

## CDEFO Week 5

### Prompt:

There haven't really been massive changes in my project thus far, more just a clarification of what I want to do. From a technical standpoint, my project has always been very simple and there was very little room to change things other than platforms. For example, instead of Bash for the host machine scripts, I'm using Python instead because it's a lot easier to integrate Arduino with Python over a serial connection. Aesthetically, at first I thought I wanted to 3D print the enclosure for the Arduino and the NFC shield, but I realized I wanted something weightier to make it feel less "cheap," like a wooden enclosure. I plan on getting in touch with the wood shop in the Art and Sociology building sometime next week to see if I can make the enclosure. Meanwhile, conceptually, thanks to my stakeholder interview my project itself has been clarified a whole lot more. I still have another meeting scheduled with a secondary stakeholder, but that's not occurring until next Monday so I can't include it in my analysis. When I first started out, I wanted to make experiences that were entertaining to everyone, I wanted to show everyone how valuable it was. Basically, I wanted to please everyone, but that's not realistic, and Professor Chan told me this. So, what I learned is that I need to make experiences that showcase the ideas of Internet of Things and emotions well enough, and then ask people why they were or were not interested as a form of Iteration and Speculative Design. I need to let my design be iterative, I need to put out what I already have and then ask people questions about what they like and don't like. Therefore, I'm going to double down on the two experiences I have, and wait until I have data about those two before deciding if I need to move, and what demographics of users I need to target. I still want to bring this to the masses, but now I will be attacking the problem in a much more reasonable way.

Truth be told, I'm not sure what the question is asking when it asks me how I'm iterative. I guess the mistake I've made thus far is trying to make every user experience before beginning trials of my project. Since talking to Professor Chan, I've reprioritized, and hope to make a lot more progress in the coming weeks. Another mistake is something that actually happened this week, and it has to do with the fact that the URI record of an NDEF chip doesn't translate to a character array in Arduino, probably due to a bug or oversight. Therefore, I can't use URI's like I wanted originally, so I need to use text records. Text records are slightly larger, but I've found that I can shorten the other commands in such a way that it doesn't matter (i.e. using "h" instead of "https://").

Given the straightforward nature of the tech, I haven't been experimenting too much with the way the whole project is laid out. I experiment while I'm programming, like seeing how little data I can use while still making coherent commands (i.e. using pointers to conserve RAM and abbreviating certain keywords) but that's just the nature of programming. As mentioned previously, I was making a conceptual mistake in the way I was developing the user experiences, and I have since corrected my design process to be more iterative and accepting of user input.

Now, onto progress.

#### **Week 4-5:**

- Find more user experiences (continuous)
- Start and finish the database standard that the NFC's will use to store commands (4 days)
  - How long do the lines need to be?
  - How do we store parameters?
    - Are we storing things on the tag, or using references to files on the Arduino/Host Machine?
  - Can we fit the commands onto one tag?
    - Multiple tags needed?
  - Does our standard work when we read the tag?
- Start testing C functions with preprogrammed NFC (continuous)
  - Is the Arduino accepting the NFC commands and executing them in the right places?
  - User experiences aren't required to be built at this point.
  - Testing shall continue to occur while modules are built

Since I'm still working on the other C++ functions, images won't really do any justice to this journal. The images would just be screenshots of Github commits or still images of an LED strip. I also have a rough outline for my next user experience, using a stuffed hedgehog from John Fitzell. He got it about 15 years ago during a road trip that took a detour into an aquarium, and he has a bunch of sensory-related memories to go along with it. He related to me the fact that it was raining, and, along with the fact that he got it in an aquarium there's the suggestion of cool air and rippling water and blue lighting. He also remembers the snapping turtle exhibit specifically, so I can fit that into the visual component. The full draft is too large to fit here.

Between the coding and drafting, I've spent around 12 hours this week, and I'm still on schedule.