

STATEMENT OF OBJECTIVES

For graduate admission at the MIT Media Lab

Raphael Schaad, December 2014

“Trying to determine what is going on in the world by reading newspapers is like trying to tell the time by watching the second hand of a clock.” —Ben Hecht

The web has now been in existence for a generation. The idea of enabling people to create, retrieve, and interlink information at will turned into one of society’s biggest advancements. However, with the advent of hyperconnected devices, information is generated in an increasingly fragmented way across space and time. Consuming feeds of these fragments is like watching the second hand of a clock – second by second, post by post, photo by photo – we miss the bigger picture. We are getting inundated with more information than ever before but have little control over how to gain more insight. There is an increasing need for new systems that help us understand information, improve communication, and allow us to create meaningful change. The web is in Beta again.

My objectives for graduate studies are focused on advancing interfaces and interactions in social contexts. As a basic framework to do research, I believe any new system will benefit from being interconnected (as opposed to isolated), distributed (as opposed to centralized), and interactive (as opposed to static). Specifically, I want to define technologies for the web of the future that enable peers to leverage the power of social networks to better self-organize, learn, and gain insight. My research will build upon experience gained in the industry, and is inspired by my lifelong passion for creating technology that meaningfully impacts people’s lives.

During my undergraduate studies in Switzerland – while immersed in studying the theories of algorithms, networks, and computer vision – I had a transformative experience when an individual project of mine, the app LightDetector, enabled the blind to “see” light. It used a mobile phone’s camera and image processing to transform light sources into sound. I was deeply moved by the impact my creation had on a blind friend’s life, allowing him to experience his environment as he never had before. This influenced my future pursuits and defined what innovation

means to me: creating new technology that augments people's abilities. For my thesis I joined the Computer Perception and Virtual Reality Lab and built a tool to aid students in learning and researching computer vision theory. Since both my parents are teachers, the theory and practice of education has always been present in my life. What fascinated me most about my research was building tools that allowed people to take ownership of their own learning.

Growing up in a country with four official languages, I became interested in how we can communicate and share experiences clearly through symbols or text. With my drive to build tools that augment people's abilities, I prototyped interfaces for focused text entry and engineered a syncing system that gives the writer the flexibility of developing a story seamlessly across different devices. Through a collaboration with Information Architects in Tokyo, this "writing machine" led to the award-winning app iA Writer. Beyond written text – and even beyond audio or video – I am interested in researching how stories can be told incorporating additional possibilities of new media. I envision multidimensional real-time narrative experiences, augmented by a variety of sensors, co-influenced by the audience and their own context. 500 million people followed Neil Armstrong's "one small step" through live television. How will five billion connected people participate as the story of the first human setting foot on Mars unfolds?

Over the past four years I have been building the world's first social magazine at Flipboard in California, to improve how we consume increasingly fragmented media content. With the belief that content is better discovered and experienced with context and structure, I spearheaded the development of user-curated magazines, thus allowing people to create new narrative experiences. Most recently, I led the design of content personalization that layers these signals from large-scale human curation with recommendations from machines. For example, algorithms are great at classifying and correlating content, but they cannot identify what is cool or insightful the same way a person can. The experience I gained by deploying such mechanisms at scale and measuring their impact brings a valuable perspective to my proposed research.

My continued curiosity for identifying ways to harness the power of social networks has led me to explore how co-presence can enable new forms of communication. Aircoin is a recent personal project that allows nearby people to send bitcoins over proximal networks using Bluetooth and Wi-Fi. The prototype won an award in the BitHack competition for innovative

use of the Coinbase API and I am interested in making it entirely infrastructure-free. I believe that such mobile networks of peers have the potential to change everything: from social organization and learning, people-driven media experiences, to the conservation of the environment – an incredible opportunity we cannot leave untapped, and one I want to immerse myself in through my research.

After graduating with a B.S. in Computer Science and four years of invaluable engineering and design experience in the industry, I am pursuing a master's degree in the Media Arts and Sciences Program at MIT. In my objectives to create new systems that help us understand today's fragmented web, and to deploy networked social tools that augment people's abilities, I see common themes with research being done in the *Social Machines* (language and literacy learning initiative; social network and media analysis), *Viral Communications* (Ultimate Media platform), and *Human Dynamics* (Data-Pop Alliance, project Ethos) groups. I am confident that my experience working on innovative mobile and social products can contribute in significant ways to these projects. Working under the inspiring mentorship at MIT Media Lab I want to continue my interdisciplinary trajectory in academic research. There is no single field of study or profession that can answer my questions – the research I propose lives at the intersection of technology and people, and cannot be understood in separation. MIT Media Lab's multidisciplinary and collaborative environment will allow me to create the change between the world as it is and the better place it will become.

This essay, from Raphael Schaad's application to the Media Arts and Sciences Program at MIT Media Lab, originally submitted in December 2014, edited for publishing in September 2015.

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