

Dust & Dirt Game Design Document

First Shooting Survival Game

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I. Introduction

i. Narrative

The story and background was Inspired by Interstellar and 2012. The world has been destroyed by land desertification. Human has move to the arks and live underground. But after many years, the arks faced the severe shortage of resources. So, the arks leaders decide to send an expedition to the land surface to collect resources. You were been chose as a member of expedition team.

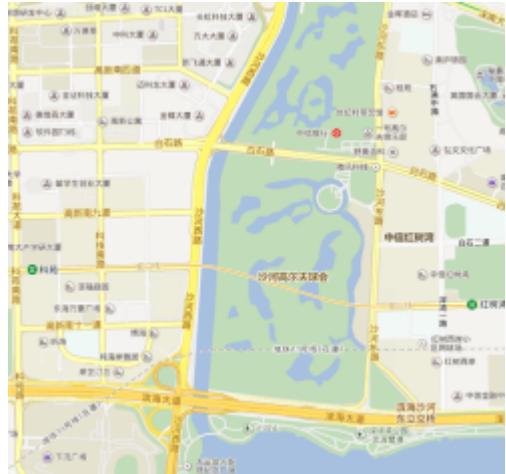
When you get to the surface, the condition is much better than before, but the earth still suffer poisoned fog and sand storm. You need to complete the mission that collect enough resources but also be careful to the dangerous situation.

A pilot names Palm who is your friend. He send you to the surface and warning you incoming dangerous. He also has the mission that collect the resources you get.

Palm is a greedy person. He is willing to send your staving family food which you collect personally, but you have to bribe him with some food. The food is the most valuable resources now, the main conflict for you is decide the food allocation. Leave them to you and your family, or be responsible for your duty, give them to the ark people.

ii. Level

The map prototype is an area of my homeland, Shenzhen.



The level separated to 3 areas: the desert, the city, the highway. The resources allocations are varied from place to place.

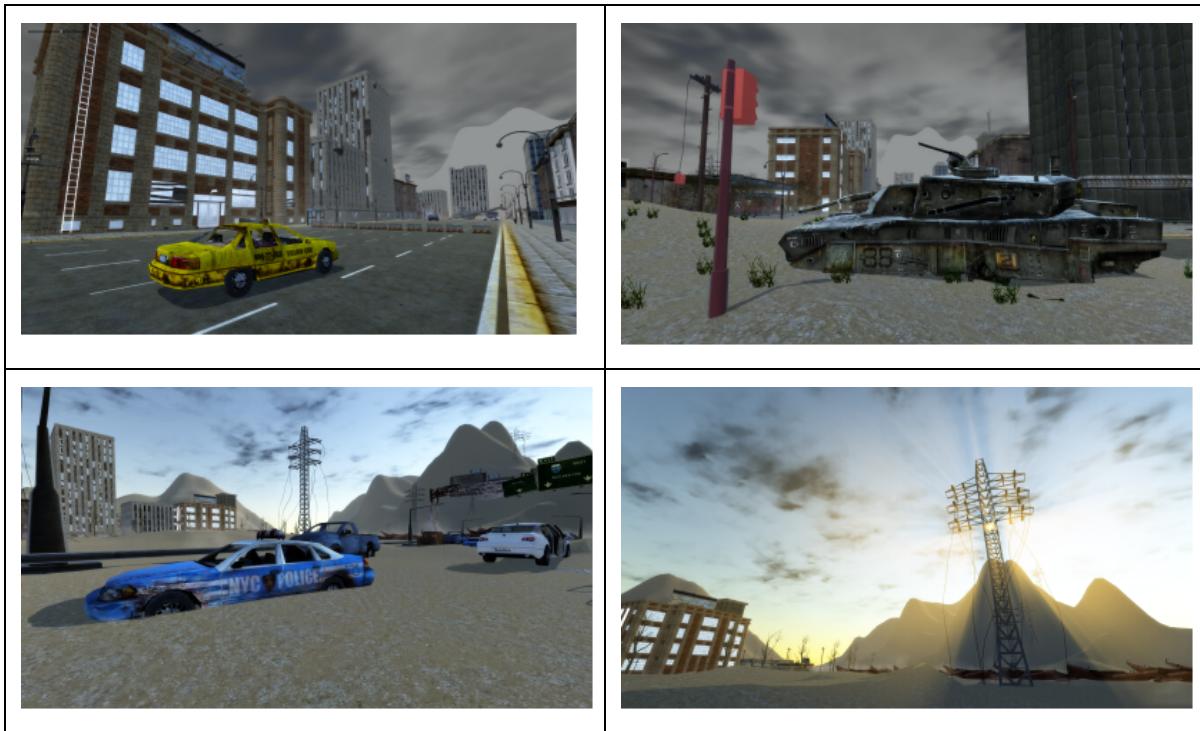
The Desert:

