Into the Wild: Final Summary

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Into the Wild is a virtual-reality nature simulation that allows users to explore and learn about real natural environments and ecosystems. Into the Wild lets users observe and study animal habitats, life cycles, and food chains. Into the Wild is intended to be developed for the HTC Vive system to balance cost and performance. It is to run on a minimum operating system of Windows 7 to allow compatibility with the Vive and current systems. The environment is created and rendered using Unity3D to allow the developers to focus on the logic and environments without having to implement t the specifics of cameras, rendering, and physics. Into the Wild's virtual reality system will a more interactive and memorable experience for the user than a book while also being cheaper than actually visiting and explore the real environments. The goal of this project is to spread knowledge and awareness of a wide range of environments and animal life. Into the Wild will be considered effective and successful if it can teach users about the natural world in an immersive way. The intended customers for Into the Wild are parents, teachers, or individual enthusiasts who have an interest or want to spur an interest in the natural world for themselves or children.

The users of Into the Wild will be known as explorers while exploring different environments and ecosystems. The explores can explore different environments from across the world and study the different species that inhabit the ecosystems in those environments. The explorers should be able to traverse the environment in different ways such as running/walking and climbing. They can watch how animals interact with other animals or plants or they can examine the animals or plants to get more information about them that will be saved to a journal that keeps track of what the user finds. They also will be able to view information about animals and plants they find by exploring by reviewing the Journal at any time after discovering the animal or plant. To measure the explorer's knowledge of the environments they explore, the system will also present them with a quiz of what they learned.

Into the Wild should be user friendly and immersive but also safe from user abuse. The system has to be usable by a wide range of users with relatively little difficulty. It also should run fast and reliability while in the simulated environments as not to break the immersion of the user while they are exploring the environment. The requirements below aim to help Into the Wild follow these specifications.

User Interaction:

- The system stores all Journal and Food Chain data related to a user. Returning users can see all viewed animals and plants in the Journal and Food Chain. This allows the User to explore the game in smaller segments and leave and come back to the game as they need.
- The product must also make this information easily comprehendible to different age groups. In tests conducted for this product, at least seventy percent of all users in each age group must display understanding of presented information by passing a questionnaire on the material.

Performance and Accuracy:

- The product should render detailed and accurate environments to immerse the user in an experience as realistic as possible. In an anonymous survey conducted across our users, at least eighty percent should have reported that the simulated environment looked and felt realistic.
- The ram required should not exceed 8gb.

Security and Dependability:

- In the event of a failure, no data should be lost or damaged.
- The product should periodically verify the integrity of the data in the system. In the event of a breach of data integrity appropriate actions to correct the data should be taken.

Other Requirements (Style, UX, Accessibility, etc):

- The product must support multiple languages; there must be enough languages supported to make this product marketable to at least sixty-five percent of the world's population.
- This product shall have a modern, minimalistic style for all packaging and layouts within the game, such that seventy-five percent of a sample people encountering this product will rate its packaging positively.

The requirements above and the other not shown here while the product is being developed. As more requirements are discovered/made more tests will be added and tested. For the hardware and software materials, the application will exclusively be manually tested on the only supported hardware, the HTC Vive, both with minimum and well over minimum specification computers to ensure quality. Additionally, unit testing will be done with Unity Test Tools.

The software will be organized using several key objects. The root object is called Globe and it links users with the virtual environment and provides a menu. Each user's journal notes are stored in their own objects. The globe will link the user with an Environment object which contains protocols for using the simulation. Objects are designed to minimize flexibility while creating a streamlined means of implementing common features and behaviors. Classes are designed in a way as to minimize the interfaces between classes and maximize reuse of classes for different environments. Interfaces help to create a common template for classes serving similar purposes.

The most successful approach in this project is the collaboration of ideas for concept and the division of labor regarding implementation. During the stages of defining the primary concept and core features, every group member was working together and brainstorming. No idea had a definitive source, and the finished concept felt like a product of everyone's work. With everyone on the same page about the vision for the project, we had success splitting work between group members. This helped create an effective environment where everyone had responsibility.