VIKINGS VOYAGE

ZHERAN XU

PS4296875

DESIGN

Game form

Vikings voyage is a locative exploration game designed based on Nottingham Lakeside Arts journey, as players explores the museum and gain rewards by completing series mini-game in various location

How it unfolds for a player? [Appendix A, Sketch]

- Player plays game on mobile device during the journey of exploring museum.
- Player moves to various area to trigger mini-games as missions by locative media.
- Mini-games are different and related to the current location exhibition.
- Player plays mini-game with instruction and improves the museum experience. For example, mini-game could vividly convey content by digital media which helps players understand better of the exhibit.
- Player gets reward by finishing mini-game

Design process

I did field investigation first. Three times of going to the Lakeside Arts help me establish a basic understand of the initial design. During the visiting, I was observing visitor activities and thinking about how to improve their experience from different aspect. Then I started to do initial experience design. After that I integrated initial design into a complete game.

Throughout the design process, I go through each IDEATION CARDS, which helps me think more deeply about the several aspects, from concept design to area control. I also pick out some main cards as annotated in sketch. Particularly, the structure of the game is inspired by the CARD MINI-GAME, as several small games make up Vikings voyage. And the PHONE ZOMBIE risk is the main challenge to the game design since using massive mobile interaction.

- From the perspective of museum reality, Lakesides Arts are located on the lakeshore, which consists of two main buildings AT the middle of two buildings there is a vast green area. The scenery is pleasant while the architecture has own unique features. Various kinds exhibition themes are held in different buildings as people walk around the area to appreciate the architecture. Currently (When I am doing my coursework), exhibits in the museum vividly display the Vikings history and culture in various formats. Additionally, interactive objects inspire me lot. They offer a more immersive viewing experience than literal.

- From the perspective of visitor activities, In the museum, people view exhibits and read literal introduction in orders. Visitors have a wide age range. Children prefer interactive objects, and they also do hands-on workshops in the company of their parents. These kinds of games help them better understand the content. People outside are more interested in scenery, as some people are taking pictures.

- From the perspective of potential possible experience improvements,

During the observation, I found that some exhibits introduction is not intuitive enough as massive reading requirements. Some exhibits need the participation of visitors, but there is no suitable method to interact. The entire layout can be enhanced in the aspect of the content architecture.

Initial ideas

- The goal of design is to improve museum experience with less digital content.
- The experience should return to the exhibition itself, and the design should focus on enhancement in terms of guidance, introduction and interaction.
- The game should be avoided from interfering with the museum's visit
- Transfer into game [1]
    - Unpacking people's different motivation and activities
    - Gamify motivation and activity
    - Apply types triggers and application in game design

PROTOTYPE

Game Procedure

Players are assumed to have interest in game and own a mobile device to connect to the web application.

- Players use mobile device (usually smart phone) to logon museum game Web application.
- Application (like wander anywhere) updates players current location by GPS and display with several related mission locations as treasure place on the map. The interface could be design to game theme.
- Players interact with the map and get to know the mission introduction and instruction. By move to the mission location, players can access to mini-game by kinds of triggers (like wander anywhere, QR code, Artcodes, .etc.)
- Players interact with application and real objects when playing different mini-game. After players completing the task, they gain rewards and move to next mission location.
- The journey continues by engaging with following mini-games until finishing.

As for journey design, different entrance may lead to kinds of explore route. Therefore, start points could be the location of the first access the game, while there are no certain end points since players may have different routes. But the when players leave the area or complete a certain number of mini-game, and evident message should pops up as the end points. The order of the game, as mentioned in prototype, should be in accordance with visiting journey, by displaying the nearby mini-game.

The design of mini-game design is concerning more about OoI and viewpoints. There could be various types of small game to fit the museum exhibition, pick up players' attention and guide them to the OoI, which could be exhibits. Here are three kinds of mini-games I designed to form the game.

- Graphic Treasure [Appendix A, Photostory, mini-games]
    - Description

      This kind of mini-game is designed to guide players through the themed exhibitions as well as deliver a brief overview. Sometimes it's very abstract to understand meaning behind object of interest-pattern. And through other form of media is more intuitive. Moreover, scanning pattern is interesting.
    - Area control & Viewpoint setting

      The access of area could be wide as players need to find it and scan. As solution mentioned, some graphic trigger could be put in areas. And all of them should pick up players attention and let them find the pattern, which also lead them to the next period exhibition. As there may be many players scanning at same time, pattern need to be put in a spacious and clear place. (e.g. on the wall)

- Photograph
    - Description

      This kind of mini-game is designed to deliver a excellent outdoor experience. Obviously, the architecture and scenery are fantastic. Visitor enjoying wandering and shooting. Therefore, transferring this activity into game and providing social media access would enhance players experience.
    - Area control & viewpoint setting

      In this mini-game, the location is the only trigger interaction based on reality. Other contents are digital forms. The activity could cover the whole outdoor area and viewpoint is also various. (under absolutely safe condition)
- Puzzle
    - Description

      This kind of mini-game is designed to enhance indoor real object interactive experience. For example, there is a Viking's board game on the exhibition while it's difficult to learn and play. (you need an opponent or a tutor) Therefore, proper forms of enhancement like puzzles in animation help player quickly get started with real game. Another point is that it's a guidance to interests by location media. People can easily find the object of interest as it displays on the map.
    - Area control & viewpoint setting

      Accessible location media could be wider, which enable players know the content earlier. The prompt of objects location should be accurate to play a guiding role.