The desert area is the largest part of the game. In this area, players can gather lots of natural resources, such as wood, iron and so on. However, the desert is the most dangerous area since there are many wolves wandering here and most of places of the desert cannot provide a safe cover for player so players is easy to be damaged by sandstorm.



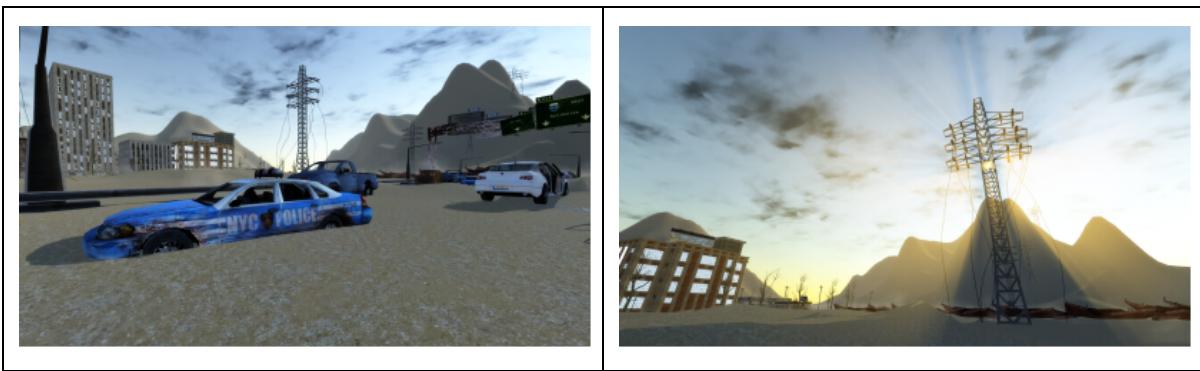
The City:

The city is much safer than the desert since the buildings can provide a cover for player. Player can gather some artificial resources in the city, such as bullets.



The Highway:

