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## **MMP310- 21V Web documentary**

### **Methods report**

*This report aims to discuss the choices and assessments in the context of our endeavour for developing an immersive storytelling experience for the young audience of Sunnmøre Museum. We, as a team of six students, developed a fully functional prototype open-air AR scavenger hunt game by using the Unity Game Engine and the Vuforia Unity extension. In the game, players navigate to several locations in the museum by following a storyline and guidance from a ghost character called Lille Aarsille to help her case.*

*The report is structured around the discussion on the project development from ideation to production, methodological choices and evaluation of our product based on the web documentary literature.*

## **1. Project development**

### **1.1. Actors, pitching and literature review**

At the beginning of the course, we were introduced to a beta geolocation AR solution provider Hidden and the client, Sunnmøre Museum, which is in need of making its content more accessible and engaging for younger audiences. Keeping in mind these two actors, we pitched our concept idea named Vær'la. It was a classic treasure hunting idea aiming at a young audience group through a gamified storytelling experience. The initial idea was to choose a number of items in different houses at the museum and tell visual stories around those objects. As a part of treasure hunting, the users of our gamified experience would find these objects with the help of their mobile phones and as they find them, a visual story would be served to them through location-based AR technology of Hidden. In this way they would both consume these stories and collect points/badges/levels.

After the pitch, three more master students and one bachelor student joined and we formed a team of six with the following competences: two communicators, two media designers, one animator and one journalist/sound designer.

Before we enter into production, we wanted to gain insight from the museum staff/visitors to gain client/user insight by following design thinking methodology and value proposition scheme (Cortés-Selva & Wandosell-Fernández de Bobadilla, 2018). Prior to launching our research phase, all master's students conducted an individual research report where we explored literature related to the webdoc genre. In this process, we came up with several highlights that led us to a more conscious content development without being trapped into hype of technology and tools. The most fundamental guidance we got from the literature was the importance of the novelty, and user centered and empowering features of webdoc productions. In comparison to traditional media contents, the interactive nature of web documentaries provide the audience the opportunity to engage with the documentary in novel ways through processes of interpretation and meaning-making (Nash, 2014). Considering these features, interactive documentaries give voice and greater agency to the “people formerly known as audiences” and are seen as a more emancipating storytelling experience and even a tool to let the audience create their own narrative compared to linear format documentaries (Flynn, 2015).

Having an informed decision on what we should pay attention helped greatly in both understanding the client and in developing our concept.

## **1.2. Research: Client, audience and technical considerations**

For the research phase, we split into two teams with different areas of expertise: research/design team (R/D) and technical/animation team (T/A), respectively consisting of three people. This approach worked well as it helped us assign responsibilities effectively while maintaining cooperation across our disciplines. It also helped us communicate more directly with clients, as the R/D team handled all communication with the museum while the T/A team handled all communication with HIDDEN. We informed each other and planned together during our weekly Monday meetings.

The first week of research was kicked off with an online interview with Sunnmøre Museum to understand the needs and challenges of the museum in their digitalisation process. The interview was semi-structured, it was recoded via audio and transcribed by the R/D team. A main insight

from the interview was that Sunnmøre Museum is targeting a specific age group for their new exhibition, 17 year olds, which is older than what we previously considered. This made us rethink our target group from preteen and children's families to teenagers. Another insight was that many museum buildings are not open to the public, making them difficult to access in the way we had previously envisioned - animating objects for a treasure hunt and using geolocation. The museum also told us that communicating diversity, underrepresented stories and stories that resonate with the life of young people are values that the museum strives to fulfil and which are to be included in its future vision.

T/A team worked with the capacity of developing and assembling the game after figuring out the technical infrastructure. For this we tried to get a hold of HIDDEB to understand if it is capable to meet our needs such as gamification and precise geolocation due to limitation of locative AR experiences with GPRS technology. For this we had an online meeting with the HIDDEN team in mid April. During the meeting, we found out that HIDDEN does not have any inhouse solution for our needs and we have to do all the development manually outside the HIDDEN software. For this, we were told to use game engine UNITY and AR development plugin VUFORIA. To be able to actualize the project, T/A team enrolled in online courses to learn UNITY and VUFORIA as well as basic C Sharp coding language, as we did not have any practical experience or enough technical knowledge in these fields.

