes**

Andreas Girgensohn, Don Kimber, Lynn Wilcox, Frank Shipman

*U.S. Patent 8,089,563 2005*

**Mediated Meeting Interaction for Teleconferencing**

Jonathan Foote, Don Kimber, Qiong Liu, John Doherty, Kazumasa Murai

*U.S. Patent 7,688,344 2004*

**Methods For Presentation Authoring In A Media Device Distributed Environment**

Patrick Chiu, Don Kimber, Qiong Liu, Chunyuan Liao, Surapong Lertsithichai

*U.S. Patent 7,434,153 2003*

**ADO: An Audio Device Organizer**

Jonathan Foote, Don Kimber, Qiong Liu, John Adcock, Chunyuan Liao

*U.S. Patent 8,126,155 2002*

**VETCH: a Video Enabled Tele-presence Control Host**

Qiong Liu, Jonathan Foote, Don Kimber, Patrick Chiu, Lynn Wilcox, Chunyuan Liao

*U.S. Patent 7,995,090 2002*

**Capturing and Presenting Shared Multi-Resolution Video**

Jonathan Foote, Don Kimber, Lynn Wilcox, Qiong Liu, Hai Tao

*U.S. Patent 6,839,067 2002*

**Methods for intersection detection in panoramic video**

Jonathan Foote, Don Kimber, Xinding Sun, John Adcock

*U.S. Patent 7,289,138 2001*

**Methods for Annotating Remote Objects**

Jonathan Foote, Don Kimber

*U.S. Patent 7,333,135 2001*

**Video Production Through Collaborative Control of FlySPECS**

John Boreczky, Patrick Chiu, Jonathan Foote, Don Kimber, Lynn Wilcox, Qiong Liu, Shingo Uchihashi

*U.S. Patent 6,839,067 2001*

**Methods for multisensor color normalization**

Jonathan Foote, Don Kimber

*U.S. Patent 7,260,258 2001*

**FlyAbout: Spatially Indexed Panoramic Video**

Jonathan Foote, Don Kimber

*U.S. Patent 7,096,428 2001*

**LiteMinutes: an internet-based system for multimedia meeting**

Patrick Chiu, Don Kimber, John Boreczky, Andreas Girgensohn

*U.S. Patent 7,260,771 1999*

**System for person location and gesture tracking**

Jonathan Foote, Don Kimber

*U.S. Patent 6,775,014 1999*

*Filed while at Xerox PARC:*

**System for the Capture and Replay of Temporal Data Representing Collaborative Activities**

T. Moran, S. Minneman, S. Harrison, D. Kimber, W. van Melle, P. Zellweger, G. Kurtenbach, L. Wilcox, S. Bly, W. Janssen, C. Hebel

*U.S. Patent No. 5,717,879 1998*

**Computer Controlled Display System Using a Timeline to Control Playback of Temporal Data Representing Collaborative Activities**

T. Moran, S. Minneman, D. Kimber, P. Zellweger, G. Kurtenbach, L. Wilcox

*U.S. Patent No. 5,717,869 1998*

**Unsupervised Speaker Clustering for Automatic Speaker Indexing of Recorded Audio Data**

Lynn Wilcox, Don Kimber

*U.S. Patent No. 5,659,662 1997*

**Method of Speaker Clustering for Unknown Speakers in Conversational Audio Data**

Don Kimber, Lynn Wilcox, Francine Chen

*U.S. Patent No. 5,598,507 1997*

**Segmentation of Audio Data for Indexing of Conversational Speech for Real-time or Post-processing Applications**

V. Balasubramanian, F. Chen, P. Chou, D. Kimber, A. Poon, K. Weber & L. Wilcox

*U.S. Patent No. 5,655,058 1997*

**Real-time Audio Recording System for Automatic Speaker Indexing**

V. Balasubramanian, F. Chen, P. Chou, D. Kimber, A. Poon, K. Weber & L. Wilcox

*U.S. Patent No. 5,606,643 1994*