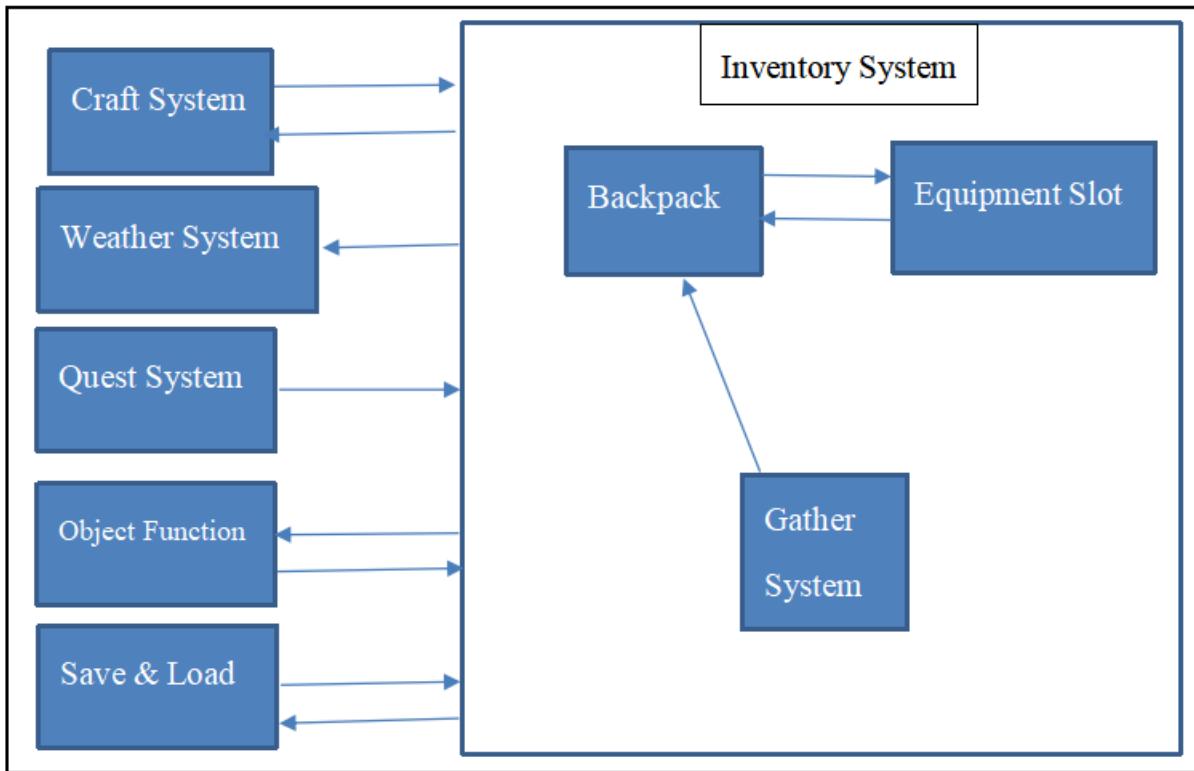
There are many abandoned cars on the highway. Player can gather resources such as oil, iron and food at cars.



iii. Game system

The game build with Inventory System, Crafting System, Player Condition, Random Weather & Real-time Weather, Quest System & Multiple Endings, Object's functions, Animal AI, Dialogue System(Game Assistant), Persistence data.

Next graph will show the relationship between each system.



iv. GUI

GUI design includes Inventory panel, Craft system panel, Quest system panel, player's condition and quest condition panel (stat panel), objects' panels, game menu, start menu and HUD(a method of visually representing information in video games).

II. Implementations

i. Inventory System



Inventory Panel

Backpack & Equipment Slot & Equipment effect

The panel contains 3 parts.

Backpack: The left part is backpack panel, the player can view items, use items, or equip items here. Right click to use or equip selected item.

Equipment slots: The middle part is equipment panel. If the player equipped a certain equipment, it will be shown on the exact position. If the player want to the equipped item, right click the slot to remove it. If the duration of equipped item becomes zeros, the item will be automatically destroyed.

Tooltip: When the player move the mouse to an item, the paper on the right will display a description of the currently selected item.

Equipment Effect

1.Axe: There are 2 types of axes, Stone Axe and Iron Axe. The difference between them is duration and gathering speed. Iron axe has a higher gathering speed and duration. If player equip the axe and gather trees or bushes, the gathering speed will become faster than equip nothing.

