**DM7908 Early Sketches Presentation**

Transcript

In this short presentation I'm going to talk through the early sketches for my project and offer some explanation that ties them together and justifies the direction of the project. Please feel free to pause the video to look through my handwritten notes on the sketches.

I started by producing a small mind map that combined the outcomes from literature review with my knowledge of the client, and the software packages available to me. I also spent a small amount of time listing some of the constraints that I would need to keep in mind, and it will be important at some stage to reassess my plans against those.

… and just before diving into creating my first sketches, I thought I’d quickly collect my thoughts on these constraints. As I would spend a few afternoons creating sketches and wireframes, I’d keep this list to hand, and see how I could address each of these constraints.

So, at this early stage, I had an idea to produce an AR experience that would enable e-retailers to appeal better to high-NFT users. The experience would address the salient haptic ‘qualities’ of the product i.e.: weight, capacity, build quality, artwork/design, texture, and scale (Peck, Barger and Webb, 2013). By addressing these in one, vivid and coherent form of media, users wouldn’t need to summarise information from a variety of sources such as product description, images, a video, and reviews, which may produce a high cognitive load (Løkke‐Andersen, Wang and Giacalone, 2021). An AR experience of this kind might allow a business to be more inclusive to its customers, especially those living with cognitive impairments, as it could allow customers to offload the mental processes involved in evaluating a product (Yoo and Kim 2014). Users of the experience would also benefit from the AR experience showing them products within the user’s environment, further leaping their decision making process and providing a feeling of fluency (Janakiraman, Syrdal, and Freling 2016).

Here we can see some early sketches and notes that reference the addition of congruent sound to build auditory-haptic imagery for the user (Løkke‐Andersen, Wang and Giacalone, 2021). In other words I have considered adding transition sounds that match the animation of a make up bag being unzipped. I also made notes about photogrammetry being a method of image capture that results in the production of 3D models.

In the last year or two, companies such as Apple have made strides towards making this technology more accessible insofar as they’ve embedded it into their operating systems and produced APIs for developers for use in mobile applications; for this reason, it seemed to be an affordable way to help e-retailers create AR experiences, and this would meet a key constraint outlined previously.

In order to exhibit the product’s ‘qualities’ in an AR experience, it felt necessary that the product should animate. For example, I could not expect a user to feel confident in knowing the texture or capacity of the inside of the product unless it was unzipped and opened, OR unless they could see examples of what might fit inside. So, in these sketches we can see seven stages of animation, requiring the product to rotate, tilt, unzip, and provide a comparison alongside some common make-up bag products such as nail polish jars and an eyeliner.

At this stage, the product’s lightweight quality appeared to be the most challenging quality to address - and so far I believed that the floaty animations might be the most suitable method of illustrating this.

…and on-screen, here, we can see a quick table that I created, summarising some of the methods I could employ to build haptic imagery, referencing each of the product’s qualities and methods of depicting them on a screen.

One of the real challenges ahead of me that I realised at this stage was that although photogrammetry would be an affordable and accessible method for e-retailers to create 3D models of products, there would be difficulty in animating them. The solution that I had thought of was to create several photogrammetry scans of each product, and then create a stop motion animation of them. Theoretically there are many 3D software applications that would help to achieve this, including Blender, Adobe After Effects, Maxon Cinema 4D, and Apple’s Reality Capture, which is a part of Xcode. The difficulty would come in producing high-quality photogrammetry scans in consistent lighting conditions and then producing aesthetically pleasing transitions between each scan. I was aware of the challenge and knew that I may need to resort to producing prototypes to the best of my ability and knowledge as animating goes, when that time came.

So, my plans for an AR experience and animation of 3D photogrammetry scans would require some alterations to the Blossom & Easel website’s product pages. The sketch on the left here includes my first amendment, mostly limited to creating a ‘View in AR’ button. However, the sketch on the right is far more adventurous.

As I will have the photogrammetry models and animations available for the AR experience, I figured that it would be efficient to include them on the website’s product page. This would improve the haptic imagery available on the product page, even if the users were not able to launch the AR experience due to not having a suitable device or not being in a suitable context to launch the AR experience (e.g.: commuting on a bus).

I steadily built upon the redesign of the product pages, adding a mixture of static and scrollable page elements. On the left you can see that I have considered the accessibility of the elements I was adding onto the page, and has brought about some interesting balancing acts between accessibility, aesthetics, and functionality.

To the right you can see an extended view of the product page. The concept is that the product positioning on the page could be static and while the user is scrawling through the description, the product would animate as appropriate. For example, when the user reaches the description of the product’s capacity, the product’s zip would unzip, revealing the inside.

… And here you can see the product page layout being firmed up even further. On the left I have divided the page into sections and each one of them addresses a salient quality of the product. On the right you can see some rough drawings for the footer of the product page that includes information that must be taken directly from the existing page and placed onto my new prototype at the client’s request.

A lack of touch has been commonly referenced as an issue for high-NFT consumers when shopping online (Løkke‐Andersen, Wang and Giacalone (2021); San-Martín, González-Benito and Martos-Partal (2017); Peck, Barger and Webb (2013); Peck and Childers (2003). So, although having the product automatically animate itself seemed suitable, that would also present a missed opportunity for adding interactivity into the experience. Construal level theory suggests that adding interaction, such as tapping, swiping, and pinching to affect the virtual product could be a surrogate for the sense of touch and potentially increase the endowment effect (Trope and Liberman, 2010; Vries et al. 2018).

In the sketches I've experimented with adding a "drag to rotate” option, and placed “design selectors” neat the product preview, allowing the user to select which design they’d like to see.

… And here you can see I’ve circled back to firming up the linear presentation of the product animations, anchoring each animation to the content of the page and saviour of the user.

As mentioned earlier this is a useful task because it informs the product pages on the website as well as the AR experience.

Translating the animations of the virtual products to the AR experience became a bit more challenging. As the user will not be required to scroll to see any description or information, there would be no cue for the animations to take place. I decided to rely upon the user to use a tap gesture when they wanted the product to animate. In the left and top-right drawings and descriptions you can see that I experimented with having labels that could be tapped; however the issue with this was that the animations could be triggered in any order and this would create a problem when producing stop motion animation with photogrammetry. To make this project more achievable for me I would need to ensure that uses a stick to a linear approach to the animations, meaning they happen one after the other in a very specific order. To solve this I experimented by producing the bottom right sketch; here, the user interface features numbered buttons that must be tapped in order, known as the ‘animation selector’.

You can also see a variety of notes here regarding accessibility, such as tap targets and their visibility, size, and placement.

The user interface steadily involved, involving arrows to dictate the linear approach to the experience. I also experimented with the placement and interactivity of the design selector and the animation selector. The sketch on the right places the animation selector at the bottom of the screen and now allows users to swipe from left to right, in a very similar fashion to pre-existing applications such as the iPhones camera application. By aligning the experience with existing experiences, users would be able to draw upon their prior knowledge and expectations of user interface behaviour, reducing the amount of cognitive load required for use.