

Featherman

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**MSc in Multimedia and Entertainment Technology
Master's Project**

**SCHOOL OF DESIGN
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Title:	Featheman
Team member(s):	Giovanni Lion Rhys Jones Ren Yi Xie Linghui Wei-Ju Lo (Rachel)
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Abstract:	Featheman game project is designed to raise people's awareness to wetland conservation and endangered migratory birds through an entertainment experience.
Aim:	Raise awareness through a fun and engaging way.
Achievements:	Featheman game prototype has complete for testing. Through playing the game, player learned how birds migrate and struggling with limited natural resources. We have reached out to non-profit organizations for cross-promote opportunities.
Target consumers and benefits:	Target consumers: 14-35 year olds who play mobile video games. There are also benefits for wildlife charities who can partner with us in order to raise awareness of their cause in relation to wetland conservation and the other themes and causes present within the game.

DECLARATION OF ORIGINALITY

Except where reference is made in the text of this report, we declare that this report contains no material published elsewhere or extracted in whole or in part from any works or assignments presented by me or any other parties for another subject. In addition, it has not been submitted for the award of any other degree or diploma in any other tertiary institution. No other person's work has been used without due acknowledgement in the main text of the Report.

We fully understand that any discrepancy from the above statements will constitute a case of plagiarism and be subject to the associated disciplinary actions.

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2. Introduction

2.1 Vision

2.1.1 Guiding Principle

As international students in Hong Kong, we are a group of people who care about local environmental issues. Each of the team members comes from a different background, but we all aim to build a game together that will raise awareness of social issues. At the first, we wanted to make a game about saving the forest. After doing some research and contacting WWF Hong Kong, we realized that even though saving forest has always been a critical issue, there are already many projects about this issue have been done. Meanwhile, during the research of Hong Kong environment issues, we noticed that the Mai Po wetland has been an important habitat for migratory birds.

Half of the wetland in the world had disappeared since 1900. [1] For migratory birds, wetlands are essential for their long trip. Non-stop urban development and human activities have been the crucial threat to wetlands. How can we arise awareness on this issue to everyone? We decided to use entertainment technology to achieve our goal.

2.1.2 Statement of Purpose

Featherman game project is designed to arise people's awareness to social issues through an entertainment experience. Therefore, we used a game as a medium to deliver knowledge and also keep people's interest at the same time. The reason we picked mobile game as our medium is because the sustainability of our current lifestyle is dependent on the global awareness of the imbalances that we are introducing in the ecosystems of our planet. Our goal is to empower NGOs with a new way to connect with the young generation using digital media entertainment in order to raise environmental awareness from the bottom up.

We want to raise environmental protection issues in a way that is fun and engaging; thus reaching a much larger audience than tradition methods of advertising these causes. Specifically we want to start by spreading awareness of the issue of wetlands and the migratory birds that visit them. The land maintenance is an issue that not a lot of people are aware of in regards to the wetlands that has a large effect on the local environment.

We plan to make a fun and engaging digital game based around the theme of wetland land management to spread awareness. We aim to use new social media to further advertise our game and spread the environmental message in our game as well. We will also aim to connect with the local wetland park and experts to make sure we are spreading the right environmental message. We will be visiting the local wetlands site for research purposes and to make a more authentic game environment.

2.2 Aim

2.2.1 Measures of success

For Featherman project, our goal is to have the maximum impact on arising awareness to public. To achieve this goal, we have come up the following targets.

Based on our goal, our measures of success are identified as follows:

1. Design a compelling gameplay that attracts and retains players, while subtly exposing them to the real world problems of migratory birds. Our target is to reach 100,000 players by end of 2015, in order to do so, we need to achieve following goals:
 - Game design document finalized
 - Produce playable demo of the game
 - Publish game on Play Store and App store
2. Design and maintain in-game store items to drive monthly revenues up to HK\$20,000 per month by end of 2015, in order to do so, we need to achieve following goals:
 - Introduce in-game purchasable items
 - Establish a payment method
 - Establish a revenue share with WWF/Mai Po
 - Optimize item offering to maximize sales through in game analytics
3. Grow our fan base up to 50,000 people by end of 2015 and engage with them regularly on social media
 - Weekly updates on social media.
 - Launch crowd funding campaign
 - Launch social media advertising campaign

2.2.2 Project Assumptions and Risks

2.2.2.1 Project Assumptions

- We know that we already have organizations that care about the proposed topic area of our project.
- We know we have to have a completed project (Beta version) by August 29th 2015.
- We know we have a list of on hand tangible and intangible assets that will not shrink.
- 5 people in our team that can each handle different areas of the project.
- We assume we will keep the same supervisors for the course of the project.
- We assume that people will like to play our game.
- We assume that people will like to pay for in-game purchases in order to play the game.
- We assume that our marketing will be effective at advertising our game.
- We assume that our game will be effective at delivering social awareness on wetland conservation and migratory birds.

2.2.2.2 Risks

The risks associated with our business rely on the reception to the game. If people do not enjoy playing our game then it may cause less of them to continue playing it or spend money on it. In order to reduce this risk, we aim to carry out extensive user testing during each development cycle so we can see what our customers like and don't like and respond accordingly. Furthermore, our data analytics tools means we can monitor the customers likes and dislikes in order to make changes to the game after it has launched.

3. Background

3.1 Context

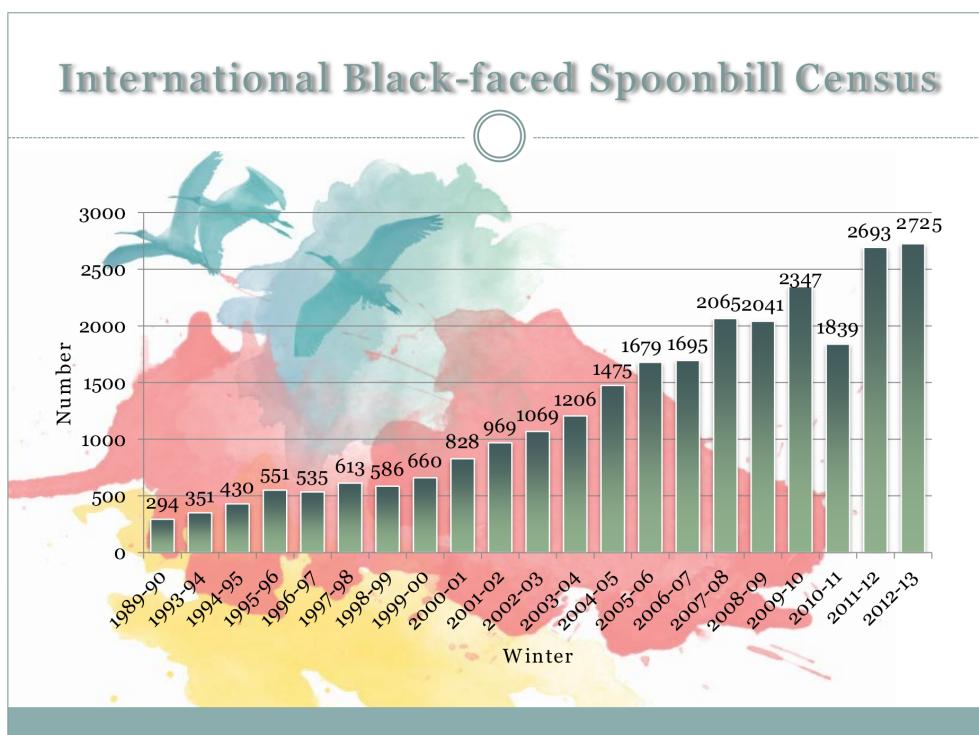
3.1.1 Wetland reduction issue and migratory birds.