### **1.3. Concept development: story, approach and user experience**

The research phase created many leads which were followed up in later stages. Mostly we followed up on story leads and ensured a close dialogue with the museum throughout the project to find and check our materials for historical accuracy and supplement with archive materials. We also initiated a user test/access to audience studies from the museum but did not get a reply from the marketing department in time.

Based on what we got from both interviews and historical material research, we started the concept development-phase. We met up twice a week during the concept development phase to discuss our findings, adjust the concept and find a story. The chosen approach had to resonate

with a young target audience, represent a marginalised story and make information accessible in the museum landscape in an engaging way. Our choices in our concept development were shaped by evidence and arguments from leading researchers and scholars in the web documentary field. As one of these scholars, Perlmutter (2014) argues that web documentary form has a potential to transform “how we perceive and understand the world epistemologically” and “create social meaning”. In alignment with these arguments, Nash (2012) points out web documentaries have three functions: “democratic civics (providing information/publicity to engage the audience as active citizens), journalistic enquiry and radical interrogation (questioning the status quo and providing alternative perspectives” (pp. 12).

The emphasis on social meaning, radical interrogation and providing alternative perspectives led us to tell a personalised character’s story, an approach shown to enhance engagement with museum experiences. Our initial concept has been transformed into an AR-based game with experiences for different age groups or other segments. This may help the museum compress and tailor information according to users’ interests. Each segment follows a story of a relatable character who lived in the past and is connected to the museum. On their way they explore the area for objects and pieces of story told in an engaging manner.

For our prototype we focused on a 17 year old ghost who was stuck as she could not actualize her dreams and for this needs the help of the users to find three objects in the museums. We inquired with the museum for a story told from a young person’s perspective (historically underrepresented). Through own research, we found a character with dramatic potential - Aarsille Strøm, who inspired our final concept. Aarsille was the older sister of Hans Strøm, “Norway’s first modern biologist”, famous for depicting the everyday life, flora and fauna of Sunnmøre. Aarsille has a natural connection with the museum as she is one of the few historically documented children to grow up in Borgund. By projecting Hans’ story onto her, she becomes the perfect guide for the area. Aarsille was 17 years old when her father died, and both she and Hans’ lives were affected. However, Aarsille had less opportunities than her three (esteemed) brothers and her story tells of the limited opportunities of a young woman during the enlightenment period. We believe her story, with a fresh perspective, can spark interest and identification with a young target group today.

We have also considered the “interactivity” issue in development of the story thoroughly following Richards (2006)’, Nash (2012) and Flynn (2015)’s elaborations on effective interactivity by building a proactive role for users. These scholars discusses three forms of interactivity: consumer interactivity, which is traditional fixed form in which user activity is limited to interpreting, evaluating or acting in an alternative domain; processor interactivity, which gives the audience a certain level of freedom to contribute through actions such as sending an email or commenting; and, generator interactivity, which gives the audience a role of authoring content and possibility to alter the environment (Nash, 2012; Richard, 2006).

This third level of interactivity seems to be the only form where user engagement experience is experienced differently and more positively according to the research by Quiring (2009). The study, conducted in Germany with non-technical ‘ordinary’ users, revealed that the audience associate the interactivity mostly with what they can accomplish by using media in terms of self-development, and influencing the content (Quiring, 2009). Based on that finding, Nash (2012) argues that webdocs form can have a positive impact on engagement if the users’ have a voice or “choice” in the story.

Keeping in mind the importance of this kind of interaction, we set on writing interactive story dialogues based on the main story idea. For creating various storylines and alternatives, individual team members created their stories on Twine. After going through all these developed dialogues together, we combined them in one interactive story form. We also co-wrote facts to integrate in the story dialogues.

#### **1.4. Production: Medium, challenges and opportunities**

After the story is done and we are done with our intensive crash course in UNITY and VUFORIA, we made decisions on what kind of AR and UI elements we will be using in consultation with the HIDDEN team and with our own research. We had several options to trigger the AR experience. The first technique was to use geopositioning, like Pokemon Go, in which the user would be served different parts of the story according to their GPRS location in the museum landscape. The other method was to use markers, such as objects, building or QR

codes, in which the users could scan selected markers with their phone cameras to start different parts of the story. The first technique was problematic as it was not possible to set a specific location precisely without the help of an extra intranet hardware system at the museum. So we decided to go for the latter solution. For this, we needed to find six markers, that can start the interactive dialogue with our ghost character who guides users from one location to another, providing the educational elements along the way.