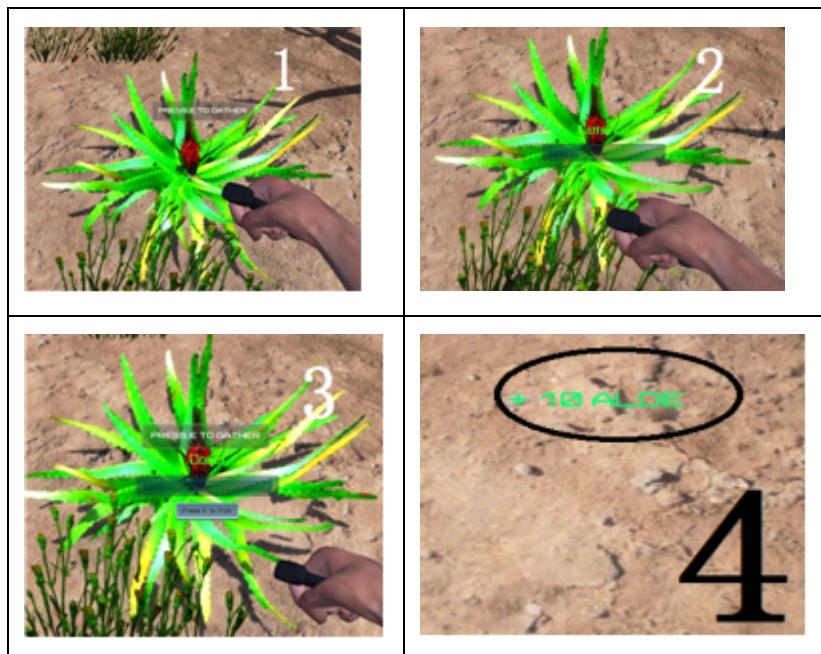
2.Pickaxe: There are 2 types of pickaxes, Stone Pickaxe and Iron Pickaxe. The difference between them is duration and gathering speed. Iron pickaxe has a higher gathering speed and duration. If player equip the pickaxe and gather the rock, the gathering speed will become faster than equip nothing.

3.Clothing: There are 2 types of clothing, Coat and Boots. Wearing clothes will make player keeping warm.

Gather System

When the player aim to a certain pickable game object, a tooltip will be displayed on the middle of the screen. If the player press E, the gathering process will be started up.

The gathering process is shown below.



ii. Crafting System

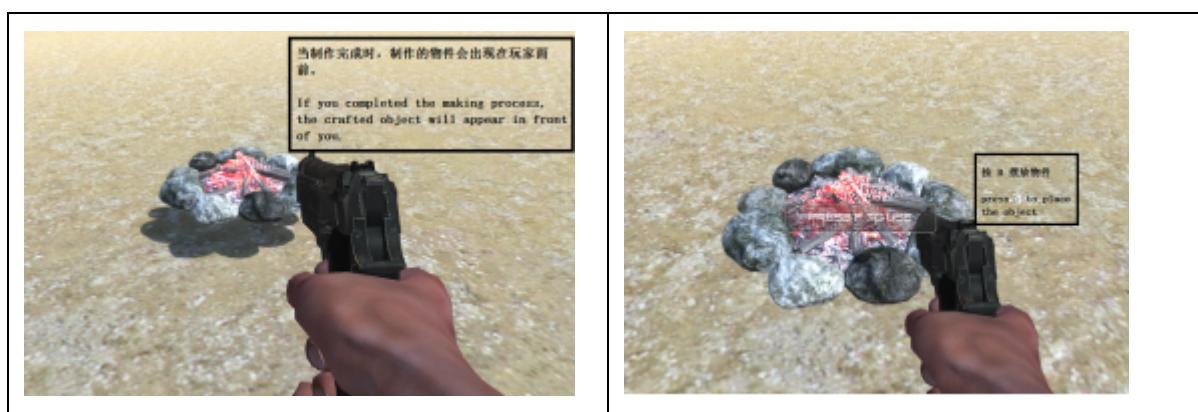


Crafting Panel

Crafting Buildable Objects

The way to craft an object is similar to crafting items.

Once the player finished the crafting process, the crafted object will appear in front of the player. If the player press **B**, the crafted object will be placed in front of the player.