"Wetlands are vital for human survival. They are among the world's most productive environments; cradles of biological diversity that provide the water and productivity upon which countless species of plants and animals depend for survival." – Ramsar. [1] However, Human activities are the cause that wetlands are disappearing in the past years. Half of wetlands in the world had disappeared since 1900.[2] Meanwhile, 20% of the world's 10,000 freshwater species are in the situation of becoming extinct, or threatened in the past decades. [3]

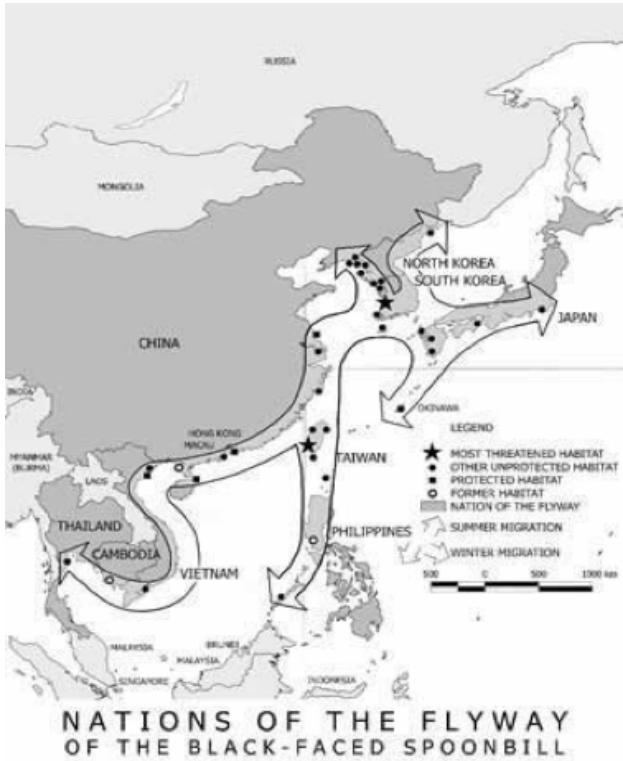
In Hong Kong, fast population growths accompanied by increased economic activity have brought numerous threats to wetland ecology. Inside the Mai Po wetland park, visitors are limited to only some areas to avoid disturbing wetland ecology. Around the wetland park, there are urban developments, industrial pollutions that are making the wetland smaller and smaller.

During our research in Mai Po wetland Park, we noticed there are many migratory birds in this habitat. According to WWF Hong Kong, there are approximately 400 species of birds that can be found at Mai-Po and peak average of 54,000 birds per year, There are about 20,000-30,000 birds pass through every year during spring migration. [4]

One of the most well known endangered species is the Black-faced spoonbill. Up to date, there are less than 3200 of them in the world. Every year, about 25% of all black-faced spoonbills come to Mai Po wetland. [5]



(Graphic: International Black-faced Spoonbill Census, 2014 [6])



(Graphic: Nation of The flyway of black-faced spoonbill. [7])

3.1.2 Social issues and games

Within the last five years there has been a growing awareness that the exploding popularity of games can be used to raise awareness for social issues. Below are two examples of games have had a real positive impact.

3.1.2.1 Tree Story

Tree story is a mobile game that plants real trees. This game cooperates with U.S. Forest Service, Project Learning Tree, ACTrees to raise awareness by planting real trees after players complete certain missions in the game.



3.1.2.2 Tree Planet3



Tree Planet company launched in 2010, the goal is to be the company that plants the most trees in the world. The mobile game “tree planet3” has planted 500,000 trees in over 13 countries. One of the side projects is starforest.org, it let players to build forests together through the game for

Protecting the environment and our planetary ecosystem is everyone's responsibility. Our team wanted to take the opportunity to make a positive, concrete impact to help the environment, and upon learning about the plight of Black-faced spoonbill our direction became clear. With only 3200 of these birds left in the world, the possibility that they could become extinct is quite high. While we don't expect our game to single handily save them, we hope that it can be part of a larger growing body of action that will reverse these birds' plight and bring them back from the brink.

thier favorite stars, and the forest will be named after the star. The project brought pop culture fans to participate in planting tree activity.

3.1.2.3 Mobiliz3

Mobiliz3 Beta is a phone based currency platform that users can turn their game credits into real donation for selected organizations. This platform is developed by ZigZag Zoom, and is aimed to release in 2015. All the credits that players collect inside the game can turn into Mobiliz credits. Players can donate those credits as real money to the organization that they want to donate.

3.1.2.4 Games for change

Games for change organization was founded in 2004. It has been helping spread social impact through digital games to the world. The organization works with various nonprofits, book publishers, corporates, education institutions, game companies and etc. And help games to find the right stakeholders. On the games for change website, we also found a lot of games that focus on environment issues across different platforms.

3.2 Motivation

We used the above two games as loose models for Featherman, as they provided concrete templates to draw inspiration from. They also provided solid evidence that social issue awareness can be linked to games, and that Featherman, if done correctly, could successfully raise awareness to the issue of shrinking wetlands and the shrinking space for migratory birds.

In many ways Featherman is an educational tool, and there is a growing body of literature that shows gamifying an educational process can increase the motivation to learn in a learner. [8]

According to our market research, games for change are making real impact in the world. Featherman is an entertainment package through which users get drawn into the plight of migratory birds. Through enjoyment and attachment to the game, and the bird, we hope to create an emotional bond between the players and the issue and increase the chance that players will be impacted by the experience.

4. Approach/Process

The featherman project design process covers design, pre-production, production, publishing, and distribution & culture. Starting with “Design” section, we did research on local environmental issues, competitors and mobile game market. After we decided to produce featherman game, we moved on to Pre-production phase. During Pre-production and production phase, we focus more on game development with regularly play testing.



4.1 Graphic Design

Our design process is rooted in user testing and feedback. Adopting scrum as a paradigm for project management, we worked our way to our latest design through a trial and error approach. The main reason behind this type of approach is indeed our relatively little experience in developing videogames, let alone developing videogames able to generate impact and awareness in players.

The challenge for us is to design a mobile game that is able to convey a message of sustainability and environmental awareness. Our initial hypothesis was that we would be able to convey this message through story and specifically through a series of events that the player would encounter while exploring the world map. In the first prototype we designed, these events would pop up once the player entered islands. During the first week of display at the annual show we found out that these events were mostly ignored, in favor of map exploration. In our second version we limited the amount of events and focused more on food collection, which received positive feedback from our testers.

Back to the drawing board, we decided to focus on what the users seemed to enjoy the most (the flying around interaction) and to use game mechanics to convey the environmental message. In our third version of the game the events and the story was missing entirely, we simply focused on the flying interactions; the flock size increasing gave the sense of progression. Through additional user testing we found out that the touch interaction had been using for the first three version had fundamental limitations and problems due to the fact that the hand of the player may be covering the screen most of the time.

Although it may sound out of the scope of “videogames for impact” to spend so much time and effort on the way your finger controls the flock in our game, the fact is, without creating an initial connection with the player by providing something pleasurable and fun, no one would be willing to play this game, regardless of whether it is meaningful or not.

With this understanding in mind, we looked into introducing a joystick overlay at the bottom of the screen. Together with the joystick, we also introduced physics to simulate flight more realistically. In this model, instead of simply moving the bird to a point on the screen touched by the player, the bird would receive an impulse in the direction of the joystick input. This model felt much more natural to our testers and received great feedback.

There was one problem with the on screen joystick. The user interface was taking up too much space and we felt it was a pity that the screen was cluttered with this big circle. We consider hiding it, but we then thought of an even simpler way around this issue: simply remove the visual joystick and consider any touch as a new joystick center. This way no matter where the user touches on the screen, it is the difference from the initial touching point that determines the impulse given to the flock.

User testing confirmed this to be the preferred mechanism of control. We found that users would start to move around and control the flock more intuitively than with any other methods. It took us five iterations to get to this conclusion, letting go of the work each previous solution was a challenging exercise for our self-confidence. During our first iteration we felt that the interaction was totally fine as is, perhaps because we got used to it, but through user testing we were able to open our eyes on the flaws of our design.

