Design Document

AR Use Case - Humboldt Forum Foyer

Anna Pan & Susanne Niemann

GENERAL OVERVIEW

What is our project about:

Our project intends to offer the audience (Humboldt Forum visitors) a personalized, user-specific experience that uses movement through the Foyer as a way of connecting personal interests to current exhibitions and thus a better orientation and understanding of what they can discover at the Humboldt Forum. Thus, the problem we are addressing is how to orientate visitors in a new museum space so that they can see what really interests them.

We want to provide an easily-understood yet interesting solution by using 3D renderings of key objects of each exhibition at the Humboldt Forum that are tethered to a specific in relation to the user and their respective physical location and that the visitor can discover through experiencing the objects around their place in the Foyer. Once the user opens the camera and the objects fan around the user (in the general direction of the corresponding entrance visitors can take to view the object in real), they can choose to move closer to the object and click on it to access more information about it. To further generate interest and engagement we propose two methods for extending the app experience: allowing visitors to ‘favourite’ objects that then are saved in a dock at the bottom of the app screen, and allowing users to leave reviews of exhibitions by creating an additional “Leave a Review” button on the landing page so that visitors can view past reviews on exhibitions to better make their decision of which exhibition to discover.

Why is this project relevant to its medium:

Our solution is relevant as an AR project because it is a more physical, specific, and user-specific extension of the existing media in the Foyer (the Infoturm (information tower), the Media Stations, and BCD orientation and guidance systems). We want to create an experience that would revolve around the visitor’s personal orientation within the space of the Humboldt Forum foyer and to gather a physical idea of the exhibition objects and relevant information to have a preview of the exhibition. Actually seeing 3D representations of highlighted objects from the various exhibitions would supplement the information that is most likely already being shown on the Foyer screens and give the visitor an incentive to engage more closely with the different exhibition items.

This is important as a cultural experience because the user is experiencing their body within space and there is a degree of freedom to choose from their individual interests that allows them to not be too overwhelmed by information.

What learning experience do we want to suggest in your audience:

We think that users would be incentivized to use our particular project because it includes three key interaction elements: playing, learning, and reflecting to allow the visitor to have a preview of which exhibitions they want to discover and to have a better orientation of the museum.

The user “plays” by using the camera to find the objects within the foyer and tapping them to find out more about where to find the object, a short description of the object, and viewing other visitor reviews about the exhibition, which is the “learning” aspect. The visitor has the option to “reflect” upon leaving the museum through the foyer, or even earlier, by clicking on the “Leave a Review” button that will be in the landing page of the app. This review spurts user interaction and challenges users to reflect upon their experiences, whilst informing future visitors about aspects of the various exhibitions.

We will achieve this goal through interaction of the object, once the user approaches it and clicks on it, and the content that is both shown and user-generated, as the visitor can see a 360 view of the object, the exhibition and object information pops up once clicked, and they can leave a review for future users to see once having clicked the relevant object.

Some unusual aspects:

What is unique about our project and something that we are also experimenting with for the first time is using GPS based AR to create a personal experience of the visitors body within the space of the Humboldt Forum foyer.

DESIGN OVERVIEW

The context of our project:

In our project we are representing the building around the audience, namely the Humboldt Forum Foyer that will be the starting point for all of the visitors coming to the museum space, and thus, an important activation point for encouraging visitors to use AR to enhance their experience at the HF.

Thus, the facts that we are incorporating into our projects are the physical dimensions of space and location of both the Foyer and the information of where the Exhibitions and highlighted objects can be found. As a point of initial orientation we aim to make the AR experience a short preview of what visitors can discover, so as to not make it too time or attention-consuming. Therefore, the 3D renderings of the objects that will represent these facts will be decided

together with the Humboldt Forum representatives (Alan etc.) to figure out which object can represent each of exhibitions taking place and garner the visitors interest to discover that exhibition. Furthermore, information about the object and the exhibition it can be found in, as well as, visitor reviews will represent both the facts (where the objects can be found - to help orient visitors) and varying perspectives (reviews - to create an objective user experience).

The core interactions of our project:

The core interactions of our project include scanning (a QR code for activation on the Media Stations or BCD systems in the Foyer), scanning the Foyer space around them, walking closer/further from objects surrounding them, clicking on the objects to learn more or to favourite them, and swiping to read all of the information about the object, the exhibition, and the past visitor reviews. Furthermore, upon returning to the landing page (most probably on the way out in the Foyer) the visitor could click “Leave a Review,” click one of the exhibition objects displayed in 3D rendering in the Foyer, and type in a review of their experience.

By interacting with the 3D museum exhibition items, information text, and visitor reviews, the place of the device in the learning experience is put in the users hands and doesn’t change over time but changes based on location. Thus, the device remains central to the learning experience of the visitor in becoming orientated with the Humboldt Forum Foyer. Upon entering an exhibition, the device is usually not used unless the user wants to access information about other objects or wants to locate another exhibition of interest.

