

Elyssa Chung

Dr. Stephen Fernandez

UX 202

10 March 2020

Mark 2: Crossing the Bridge in Quarantine

With Mark 1, in order to present a plausible future, the concept for an alternate device navigation system was majorly built off of the gestural navigation system that Tony Stark used to access his computer in the Marvel movies (Auger 11, Dunne and Rabby 3). Although, when encountering a major issue during Mark 1's presentation, we were made aware that based on the audience's reaction, it proved our speculation to be too futuristic, not allowing for the crossing of the perceptual bridge and rendering the idea unrelatable towards the use of their daily lives (Auger 11-12). Due to the realization that the movie references proved inadequate in crossing that perceptual bridge, we worked with Mark 1's base, iterating to align truer to the definition of haptic tech that computer mice and device navigation through touchscreen seem to fall short of (Goggin 1568).

First, we bridged out to work on the physical electronic side that would enable the user to use the sensors to navigate via gestures in the first place. By including a component to record the movement of the sensors within the charging case as well as a Bluetooth connection for easier tracking, it enables the sensors to be a self-extension of the user, providing them an agentic role in the navigation of the internet and the device they are connected to. Additionally, the sensors provide users a self-expansion since they allow for better user experience, not only with the personalization of the user's gestures, though through not confining the user to a specific posture or desk for hours on end, thus providing them a consumer-object assemblage to navigate the web and their device while allowing them to move around more freely.

As for the creation of the graphical user interface (GUI) that would enable users to choose and create new gestures for their navigation/design/gaming purposes, when initially starting up the sensors to connect with the user's preferred device to navigate, they would encounter a page that enables them to confirm basic gestural options while providing a video tutorial as a visual aid to calibrate. The choice for the application to open up to this page is because it helps people to branch over the perceptual bridge further. By providing a ground-zero database that provides touch screen gestures that could be transferred over to the device navigation, it takes away the need for a screen to be activated based off of touch while allowing the user to start off with navigation gestures that are familiar. From there, after steeping the users to be more comfortable with toggling with sensor reactivity as well as haptic feedback received from the actuators within the sensors, ideally, users would then be comfortable enough in recording and integrating their own gestures towards the device gestural database. Thus, not only would users be enabled with a better user experience, though they would also be able to strive towards a richer ability to be able to enjoy an alternate form of navigation, allowing for a more engaging contact with their web/ work/ gaming/ design experience.

Before starting, COVID-19 threw a wrench in our group plans to meet up to work on Mark 2. Due to the need for quarantine, a mix of digital tools (Facebook Messenger and Zoom to discuss and screen share; Figma for wireframing collaboration; Microsoft OneNote for sketching; Tinkercad and Adobe Illustrator to replicate how the prototype would look despite the inability for lab access for 3d printing) and good old communication were used. Considerably, it was interesting working from home since, throughout the whole process, not much had changed in the design process. If anything, Ratto's three stages were followed more closely and there was a near obscene amount of sketches to properly convey our ideas so we could all

understand each of our mental models (McGlashan 378; Ratto 253). Despite the digital tools allowing for a near play by play of all our ideas, making sure everyone was on the same page continued to be a challenge. The reason for this difficulty is due to the asynchronous nature of our idea keeping and the occasional lack of explanations that went with the wireframes for part of the GUI; because of our differing schedules, we were not always able to have real-time explanations. It was due to this asynchronous nature of collaboration that one of the issues we had with the wireframes was figuring out the user flow for the sensors once they were turned on.

Due to this issue and due to not being able to be in contact with other humans, ideally, I would like for there to be further user testing towards the user flow of Mark 2 that would span from the initial device activation all towards the usage of the sensors on a device. Additionally, I would like to incorporate alternative forms of accessibility, options within the settings of the GUI that would allow for further empowerment towards people with hearing and visual disabilities. For example, besides incorporating the option of audio captioning with the calibration feature on the main page, it would be interesting to consider options that the actuators within the sensors could provide. Especially for those with visual impairments, because the sensors don't necessarily provide any sort of marker for people to orient themselves with it might be viable to consider allowing users to select what key point of a page or device they would like the actuators to activate on, then use that chosen point as a marker (Goggin 1571). Additionally, building off of Goggin's mention of the hearing glove, if using the actuators in the sensors, for people with hearing issues, they could also be for those who would like to watch videos (1573-1564). All in all, the capabilities and applications could prove to be vast, the two ideas, listed above are just the tip of the iceberg. That said, if waiting for modern tech to be a bit more developed, this could be something worth pursuing.

Works Cited

- Auger, James. "Speculative Design: Crafting the Speculation." *Digital Creativity*, vol. 24, no. 1, 2013, pp. 11-35. doi: 10.1080/14626268.2013767276.
- Dunne, Anthony, and Raby, Fiona. "Beyond Radical Design?." *Speculative Everything: Design, Fiction, and Social Dreaming*, The MIT Press, 2013, pp. 1-13.
- Goggin, Gerard, et al. "Disability and Haptic Mobile Media." *New Media & Society*, vol. 19, no. 10, SAGE Publications, Oct. 2017, pp. 1563–80, doi:10.1177/1461444817717512.
- McGlashan, Ann. "A Pedagogic Approach to Enhance Creative Ideation in Classroom Practice." *Springer Science + Business Media* Dordrecht, 2017. *Int J Technol Des Educ*, vol. 28, 2018, pp. 377-393.
- Ratto, Matt. "Critical Making: Conceptual and Material Studies in Technology and Social Life." *The Information Society: An International Journal*, vol. 27, no. 4, 2011, pp. 252-260.