4.1.1 Design Process-FFFORREST (First Game Concept)

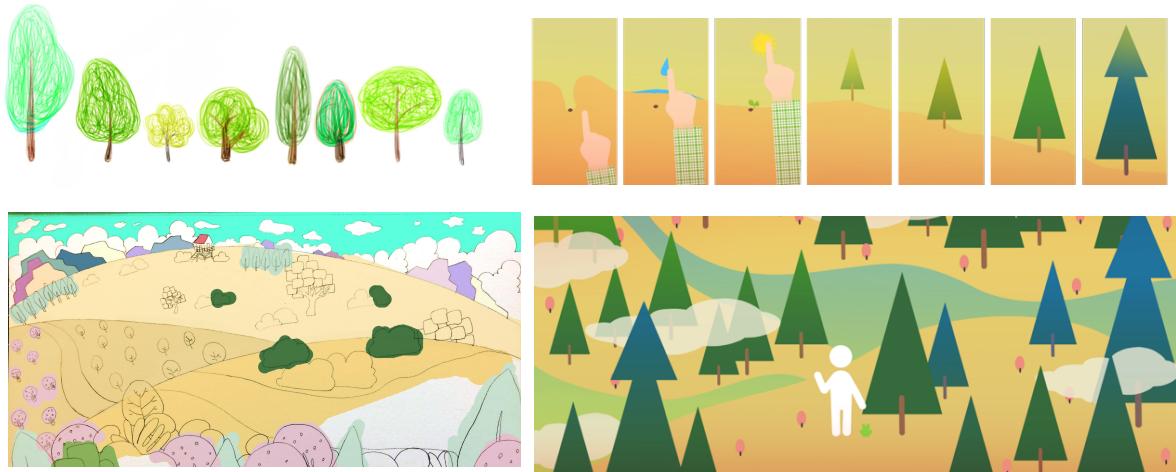


FFForest is the first game idea we worked on. From game concept development to paper prototype, the design experience gave us a solid practice on our Featherman project.

4.1.1.1 Concept art - Style

Trees and animals are the main elements that players can interact with. In the game, we will use different colors for trees and animals to show the progress of the present level. Meanwhile the background color will change with the levels. With the color changing of trees,

animal and background, we expect to avoid visual fatigue. On the other hand, we will use some consistent colors to make the graphic looks consistent along the way.



4.1.1.2 Paper Prototype

The paper prototype of FFForest was presented in the poster fair at the beginning of 2015. We invited many people to play test the game, and based on the feedback, we learned that the game mechanics and balancing could be very simple and also could be very complicated to increase the playability.



4.1.2 Research Process-FEATHERMAN (Second Game Concept)

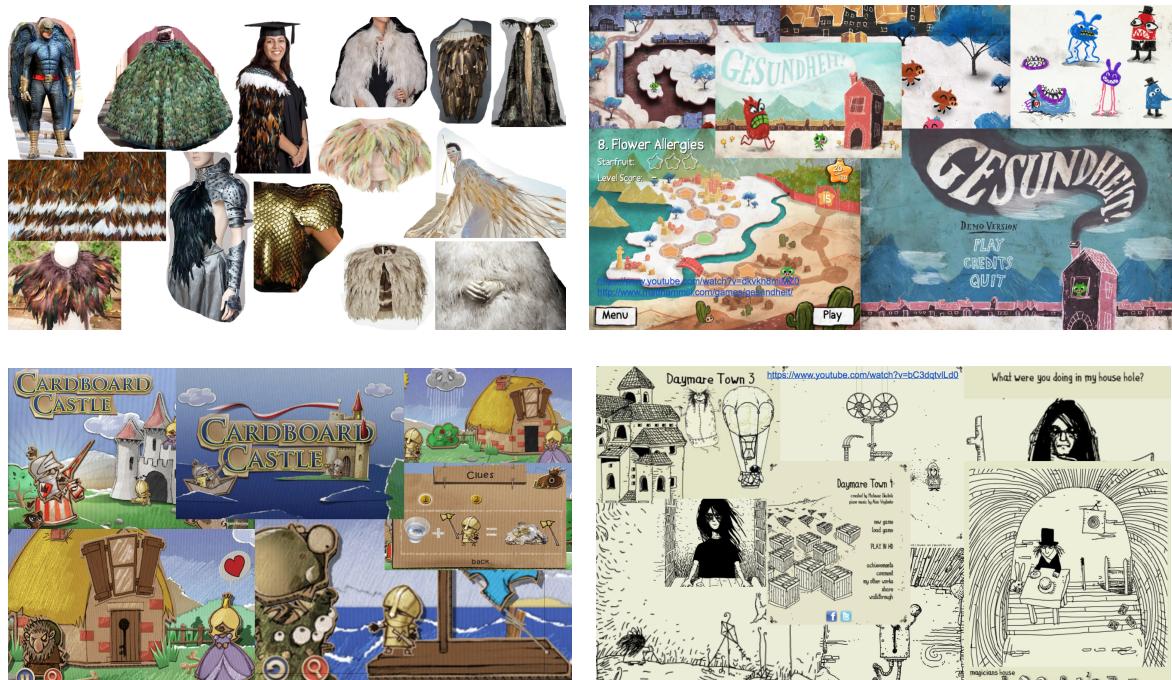
We have done a lot of data collection, types of wetland birds, and graphic style of different game types analysis. We hope that our final presentation of the visual part is able to convey our idea, and make many people like it by visually exciting the players. This would be reduce the visual fatigue when the play our game.



In the early stage of the development, we also tried to create a pixel art style, as well as configuration style, until constant we looking for a lighting and pleasant style. We did some surveys to test which style and color the player like and initially set the style and work it. We chose the design style based on the most popular result from the user survey.

4.1.2.1 Concept development/Mood board

We analyzed other games and visual styles to get more inspirations.



*all the images from the internet , see appendix 2

4.1.2.2 Concept art - Style

We have painted many graphics to help us to find a style, which is special. We chose some to do further testing of the style with. Many attempts were made to find some interesting parts in the process for example; an ugly style can leave a lasting impression on a player that will stick with them for a long time, however this is not the best way to initially attract a player to the game. So we try to find a best way to present the graphic, make it memorable and refined, with light color to bring a happy atmosphere.

4.1.2.3 Design draft



4.1.3 Design Process-FEATHERMAN

4.1.3.1 Graphic style Design

Five type of graphic style we created, each with different characters.





4.1.3.2 Graphic style test

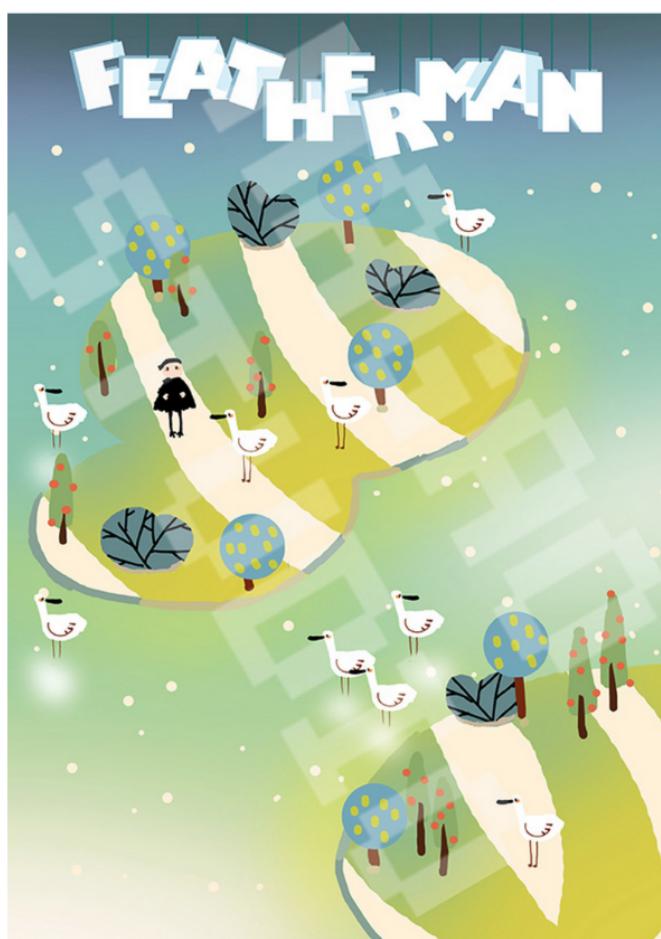
We conducted a graphics style survey. Sent the survey link to our friends online and asked people in the library and cafe. The feedback showed that over half users prefered the style that had a simple shape and the light color.