Rewards are obtained after the player completes the mini game and are displayed numerically in the application's interactive interface. The form of the reward can be varied, for example, the player can redeem a virtual or realistic memorabilia by value.

TEST

After finishing the prototype, I tested it by several methods. And I also do some modification according feedback.

Test method

- Concept test

  I introduce the game by explaining prototype to potential users, who are most of my friends and classmate, and ask their general idea about game design. After having a basic concept of game, I discuss more about different aspects - trigger setting / area control / exhibits related / seam through the journey.

- Application test

  My friends and I do some testing on different mobile platform, IOS and Android system, manipulating wander anywhere while moving and scan modified pattern on Artcodes in different angles and light condition.

- Field test

  I went to the museum with my friends who also have done concept test, visited the exhibition again and talked about the detail question about route, viewpoints, potential feeling and mood of game. In particular, we thought more about how players would behave in prototype game scenarios and focus more on the safety issue.

From the feedback, I have learned that user's ideas may be not same as they have various requirements about the game. As some believe more mini-games are needed while other think they would spend more time on the real object. Users don't care how the technology works but they are sensitive about seam during the journey. Sometimes, simple method works better. The seam need to be designed as smooth as possible. Trigger and instruction should be plain enough for user to understand what they should do or behave. The cost may not an issue in this coursework but still worth thinking.

Further development

- Enhancement of the network condition, as wifi coverage is limited.
- Further locative media and APIs development. Improve issue of the delays.
- Design more routes and orders, avoiding players going backwards or missing trigger location. Put More notification sign and manual trigger at entrance and mission location.
- Update mini-game in accordance with the museum theme. The dominant role of museum experience is players rather than game. Game should be design as a role of assistance with more physical world interaction. Players can choose the number of mini-game.
- Design an appropriate interface to avoid long time interaction and complicated information involved.

ANALYSIS OF HCI CHALLENGES

HCI challenge covered in lecture firstly is how to focus attention and direct resources. And challenge to minimise distraction and delays. At the early period of design, it is believed that players' attention mainly focus on the reality. As the beginning of the experience is players entering the museum area, the shifting of attention naturally goes with journey. Therefore, a physical or digital trigger is design to catch the players attention and allow them access to the locative media or mini-game. Then players get close to the resources which is OoI, with the instruction like map mark. Afterwards, attention would be back to the exhibits or the landscape. Complicated games should be avoid as they may distract the player's attention (except for the case of auxiliary introductory design). With regards of distraction, the first is the impact of delay, which may common happen due to various factors (GPS information, insensitive trigger, unclear pattern, etc..) Thus, some further improvement could be done in future which is covered in testing. Additionally, long time digital engagement, as players may keep looking at the screen, would have a negative influence of museum experience. Complicated games should be avoid as they may distract the player's attention, except for the case of auxiliary introductory design.

Secondly, designing for seams and how to form of flow [2] are another key challenge, which are embodied in designing good location triggers. In locative media game, the relationship between proper difficulty game and content should be matched by appropriate tasks or experience types. The design for the seams is mainly reflected in the trigger location, the trigger method, and the game content. The location area of trigger should be same as that of the journal. The trigger method can be intuitively understood and applied by the player. The subsequent content cannot conflict with the player's current activity. Here I was inspired the area setting in Yorkshire Sculpture Park. The game form and content and the museum experience have a better undertaking line. In the tests, we found that this was the most difficult to complete because of the diversity and preference of players' needs. A certain degree of personalization may solve this challenge.

Lab session provides practical options for designing. The authoring tool, Wander Anywhere, provides framework support for the game structure. Artcodes is also a cool technology as a trigger because scanning esthetic graphic is fantastic. And ideation cards provide a wider range of ideas for design and detailed reference.

At last, the HCI challenge is that the experience design for physical world with the consideration of enabling technology. The game design is initially inspired by Location Feeding Yoshii [3], which is interacting with the real word in a large area while. And more physical elements like buildings is added. With the respect of the safety issue, the game should ensure both the of players and bystanders safety and not affecting other visitors.

As for indoor activities, game is conducted is in a spacious place and divert players by separated trigger location or instruction in order to avoid congestion.

As for outdoor activities, the design of location area is strictly controled based on traffic condition from the field study. During the game, warning message would display to remind players of safety.

Above these, the most difficult HCI challenge to address is to form flow. In game design, players need to constantly switch between the real world (museum

exploration, viewing of the exhibited content) and locative media. I believe that good design is as little design as possible. Therefore, game should maintain the relevance of the content of the game form with the of the museum and the consistency of the experience.

Reference

1. J. Hamari, J. Koivisto, H. Sarsa, "Does gamification work?-a literature review of empirical studies on gamification", *System Sciences (HICSS) 2014 47th Hawaii International Conference on*, pp. 3025-3034, 2014.
2. Csikszentmihalyi M. (2014) Toward a Psychology of Optimal Experience. In: Flow and the Foundations of Positive Psychology. Springer, Dordrecht
3. Bell, M. and Chalmers, M. and Barkhuus, L. and Hall, M. and Sherwood, S. and Tennent, P. and Brown, B. and Rowland, D. and Benford, S. and Capra, M. and Hampshire, A. (2006) Interweaving mobile games with everyday life. In, Conference on Human Factors in Computing Systems, 22-27 April 2006, pages pp. 417-426, Montreal, Canada.

Appendix A Sketch & Photostory

Attachment

Appendix B Prototype of Authoring tools

Wander Anywhere: Category = Vikings voyage

Artcodes: http://aestheticodes.appspot.com/experience/info/c883cd11-152f-4ece-a1ab-4d2acf130cd5