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I have spent my career designing, developing and evaluating a wide variety of interactive media systems.

In all of my work I follow the design-build-evaluate iteration cycle. Many of my projects have involved inventing new interaction techniques, prototyping tools, usability methods, and developer toolkits.

I have been the lead for many projects. This has required both management and hands-on work spanning ideation, needfinding, design, prototyping, development, evaluation, and communication as well as resource procurement and task management. Most of my collaborators have been colleagues, and working with them has required negotiation rather than explicit delegation. On many projects I contributed substantially to the code base. I have also been the lone developer on projects with UX and design professionals, and conversely I have been the UX lead on projects with other developers. Most of my projects span web and native mobile development.

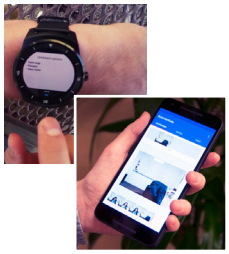
In addition to designing, building, and evaluating many applications for remote work, I also spent several years managing projects remotely.

A selection of projects...

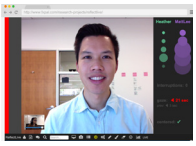
MixMeet + ReflectLive

I led a team of user experience researchers investigating current teleconferecing practices. Our field work showed that current tools do not provide adequate support for document sharing and search.

To address the issues we discovered, I designed **MixMeet**, a WebRTC-enabled web platform, mobile app, and watch-based interface. I then led a team of developers to implement my designs.



After deploying and testing this platform, I worked with another colleague to extend it to support a doctor-patient teleconference application: **ReflectLive**.

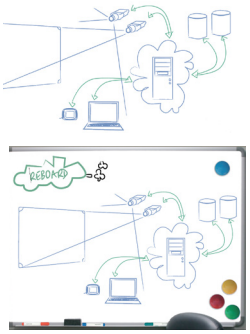


Faucett, Heather A., Matthew L. Lee, and Scott Carter. I Should Listen More: Real-time Sensing and Feedback of Non-Verbal Communication in Video Telehealth. Proceedings of ACM Human Computer Interaction, 1(CSCW), Article 44, 19 pages. 2017.

REBOARD

The goal of **ReBoard** was to add the value of digital capture and access while retaining key attributes of whiteboards we identified in needfinding: ease-of-use, flexibility, and availability.

We built a system to capture content with networked cameras. I wrote image processing algorithms to detect areas of change and clean images. A web interface provided filtered access.



The results of a summative evaluation I led in collaboration with other researchers inspired me to build a new tool: a mobile capture tool that let users create stories from their whiteboard drawings.

SketchScan

Branham, S., G. Golovchinsky, S. Carter, and J. Biehl. Let's Go from the Whiteboard: Supporting Transitions in Work through Whiteboard Capture and Reuse. ACM CHI, Pages: 75-84. 2010.

SHOWHOW

The goal of **ShowHow** was to explore the use of multimedia in the creation of tutorials and how-tos. A needfinding study showed authors needed simpler ways to capture and viewers needed ways to annotate.

I designed and built a web-based system to support easy, drag-and-drop creation of annotatable tutorial videos.

I also led a team that developmed head-mounted devices (HMDs) and applications for multimedia capture and access. A study we ran showed HMD capture was particularly useful for tutorials involving large items or spaces.

Carter, S., M. Cooper, P. Qvarfordt, and V. Mäkelä. Creating expository documents with web-based authoring and heads-up capture. IEEE Pervasive Computing, 14(3). Pages: 44-52. 2015.