Graphic Style Survey

Pick your favorite graphic style from below:

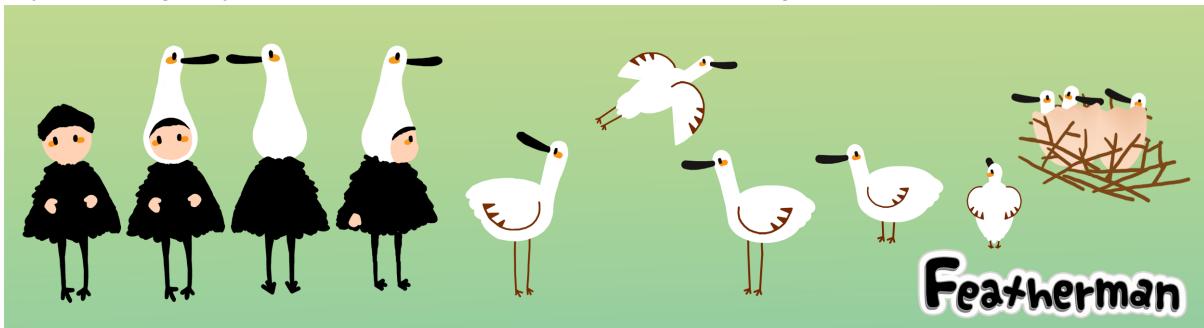
(from Graphic style 1 to graphic style 5)

Graphic



4.1.3.3 Final Character Design

We try to find a best way to present Featherman and birds. Also keep the unique graphic style to bring player a fresh experience compare with other games.



4.1.3.4 Evolution of Island Change

According to the graphic style change, we also updated island design and subject design on islands. The idea of changing is trying to show the cities, wetlands, forest, and mountains mover clearly in the game.



Version1



Version2



Version3

4.1.3.5 Evolution of Map design

We improved our map design based on coding, graphic style and user testing feedback. During the user testing, we noticed that white lines on the sea was actually distracting players from identifying islands. Therefore, we have to remove the water wave to show other elements more clearly.



4.1.3.6 Tutorial Design

Based on the play testing feedback, we changed the static tutorial into a interactive process.



Static tutorial



Interactive Tutorial

4.1.4 Freelancer contact process

4.1.4.1 Find a freelancer

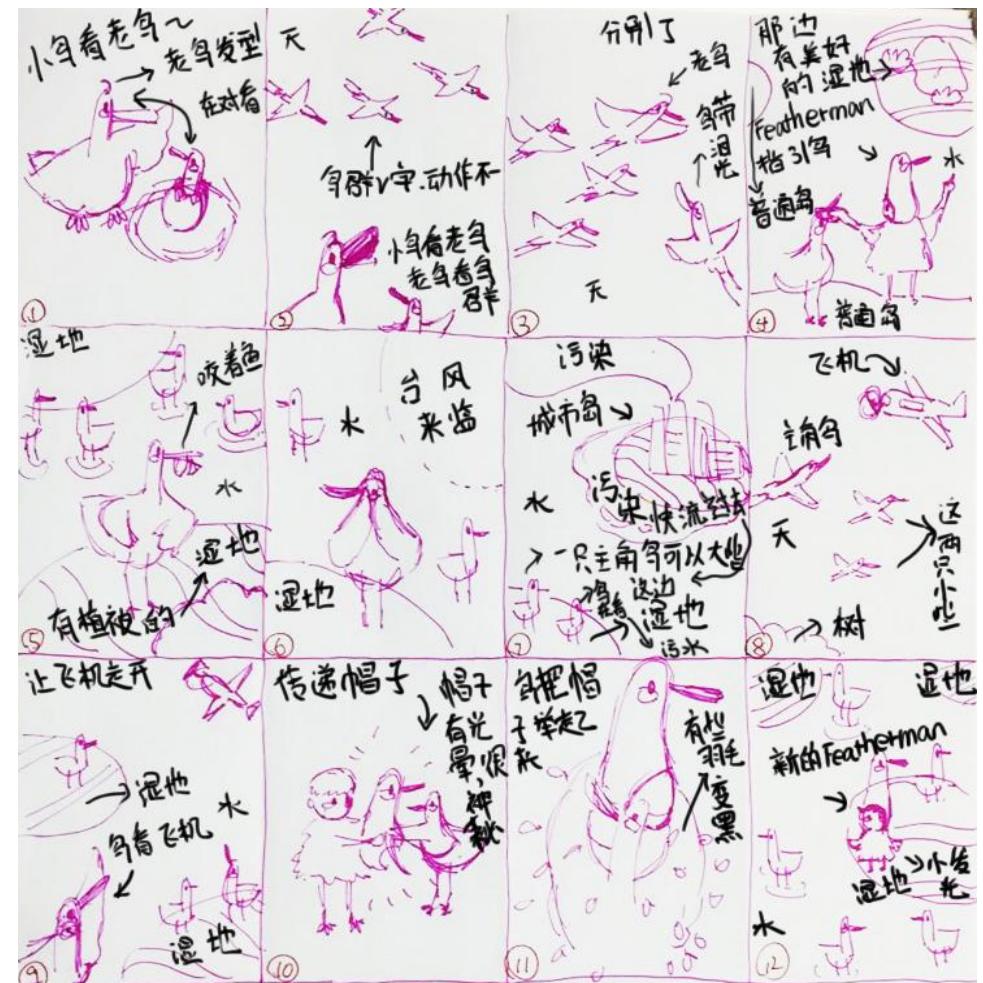
During the design process we tried to find some new graphic designer to help us to present the complete background story. We tried to collaborate with some young designer to do some comic style graphic images for the story. We posted an outsourcing post on a professional designers' website named TUYAWANGGUO, which has lots of freelancers, and we soon had many responses. Later on, they sent their profile and portfolio to us. We selected two freelancers who have similar styles, they then provided us with a test draft image.

4.1.4.2 Cooperate with freelancer

Finally, we selected the freelancer who published a book with watercolor style. She graduated from one of the top colleges in Mainland China. With skills in animation illustration, she has a unique understanding and interpretation which we appreciate.

After having a lot of communication about game with the freelancer, she played our game demo and had some inspiration. She was very enthusiastic to cooperate with us to illustrate the cut scenes of the game

4.1.4.3 Outsourcing storyboard & original design



4.1.4.4 Freelancers' test draft

Two freelancers tried to create some new graphic, which can invoke news feelings to the player and show them the background story in a visual way. In the end we chose the second one image.



test draft

4.1.4.5 The final outcome of the outsourcing

During the outsourcing process, we communicate the freelancer when every 3 pictures were finished. We gave feedback on pictures right away and leave some time for the freelancer to improve the graphic based on our needs.