Crafting Items

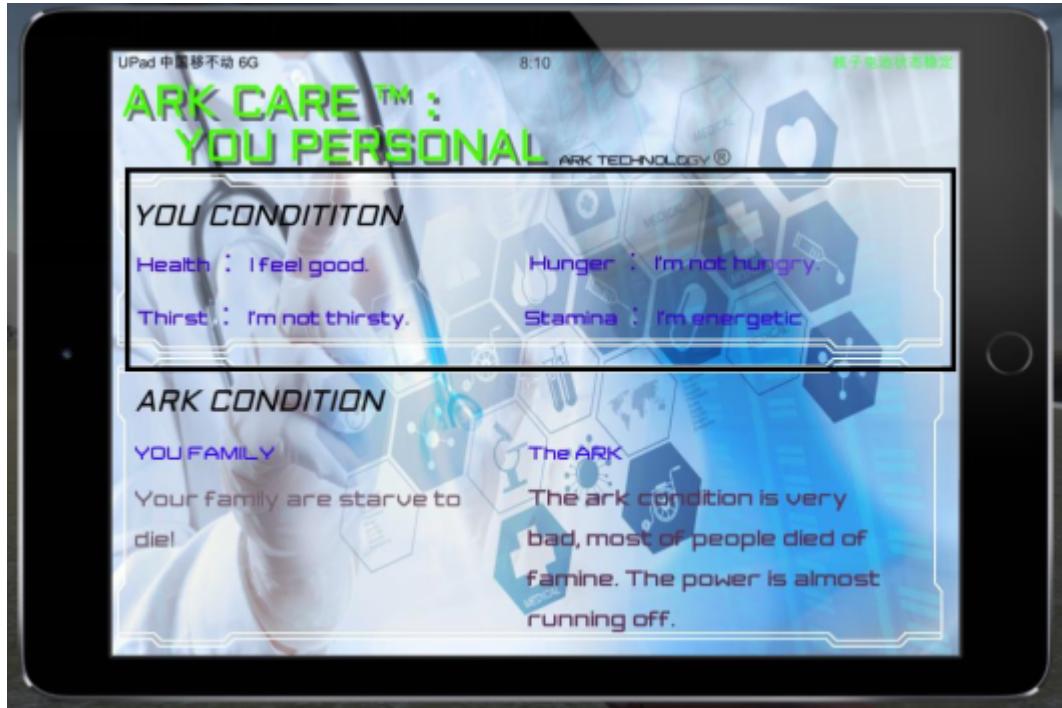


The panel is divided to two parts. The left part will lead the player to craft some items. The right will lead the player to build some objects.

Crafting or repairing an item should follow the four steps.

1. Select an item from the list, the required resources will be shown on the slots.
2. Make sure you have enough resources, press “Craft It!” to craft the item.
3. Waiting until crafting complete.
4. The selected item will be added into the back pack.

iii. Player Condition



Player Stats Watch System

Basic Stats

There are 5 different condition values in my game. They are Health, Hunger, Thirst and Stamina.

Health: player current health value. Taking medicines or using bandages will recover the health condition.

Hunger: player current hunger value. It will decrease over time. Eating food can recover the hunger value.

Thirst: player current thirst value, will decrease over time. Drinking water or soup will recover this value.

Stamina: the stamina value. Its upper limit(Max Stamina) will decrease over time. Running and jumping will consume the stamina value, but not the Max Stamina. When the stamina less than an exact value, running or

jumping will be disabled. If players want to recover the max stamina, they should take a break in the camp.

Comfort System

The player comfort condition will be decreased if the player drink unsafe water or eat raw things. It also will be decreased if the player catch cold. The low comfort value will bring the negative effect such as the player in low comfort value will more easier to get sick than the player in high comfort value.

However, if the player's family dead in famine. The upper limit of comfort value will be permanently become the half of original.

Illness/ Disease

There are two illness – Diarrhea, Fever and one negative emotion – Sorrow.

Diarrhea: If the player ate raw meat or drink unsafe water. The player may catch the diarrhea. When the player catch the diarrhea, the thirst value will decrease twice as fast than before, the gathering speed will become slower. Drinking soup will remove this DEBUFF.

Fever: If the player is not wears enough cloth at night, he/she will have a probability to catch cold. When the player catch cold. The health value will be decreased over time, the gathering speed will become slower. Taking the medicine will remove this debuff.

Sorrow: If the player's family dead, the upper limit of comfort value will become the half of original. There is no way to remove the DEBUFF. After all, Death is final.

iv. Random Weather & Real-time Weather

There are two extreme weather, poisoned fog and sandstorm. They will be generated randomly.