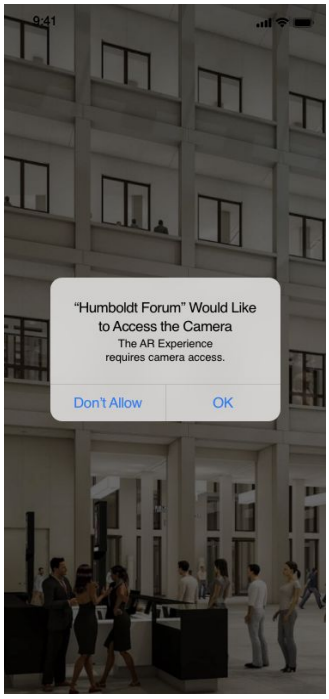
The navigation flow of our project:

The visitor is informed about the existence of an app by the museum personnel and on posters providing a QR code redirecting to the app store. After downloading the *Augmented Humboldt Forum* app on their personal phone, they open the application, are guided through a short introduction of its content and functionality, and then get to choose between accessing a general overview of exhibition contents or a personalised AR experience that also provides access to exhibition contents through 3D objects but location-dependent on the visitors position in the Foyer. If choosing this augmented exploration, the app requests camera access. If given, the visitor is prompted to turn around themself, the camera scans the space, 3D objects come into sight. When clicking an object, a field with information is overlaid over the object and the visitor can scroll down to read more or return to the 3D object and camera scan and tab another object to access its description. From the camera scan, the visitor can return to the home screen and from there access the general overview of contents which contains the description and further information for all 3D objects in list form without requiring camera access. The visitor can exit the application whenever they favor.

The interface of our project:

When starting the app, the landing screen shows the Humboldt Forum logo.

The first screen welcomes the user, offers an introduction into functionality and content of the app. Two buttons allow the user to access different parts of the application: one being an AR experience, the other being a general overview of the exhibition contents.



When starting the AR experience, a pop up message requests camera access.

A simple pop up window prompts the user to turn their own body with the phone 360°. A better graphic can be used to indicate this relationship between the user's body, their phone, and the space better.

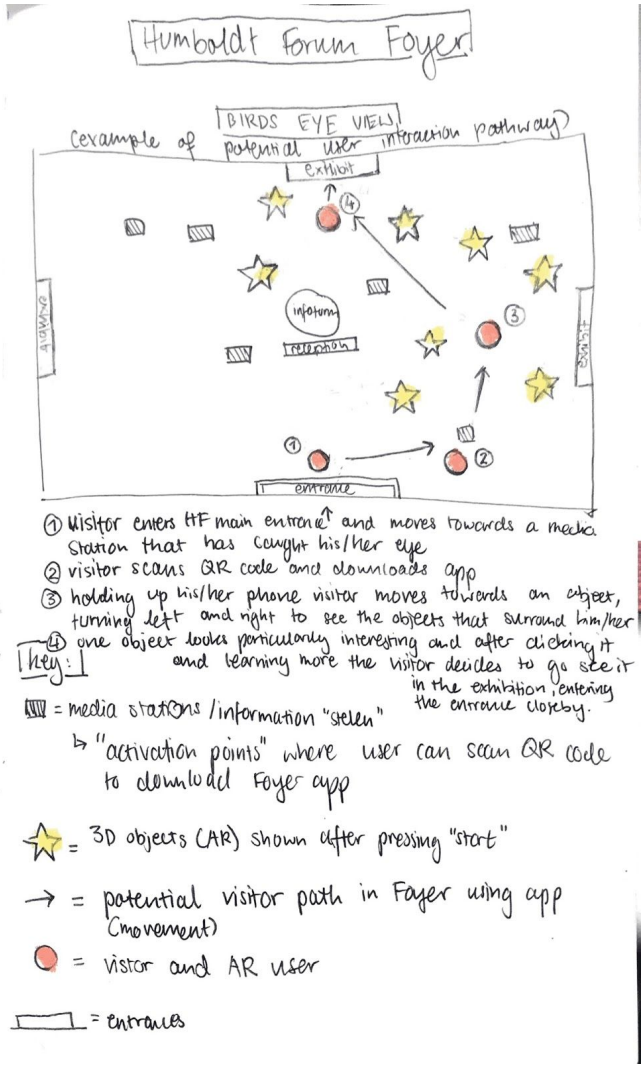
The user scans the space with the camera of their phone.

A 3D object comes into sight. (Here only a low res image is used but will be replaced with an actual 3D object in further mockups).