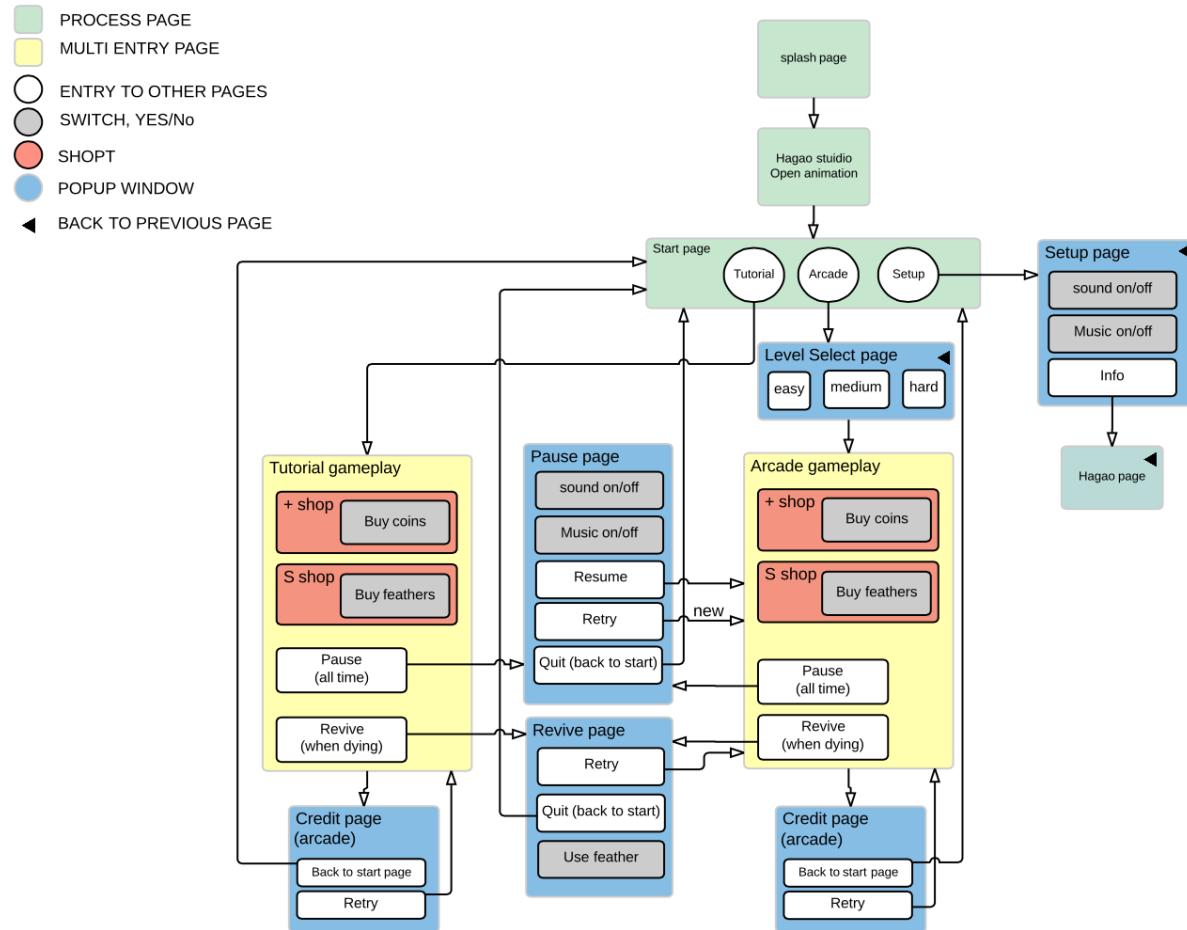


4.2 User Experience Design

4.2.1 Page Transition Flow Chart

Here is the final flowchart of “Featherman Game”. After several rounds’ of modification, we finally came out this final version. We try to make each page jump smoothly and reasonably. The frame with green color represents the process page, which will guide player to play and select the game category. The yellow one represents the game play page and the blue one represents pop-up page, which is as the transition of different screen page.

FLOW



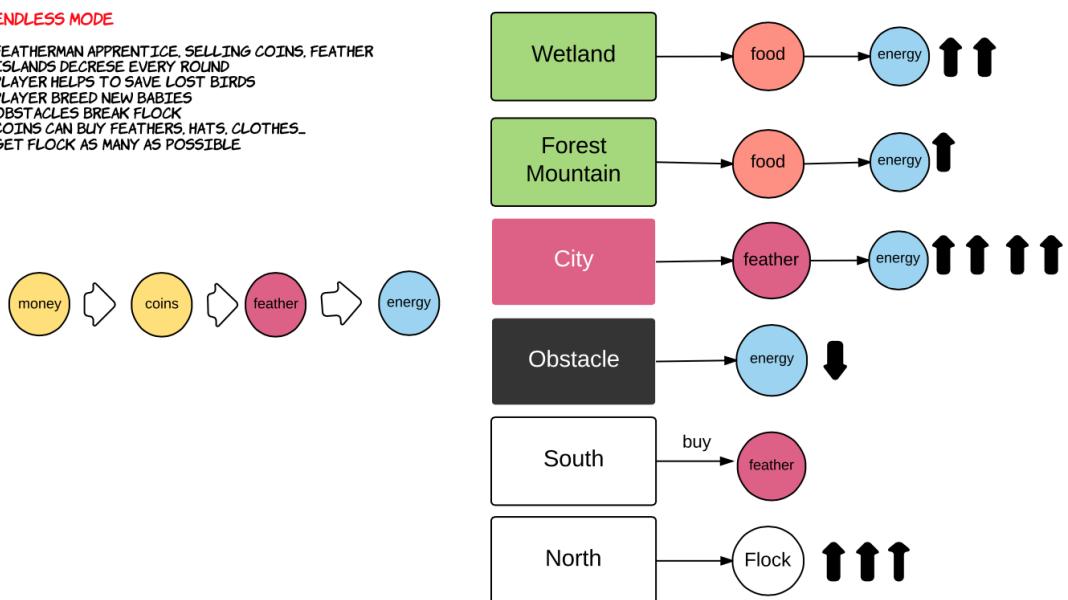
4.2.2 Game-play Flow Chart

Game Play Detail shows the main feature and functions of each island, area and items.

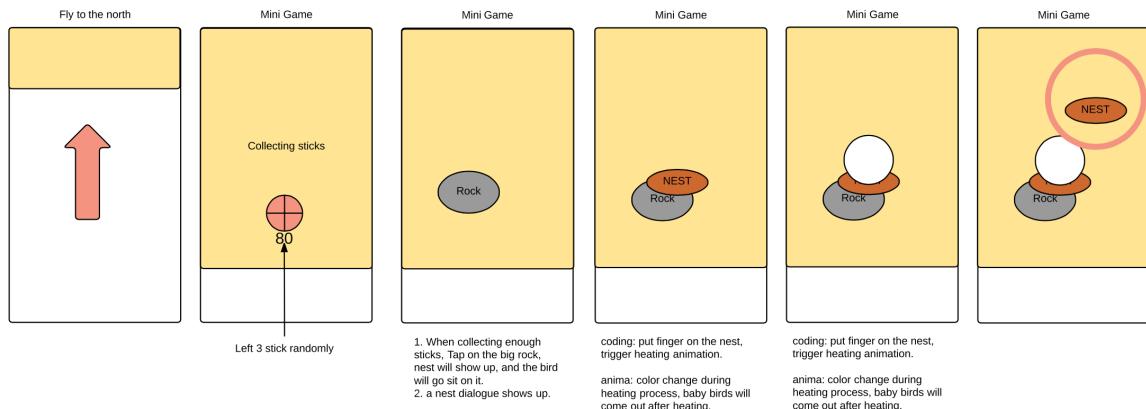
GAME PLAY DETAIL

• ENDLESS MODE

- FEATHERMAN APPRENTICE, SELLING COINS, FEATHER
- ISLANDS DECREASE EVERY ROUND
- PLAYER HELPS TO SAVE LOST BIRDS
- PLAYER BREED NEW BABIES
- OBSTACLES BREAK FLOCK
- COINS CAN BUY FEATHERS, HATS, CLOTHES...
- GET FLOCK AS MANY AS POSSIBLE



North land (north land)



4.2.3 Tutorial Flow Chart

Based on the user-test feedback, we at first use image to be as our tutorial, but 85% (85/100) players will jump over directly. As a result, we create a step by step in-game tutorial, which can let players play and learn the game at the same time.

Tutorial Animation 01

"Tap or slide to fly"- Parent birds fly ahead of you before this message pops up, the screen is greyed out apart from a highlighted space on a nearby island.



Note on animation:
Welcome to tutorial, said featherman,
(player tap on the screen to trigger next scene.)

No UI

Note on graphic:
game play pauses and background goes grey.
One island light up! show up from the background.

A finger moves up and down on the screen to show how to fly.

No UI

Note on animation:
After player tap or slide to fly to the island, jump to next scene.

No UI

Tutorial Animation 02

"Flying will drain your energy"- As the energy decreases the game pauses and greys out the screen, the energy UI is highlighted to show the decrease in stamina.



Note on animation:
When player interact with screen and make the bird fly, pause it and show the text box.

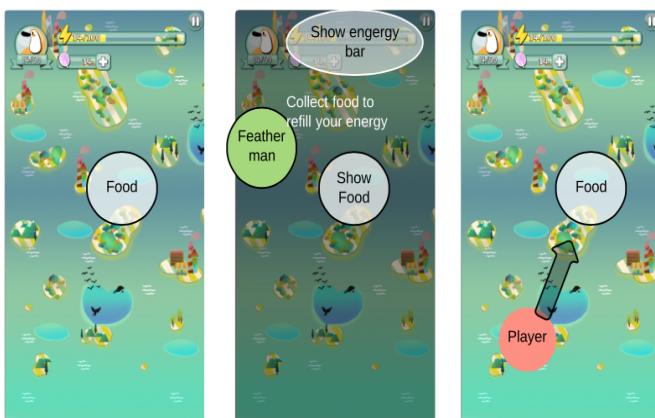
No UI

Note on animation:
Pause the gameplay and show text box. After player touch the screen, jump to next scene.

UI shows up. an arrow pointed at energy bar.