Poisoned fog(Haze): When haze coming, the player will receive the warning tips by game system. At that time, player must wear the gas mask to avoid getting damage.

Sandstorm: When the sandstorm coming, the player will receive the warning tips by game system. At that time, players should find a cover as soon as possible. If players expose to the sandstorm, the health value will be decreased rapidly.

The temperature displayed on the lower left corner of the screen. The value of temperature is related to the sun intensity.

At night, the temperature will decrease to -10 ° C. If players do not wearing enough cloth or staying close to a fire, they will probably get fever debuff.



v. Quest system & Multiple Endings



Quest Panel

The left panel display the main quest and the right panel display the side quest.

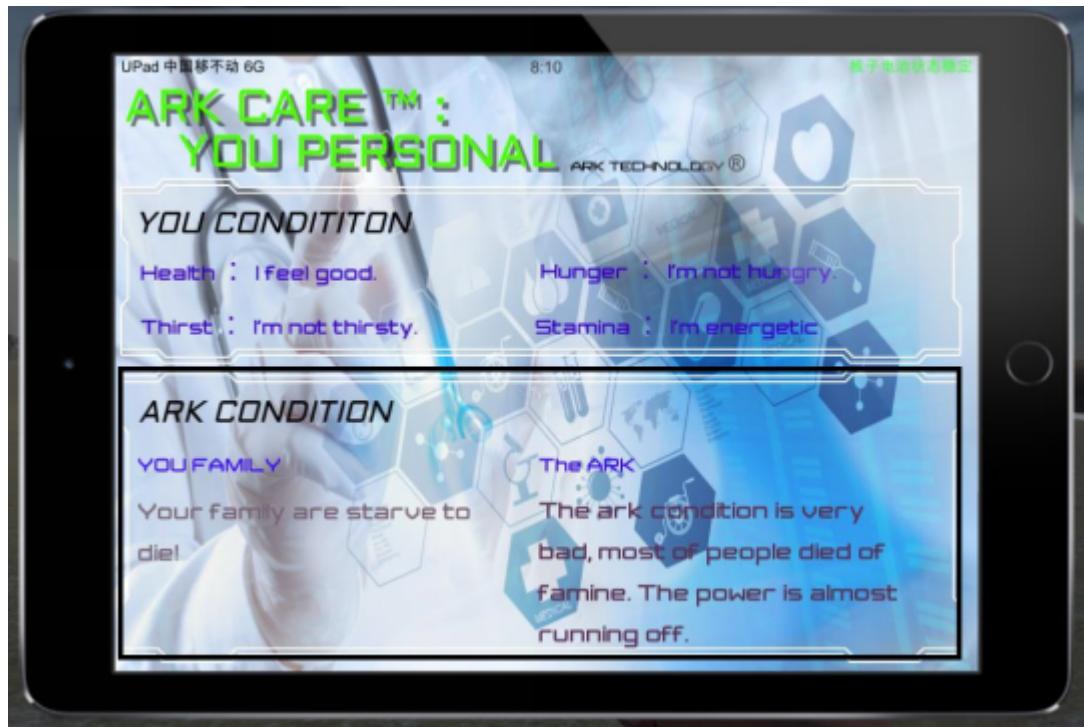
Main Quest: The main quest require the player to gather resources and deliver it to the base. When the ark(base) condition reach 100, the player will win the game. On the other hand, if the ark condition decreased to 0, the player will lose the game.

To deliver the resources to the ark, the player must craft the resource supply and food supply before. Player is able to call the carrier to pick the supplies only if the “From the next delivery” timer becomes 0 and the current weather is good.

After the aviator pick the supplies, he will give a armor box as reward.

Side Quest: The side quest is avoiding the family dead of famine. To finish the side quest, player must deliver the food supply to the family and pay extra 5 meats to bribe the pilot.

If the player want to know the details of the current ark condition or family condition, press L to view.