- Actual app: Landing page (Humboldt Forum) > Home: explanation > camera scan of environment > 3D objects > click for more information > information about location of object/exhibition title+ content
- Landing/intro page: “Welcome to Humboldt Forum foyer. Take a look around and tap what interests you to find out which exhibition you want to go to! + “Start”

button + “Leave a Review”=> user knows about body moment and touch gestures

- Object click: exhibition location + information + other user reviews (upon scrolling down) + icon/button to return to landing page + add to favourites button (star)
- Moving of camera > different 3D objects come into view based on location/orientation in space => user knows they can make different obj. Appear through movement
- onTouch > more info appear > scroll down > leave review (review more hidden in hierarchy to not distract)



The media assets of our project:

For this project, we need 3D renderings of key exhibition items for the AR experience, as well as photos for the general overview of exhibition contents. For the landing screen of the application, we need a photo of the Humboldt Forum Foyer. We currently have low resolution photos of key

items and are possibly able to receive high resolution photos from Alan Prohm. We will not include sound in this application as it is not needed nor appropriate in the Foyer space.

EXPERIENCE OVERVIEW

The overall experience of the audience member:

An audience member can voluntarily join the AR experience upon entering the Humboldt Forum Foyer when downloading and starting the Augmented Humboldt Forum App. They are informed about the existence of the app either by museum personnel or by posters in the space that contain a QR code redirecting to the app store. When starting the app for the first time, the visitor is informed about the functionality and content of the app. They can then choose to access an overview of the HF exhibition contents or start an AR scan of their surroundings. Typically, they would choose the AR experience because they want to know more about it. When ‘entering’ the experience, the visitor holds up their phone and turns around themself. 3D objects which serve as highlights from different exhibitions augment the space and are overlaid on the visitors view of the Foyer. These objects are arranged relative to the visitor’s position in the Foyer and the exhibition they are part of. If the visitor gains interest in an object and wants to visit the respective exhibition, they already face in the right direction. Before making that decision, the visitor can access a description of the object, its location, and related information about it through clicking the 3D model. This way, they get a first impression of what the different exhibitions in the Humboldt Forum are about. They are also able to ‘favorite’ objects and thus curate their own list of saved objects in addition to an overview of all exhibition contents which they can also access via the app. Once the visitor has decided which exhibition to visit first, they will usually put away their phone and embark on their visit without using the app again until they want to access information about other (highlight) objects or seek new inspiration to visit another exhibition. Adding different objects to the personal ‘favorites’ list when first orienting in the Foyer will make it easier for the visitor to decide which exhibitions to visit during their stay.

A specific moment:

A young woman enters the Humboldt Forum. This is her first time here and she's in awe of the large foyer and the vast space, filled with the central Infoturm (information tower) and the various media stations. She’s a little bit overwhelmed not knowing where to start nor what to expect in the different exhibitions starting on different sides from the foyer. Taking a look around she notices that there is a QR code in the corner of each of the screens, and having observed other visitors she takes out her phone and scans the QR code. Prompted by the landing page (which informs about the functionality of the app and offers a choice between a “Start” button and a “Review” button) she decides to press “Start” and holds her phone out in front of her turning around herself seeing a variety of interesting looking objects in close proximity to exhibition entrances. Spotting the unique assemblage of the “Kraftfigur” from the Ethnological Museum exhibition she starts to head in the direction. As she gets closer the object becomes

larger and she can move with her phone to see a 360 degree view of the object. She clicks the “Kraftfigur” and white text appears on top of a dark grey but translucent background. The text explains which Exhibition the object is a part of (i.e. the Ethnological Museum), the location of the exhibition (which entrance to take from the foyer) and the object (floor/room), a brief description of the object, and once she scrolls further she can see past visitor reviews on the exhibition as well as a star button that allows her to ‘favourite’ the object. Upon ‘favourite’-ing the object, it moves to the permanent ‘dock’ at the bottom of the screen so she can click on it no matter where she is in the foyer. The reviews of the exhibition sounded very exciting and upon clicking another object (the “Hand eines Menschenaffens”) that was next to the “Kraftfigur” she decided to visit both the Humboldt Labor and the Ethnological Museum! She closes the app and puts her phone into her bag. … On her way home from the exhibition, on the S-Bahn, she remembers that she still has the Humboldt Forum App on her phone and decides to leave a review for the Humboldt Labor which she found really interesting. As the object “Hand eines Menschenaffens” is in her ‘favorites’ list, she can easily find it when reopening the app

---

CONCLUSION

Our project is worth funding because we think that it is a fun way to interact with the space of the Humboldt Forum foyer and to orient oneself within the new exhibition space. Attracting the visitor to highlighted 3D objects from exhibitions and including supplementary information and visitor reviews helps visitor orientation, decision making of which exhibition to discover, identification with the Humboldt Forum space through the embodiment of location, and user-engagement with the possibility to actively contribute in the form of leaving feedback.

The act of experiencing is one that is central to our project, as we highlight the presence of the visitor’s body within the exhibition (through moving around to get closer to objects), emphasize orientation (as objects are arranged in space according to exhibition and user position), and encourage participation (through leaving and viewing user reviews).

Thus, we think that our project is worth presenting because the user-location-centered experience is simple to use for visitors of all ages, which is important because the Foyer is the starting ground for the Humboldt Forum’s diverse target audience. Additionally, it allows for a brief preview of the possible exhibitions they can enter and discover that is also user engaged, through visitor feedback that could be left on their way out through the Foyer.