Tutorial Animation 03

"Collect food to refill your energy"- As the player arrives on the next island the game pauses and greys out the screen, collectable food sources are highlighted"



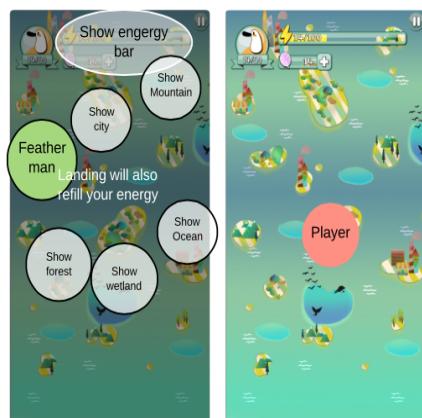
Note on animation:
Food shows up on map.

Note on animation:
Pause game play and show text. Grey goes away after player tap on the food.

Note on animation:
After player collect the food, jump to next scene.

Tutorial Animation 04

"Landing will also refill your energy"- After the player collects a food item the game pauses, screen greys out. Rechargeable land energy sources are highlighted.



Note on animation:
Pause game play and show text. Grey goes away after player tap on the food.

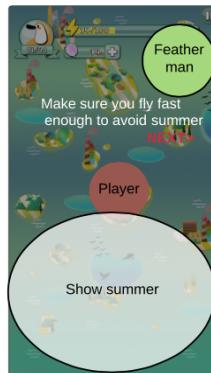
Note on animation:
after player lands, jump to next scene.

Tutorial Animation 05

"Make sure you fly fast enough to avoid summer"- Summer slowly approaches from the bottom of the screen, game pauses screen greys summer is highlighted. Summer moves very very slowly in tutorial mode so it's easy to outrun.

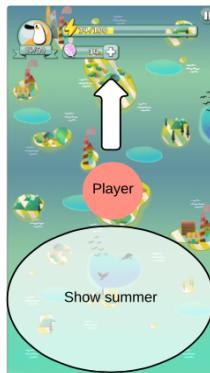


Note on animation:
player landed on an island from last scene.



Note on animation:
Pause game play and show text
show summer.

Grey goes away after player
click on next.



Note on animation:
summer moves up, a **blinking arrow** shows on the screen
points up.
summer goes slow, when player
fly to the north land, jump to
next scene.

Tutorial Animation 06

"Collect 3 sticks and land on rocks to make a nest"- Featherman arrives at Northern breeding grounds as player arrives the game pauses, screen greys out. Sticks are highlighted.



Note on animation:
player goes to north because
summer is chasing. when north
land shows, game play paused
and show text.

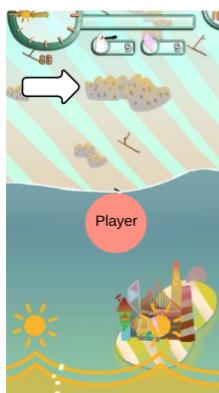


Note on animation:
player goes to north because
summer is chasing. when north
land shows, game play paused
and show text.

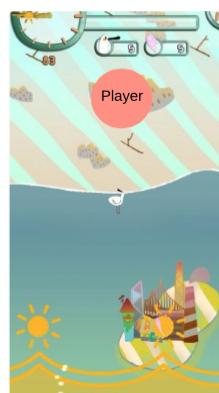
Grey goes away after player
collect 3 stickers.

Tutorial Animation 07

"Tap and hold the next to hatch the eggs and add to your flock size"- When the player has landed on a rock with 3 sticks the game pauses screen greys out, a tap and hold icon appears above the egg hatching icon.



Note on animation:
After player collects 3 sticks, a
blinking arrow pointing at the
big rock.



Note on animation:
screen goes grey, a nest and
text show on the map.

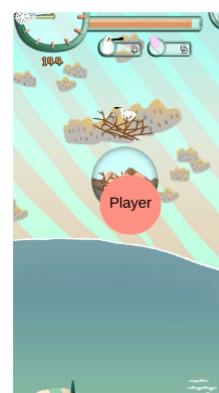


Note on animation:
screen goes grey, a nest and
text show on the map.

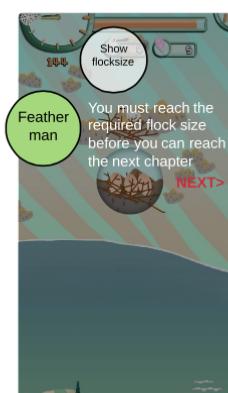
Grey goes away after hatching
the eggs.

Tutorial Animation 08

"You must reach the required flock size before you can reach the next chapter"- The game pauses screen greys out, the flock size UI element is highlighted.



Note on animation:
After player hatched the birds,
the game play paused and
screen goes grey.



Note on animation:
show flock size area and show
text.

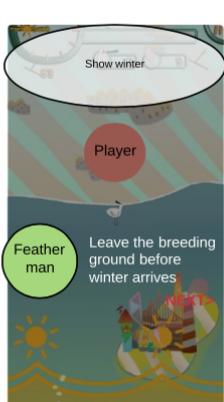
Grey goes away after player
click on NEXT.

Tutorial Animation 09

"Leave the breeding ground before winter arrives"-
Winter approaches from the north, game pauses
green greys and winter is highlighted. Same as
summer, winter in tutorial mode moves very slowly so
it is easy to outrun.



Note on animation:
Winter coming from north.



Note on animation:

Grey goes away after player
click on next.

Tutorial Animation 10

"Avoid obstacles, they can bounce you around and reduce
your flock size"- a non lethal storm obstacle enters the
screen, game pauses and screen greys. The storm is
highlighted.



Note on animation:
When player fly to middle of the
map, show one obstacle



Note on animation:
Pause the game play and show
text, show obstacle.

Tutorial Animation 11

"Feathers are used to buy things"- on the way back
from breeding a feather appears the game pauses
screen greys out, the feather is highlighted.



Note on animation:
After the obstacle, a feather
show up on the map.



Note on animation:
Grey goes away after player
click on next.

Tutorial Animation 12

"Collect these 5"- a trail of 5 feathers is highlighted and the
player must collect them.



Note on animation:
After player collects 5 feathers,
gray goes away. feather number
increases.

Tutorial Animation 13

"Use Feathers to buy a bigger wetland to increase the maximum flock size"- when the player reaches the south again the game pauses screen greys out, and the shop UI pops up. The player buys the first base upgrade for 5 feathers (as collected in the tutorial) and the tutorial ends.



Note on animation:
When player reaches the south,
screen greys out and the shop
pop up.

Note on animation:
a blinking arrow pointing at
upgrade option.

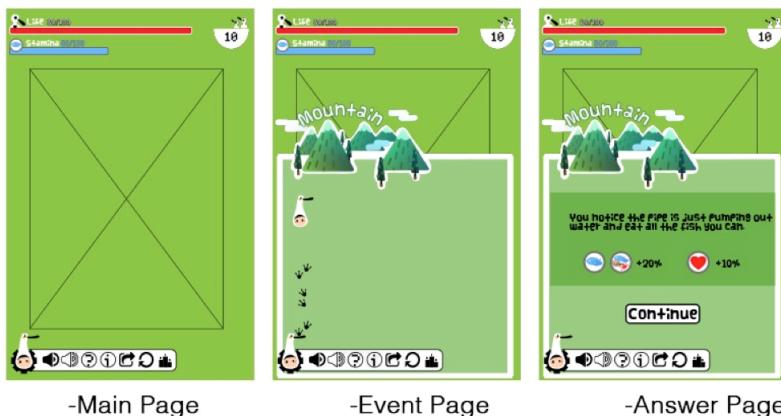
Grey goes away after player
click on upgrade.

Note on animation:
show the upgrade animation,
and end-chapter page.

4.3 User Interface Design

4.3.1 Version1.0 Design

At first, we aimed to create a mobile game with a complete story. Based on players' selection, there will be an open ending for each player. Since our game is aimed at players with 14-35 years old, we plan to create a relatively cute and warm style for players.



4.3.2 Version1.0 User Testing

For this version, we did a big scope test (100 testers). We found out that there are about 80% of players that rarely saw the entire story while they would always choose one selection randomly. We did some interview to some players. Some of them felt bored about reading and others would only want to see the result directly.