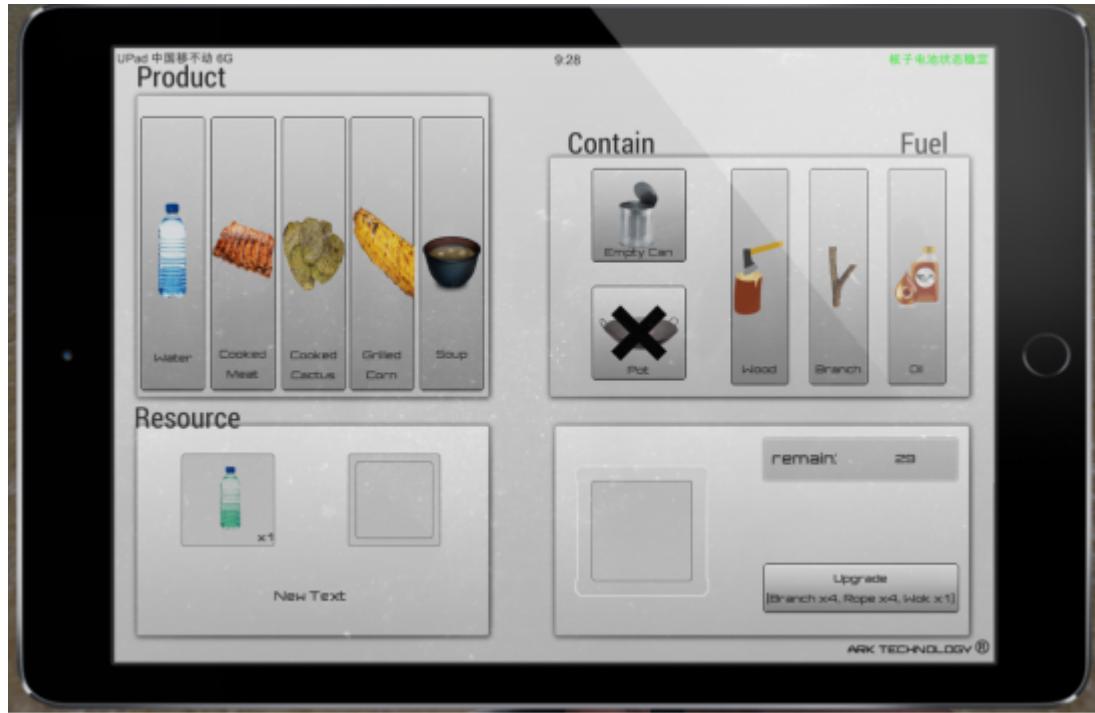
Ark & Family Condition Panel

Bad Ending: Player's family dead of famine.

Good Ending: Player's family survived.

vi. Campfire/ Shelter

Campfire & Cooking System



Cooking Panel

The campfire provides heat, and allows player cooking. A basic campfire can be upgrade. Upgraded campfire will has more features.

The cooking progress instructions is shown below,

- Select a fuel to make fire (A tip will show up if the player have not enough resources)
- Select a food (Click) or drink that you want to cook. The lower resource panel will display the required resources.
- Double click the “food” button to cook.(A tip will show up if the player have not enough resources)
 - If player selected water or soup, the extra container is needed.
 - If player choose empty can as container, this can will be consumed when the cooking process done. However, if the player upgraded campfire, the pot is allowed to use. The pot can be reused.

Shelter

The player can take a break in the camp to increase the upper limit of stamina. (Max stamina)

Camp can be upgraded. The player can restore the max stamina more quickly in the upgraded camp.

Player can press ESC to wake up when sleeping.

vii. Animal AI

The player can interactive with wolves in game. When player enter a wolf sight. The wolf will enter vigilance state. At that state, if the player attack this wolf or getting closer, the wolf will enter hostile state, and begin attack the player.

When wolf receive too much damage, it will enter **Flee** state until its health restored. In this state, the wolf will not attack player and keep a distance from them. When wolf health value becomes 0, it will enter **Death** state.

viii. Data Permanent

Most of important value can be store in hard disk if the player enter the game menu and click save button.