The users at each location would interact with the character and pick up the designated objects and get instruction for the next location, arriving there to search for the objects in AR. The users will take the whole tour until all items were collected and in the end give them to the character to set her free.

At the beginning of this part, we visited Sunnmøre museum to find markers- a challenging task, as there are many considerations. During the visit we found a strategic route leading past interest points such as the Hans Strøm statue at Borgund Kirke and Borgund Fri-og Fattigskule, with a midway stop at the museum café and start/ending point in close proximity to a popular children's animal park. The route includes resting spots to increase accessibility and motivation to explore the whole area. I put all the photos from the spot and the route on a custom Google map ([https://earth.google.com/web/data=Mj8KPQo7CiExUWRYMLhnMUFEd05LSzh4S1RHU2w1cW41dVVWaldpTFgSFgoUMDhDRjE0RUQ2NTFBNDlGRDgyMEY?fbclid=IwAR24tskZ8HkO9xEMZZ-dhgcMV\\_g5OyXSvCGZ4NC8P8cLjkvWxNIWJLD06nI](https://earth.google.com/web/data=Mj8KPQo7CiExUWRYMLhnMUFEd05LSzh4S1RHU2w1cW41dVVWaldpTFgSFgoUMDhDRjE0RUQ2NTFBNDlGRDgyMEY?fbclid=IwAR24tskZ8HkO9xEMZZ-dhgcMV_g5OyXSvCGZ4NC8P8cLjkvWxNIWJLD06nI)).

We presented the story and route to both HIDDEN and the museum. Both liked the idea and saw the potential in the Aarsille story and the game concept.

For the last two weeks of the project, the researchers and designers in our team developed a visual prototype of the game

(<https://www.figma.com/file/XIp3HEeagzQMy6q0k2TanX/UI-Webdoc?node-id=0%3A1>). The animator has finalized drawing and animating the 3D character and objects. Meanwhile we have continued to develop the game in Unity. We managed to create a fully functioning prototype yet from an ideal interface and design/aesthetic perspective, there was not enough time to make it as we initially designed.

### **3. Documentary issue, challenges and choices**

Throughout the project process, we had a clear goal: Our product should provide young people a real interactive personalized experience and identify with stories we tell. We aimed to achieve this by selecting stories from a historically unexpected perspective, a young woman who has no historical significance. Our story initially told the perspective of Hans Strøm, a traditional figure who might be difficult for young people to relate to. The story of Aarsille changed our perspective and gave us the voice to tell a more diverse and relatable story in align with Perlmutter (2014) and Nash (2012) arguments about the potential of web documentary format.

The choice of genre developed gradually as we decided on our target group and communicated with our client. We saw from the beginning the benefits of using gamification as suggested by scholars such as Bishop (2014) and Zainuddin et al. (2020). The museum staff indicated that a popular culture/fiction approach could help make the history more entertaining.

The main technical challenge we faced during our project was the uncertainty connected to the HIDDEN system. Despite direct contact with HIDDEN, limitations of the system remained vague. This made it difficult to plan ahead and visualise a common end solution. We also ended up in a stressful fast self learning process for UNITY and VUFORIA. It limited us to put in practice some obvious design issues such as shorter dialogue texts, and better interface. Another practical challenge was lack of contact with potential users. As we did not receive documents from educators or information from the marketing department at the Museum in time, it was challenging to inform our design process and we were discouraged to conduct further user research at that stage.

### **6. Evaluation**

Despite all challenges and technical difficulties, the concept we developed has big potential to be improved and developed further with a better time frame.

The main improvement area for our project is development of a better UI, dialogue system to present the information in smaller bits and making the interactivity as a more non-linear format.

Because interactivity is not necessarily an interchangeable term form for participation. For Gaudenzi (2013), participation is a specific mode of interaction, within many others. She describes it as a mode of user-action that comes from participatory culture or the term as “the action of taking part in something” (Gaudenzi, 2013). We can work better on the participation aspect more precisely in the improvement. Another field to pay more attention for the future is the measurement of the user experience. For an emerging field of study, there is a very limited number of such studies that can provide us empirical data regarding how the audience actually consume and interact with web documentaries (Julie et al., 2020). We plan to address this issue by conducting a user experience survey in summer with a sample young group in cooperation with the museum.

Our concept is a prototype, the first chapter of a larger experience, and our intention was always to develop it further after the course. We are continuing dialogue with the clients to test the prototype and expand the story into more segments/routes.

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