Apart from the mechanic setting, there are 75% percent players who did not notice the feathers' function. It was not clear enough what will happen or what will be changed when

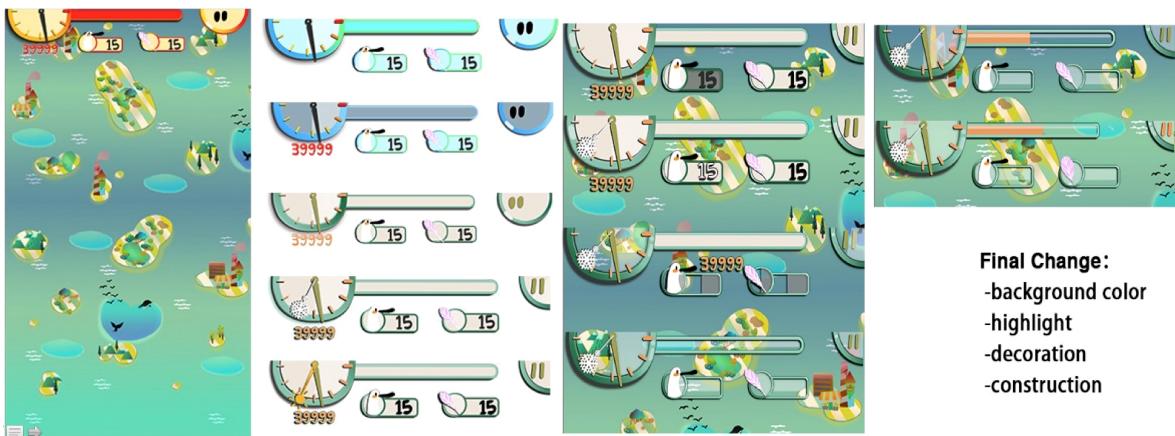
spoonbill collects the feather. Moreover, few people noticed that the sun is representing summer and they need run away.

4.3.3 Version2.0 Design

Based on the test result, we decided to remove the story element, and will mainly focus on flying and hatching elements. In this version, we add three more items, spoonbill's speed, winter's speed, and summer's speed which is for better value reading and game-play experience.



Before designing this version, we group had a long meeting about discussing the element setting. We realized that in the first version, most of players did not notice the existence of energy bar and stamina bar. It did not show its real function clearly. As a result, we intend to provide players a clear value changing. This is the basic construction about the UI design.



4.3.4 Version2.1 Modification

After a small scope test, we finally decide the shape and construction of value bars. Firstly, we did a lot color testing. Based on our game's graphic design, we choose the most similar green and orange as its matching color. And apart from this, we did further design for high quality and better presentation.



For the setting page, we created three kinds of styles. For the first two we used shallow brown to show its font and icon, and the last one we used pure black. Apart from the color, we did not show the explanation but just used icon to present.

And we also did the user testing for these three versions. 20%(12/60) players like the first version for better understanding, and 70%(42/60) players like the second version for its design and better present. Only 10%(06/60) choose the last version. As a result, we decided to use the second version.

4.3.5 Version3.0 Design

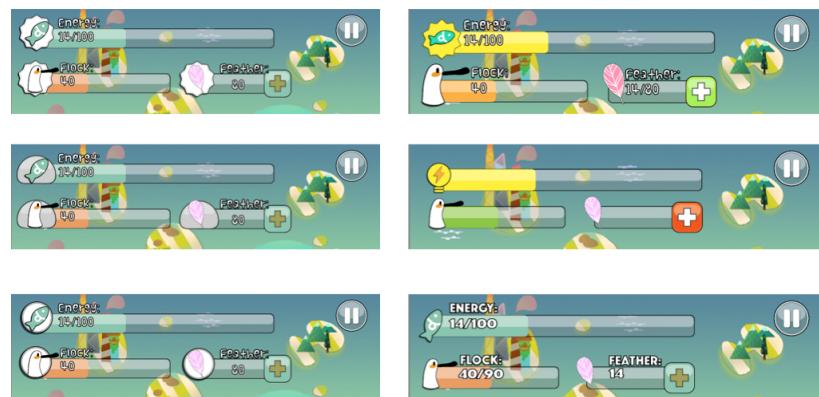
After submitting “windows competition”, we did a big scope user testing. We found out that 82%(82/100) players did not understand the meaning of the speed panel. According to their feedback, they do not have too much time to see the value changing. As a result, we decided to design the value bar again.

We did a lot of research and found out that most of strategic mobile games used the simple bar and icon to show their value changing.



Mood board

According to the above references, we formulated our initial idea as below.



After several rounds' changing, we had these versions as below and did the user test again.



We tried to let players to select the best way they feel to represent energy. And 60%(12/20) players selected the light icon. And then we did the position user testing to let them choose the best present style.



50%(10/20) players selected the one with left direction. And finally, we did the test about the font and pause button test as below.

Pause button with Round shape



Pause button with 1/4 round shape



Pause button with Round shape



Pause button with 1/4 round shape



Pause button with Round shape



Pause button with 1/4 round shape



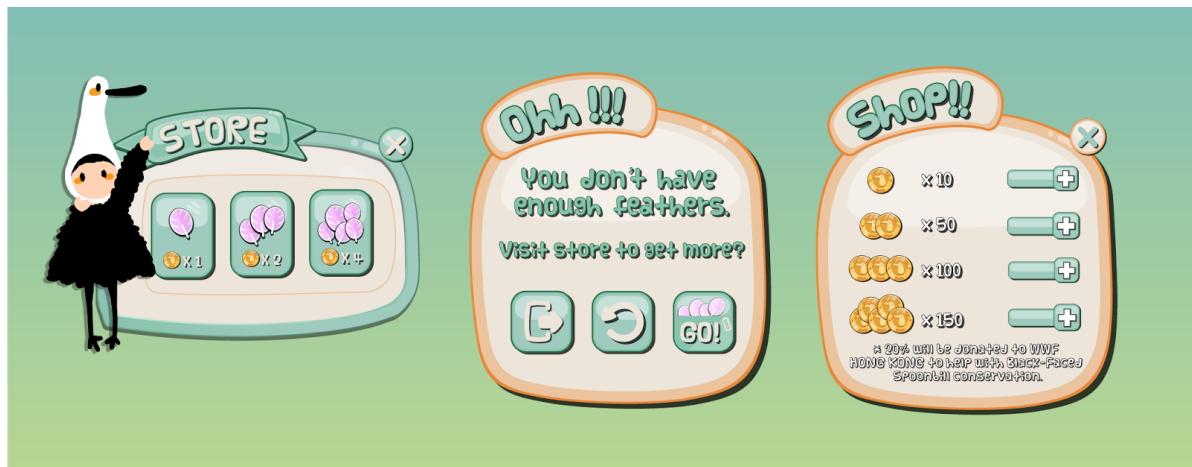
After several rounds comparison and user testing, we got the final version as below.



For the pause button, complete page, and other pop-up page, we also did plenty of research.



We found out that most games prefer to use clear, simple button and a relatively colorful icon and bar to present its selections. The designs are much more leaning towards a flat style. As a result, for providing a unique and simple style for players, we decided to use two kinds of color as the main style.



4.4.1 “Featherman Game” Logo Design

FEATHERMAN

Version1

Featherman

Version2

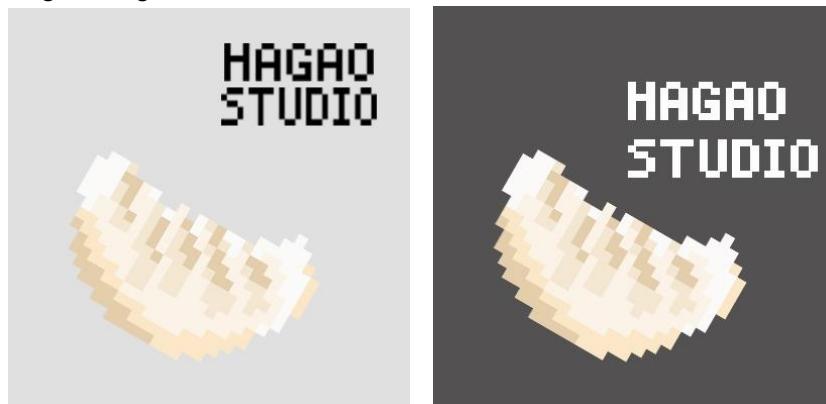
FEATHERMAN

FEATHERMAN

Version3 (animation part)

4.4.1 “HAGAO STUDIO” Brand Design

Logo design



Name card design



Website design



Version1

Version2

5. Business and Marketing Plan

5.1 Business Model

We are looking at using a freemium business model for the game Featherman. "Freemium" is a business model used in the video games industry whereby the base game is free but items may be purchased in game. These in game items can be cosmetic items which change the look of the game but do not affect the gameplay. Other in game purchases are what are known as "pay to progress" items which make the progression through the game faster or easier. Pay to progress items are often bought using an in game currency so the item a player purchases with real money in the in game currency used to buy the pay to progress items. For Featherman we have implemented an in game currency system used to purchase pay to progress items which make playing the game easier.

The target market for Featherman is teens to young adults (14-35) as they are the biggest consumers of mobile games. Due to the virtual nature of our product we can aim for a simultaneous worldwide launch on the three main app stores (Google Play, Apple App Store and Windows App Store). This will ensure best coverage of the mobile gaming market as it ensures that people can access the app on the three major mobile operating systems. Furthermore we have planned to launch a crowdfunding campaign to not only allow us to continue adding to the game beyond this Masters project, but as a measure of interest. We plan to use the crowdfunding platform Indiegogo in order to gauge interest in the project and cultivate die hard fans who seek to invest in the Featherman brand. Leading up to the announcement of the crowdfunding campaign we are also going to use a Thunderclap campaign. Thunderclap is a way to send a unified message out at the same time from hundreds of social media accounts in order to achieve the most "social reach". People and companies can pledge to support your Thunderclap and on a specified time and date an automatic message will be sent from their social media accounts. We aim to use our Thunderclap to announce the launch of our crowdfunding campaign and attract more people willing to invest.

Before launching however we have made an effort to build a fanbase and community around Featherman. This means that when it launches we will already have a group of fans ready to download and play the game. We are engaging our audience using the social networks Facebook, Twitter, Instagram and Sina Weibo. Our social networks are managed and synchronised using the social media management software Hootsuite. Using this we can push out updates and news to the different social media at the same time for ease of use, while at the same time allowing tweaks to be made to posts before they go to a certain social network.

5.2 Marketing Materials

5.2.1 Online and offline marketing

Online marketing materials included:

- Facebook
- Twitter
- Instagram
- Sina Weibo

Offline marketing materials included:

- Postcards
- Business cards
- Stickers
- Flyers
- Featherman Costume

5.2.2 Viral Video

Based on our prior research we identified that YouTube is a powerful marketing tool for video game developers. While the game is currently not in a state to be sent to Let's Players to play on their YouTube channel we had an alternative idea for a viral video that did not require the game to be done. We enlisted the help of YouTube video testimonial celebrity "Big Man Tyrone" and Youtuber who makes video testimonials for products with a friendly and happy demeanor. He is very popular in the gaming community and other indie games have had their game promoted on his channel with overwhelmingly positive response. Rhys wrote a script for Tyrone to read promoting the launch of our game sent it to him and he sent back a completed video within 2 days. Now we are waiting for our apps to be cleared to go on the app store and then Tyrone will upload the video to his 82,000 subscribers on YouTube giving us a big publicity boost. In addition to a video in English Tyrone also kindly agreed to have a go at recording a mandarin Chinese. Even though he cannot speak Chinese, Tyrone accepted the challenge to attempt the video in Mandarin Chinese so we can use his friendly presentation style to promote our video in Mainland China that has now grown to be the biggest mobile game market in the world.



5.2.3 How do they reach our target audience?

Online marketing materials are able to easily reach our intended target audience as they are not tied down to physical restrictions. With our social media we are able to offer our target audience a behind the scenes look at the development of the game creating a closer bond

with them. Allowing them to see the development process makes the connection between us and the audiences more personal as we are able to interact more easily over social media. Our offline marketing tools were mostly given to our target audience over the course of the PolyU Annual Design Show. Marketing materials were left at our booth and refilled on a daily basis so there was always enough for people to take. We also gave marketing material in exchange for people who helped us play test our game. In exchange for their feedback they were given postcards and stickers. Finally we engaged in some street level marketing, not only at crowded street intersections around Hong Kong but also at events relevant to our target audience. For example we spent an evening giving out flyers on the concourse leading to the 17th ACGHK (Anime, Comics, Games Expo 2015). The demographic of people attending this event is similar to our target audience so we felt it was worthwhile to advertise by giving them flyers for the game.

6. Discussions/Evaluations

6.1 Critical Evaluation

The measure of success for Featherman game is based around the idea of raising awareness about a cause in a fun and engaging way. We have integrated key gameplay mechanics into Featherman to ensure it is fun and engaging to play. We have implemented a sense of progression and wealth building by using the flock mechanic. We hope these addicting gameplay elements will keep people playing for a long time and therefore engaged with the game. While we have kept the gameplay addictive and engaging we have tried to organically infuse the game with knowledge related to the Black-Faced Spoonbill, migratory birds and the destruction of wetland habitats. These are not explicit lessons taught to the player but things that arise naturally in gameplay. For example during the game, human buildings replace wetland areas which are used to recharge your energy. This is a parallel to the real world in which wetland reclamation removes stop over points from migratory birds which puts them at more risk during their migratory route. From this perspective it can be said that the knowledge is imparted to the player in an organic fashion during gameplay that is then transferable to the real world. This keeps the game fun and engaging without having to break from the action to impart knowledge on the player.

6.2 Testing

We employed many rounds of user testing when creating the Featherman game. We employed an iterative design process whereby we were constantly engaging in user testing during the period of the PolyU Annual Design Show (29th May-10th July). With our booth at the design show we were able to collect user feedback in a comments book, and based on the user feedback we received we would make changes to the game in the next iteration roughly every 2 weeks. At the end of the PolyU Annual Design Show we collected all the user feedback and testing and complied it to create the next version of the game. This design process was entirely based on user feedback and testing so should be the best way to ensure a game that is user friendly and fun to play.

7. Achievements

7.1 Use games to deliver message as wetland conservation

Featherman delivers wetland conservation messages by reminding players the difference between wetland and other lands in engaging way. Using different rewards and instant feedback on sound and visual effects, players can easily bond the connection between migratory birds and wetlands.

7.2 Social media fans

We are regularly updating our social media channels, such as facebook, Twitter, Instagram, Weibo, and Youtube. In order to reach out more audience, we also use thunderclap to increase our social reach.

7.3 Crowd funding

We have launch Featherman on Indiegogo for crowd funding on Aug 14. Provided information including project background introduction, game trailer, and objectives of the game design.

7.4 Game contest

We have participated Cocos2d-x windows phone contest in June and successfully submit our beta version of the game on Windows store. Although we did not win the contest at the end, we have learned how to use cocos2d-x as a game engine to design games. Also, during the contest, we observed other participants' works and we learned how we should have better game design on our work.

8. Conclusions

8.1 Project Summary

To conclude, the project started out with the desire to create real world impact through entertainment technology. Even though the project has changed from the initial forest campaign to our current wetland campaign the desire to impart knowledge in a fun and engaging way has remained the same. Featherman is the culmination of all of our work to impart this knowledge in a way that arises organically within the gameplay as a means of knowledge delivery that is fun and not direct.

Every stage of the design process has been closely monitored through the use of user testing to ensure that we are creating a game that people want to play. A good example of this is the graphic style for the game. We created many different initial styles for people to choose from and chose the most popular one to be the final style for the game. As a result we have received overwhelmingly positive feedback on the visual style of the game.

The gameplay design is also something that has benefitted from our user testing initiative. Extensive user testing revealed gameplay mechanics that were unclear or unnecessary, furthermore they also showed people's favorite mechanics. With each iteration in the design process we were able to implement this information to create a game which people enjoyed playing for a long period of time. Once the game is released to the App stores we will be able to see if our user testing methods have resulted in a game that is truly appreciated by our target audience.

As a team we have worked well together, using the scrum method of agile development we assigned each person clear tasks and as a result were able to get things done quickly and efficiently. We also made it a point to come in to university and work together every week day from 10am until at least 6pm in order to create a more efficient working atmosphere. This resulted in us thinking more professionally about our duties as it in fact because our full time job essentially. We hope to carry on our work as Hagao Studio beyond the MScMET program and into the future as we launch Featherman and continue to create games with meaningful impact.

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