## Usability and Humanity Requirements

### Ease of Use Requirements

Requirement: The application shall be easy for anyone over 10 years of age.

Fit Criterion: 90% of the 10 year olds shall be able to successfully perform the following tasks in under 10 minutes.

* take a picture of the animal
* enable GPS to send animal pictures to the database or view available animals on the local map
* find the animal's information page

Requirement: The application shall require the user to have no prior training.

Fit Criterion: Users who use the product for the first time shall be able to perform the tasks in under 10 minutes.

Requirement: The application shall help the user avoid making mistakes.

Fit Criterion: Using the application for a week shall yield a total error rate of less than 1 percent.

Requirement: The application shall be used constantly.

Fit Criterion: An anonymous survey shall show that the application used by 65% of the intended users have used the product after the becoming familiar with it for a week.

### Personalization and Internalization Requirements

* The application shall retain the user's settings, such as enabling or disabling GPS.
* The application shall allow the user to follow and view animals that he either took pictures of or are in the local area.

### Learning Requirements

Requirement: The application shall be easy for any individual who know basic English.

Fit Criterion: 98% of users shall be able to navigate the application without asking to clarify.

Requirement: Users do not need to have any prior knowledge of how to use the application.

Fit Criterion: 95% of the users should shall be able to successfully perform the following tasks in 5 minutes.

* taking pictures of the animal
* change their settings
* enable the GPS after being given an error message

### Understandability and Politeness Requirements

* The application uses words and symbols that are naturally understandable by the community.
* The application does not offend any religion or political parties.

### Accessibility Requirements

* The application shall be used by color blind individuals.
* The application shall conform to the Disabilities Act.

## Performance Requirements

### Speed and Latency Requirements

* The application must not take more than 15 seconds to boot up.
* The application must not take more than 1 second to respond to the user's input.
* When the user takes a picture of the animal, it must not take more than 10 seconds to retrieve the information from the database.
* When the user sends the photograph of an animal to the database, it must not take longer than 10 seconds.

### Safety-Critical Requirements

Requirement: The application must not consume too many Random Access Memory (RAM) on any given handheld device.

Fit Criterion: The application should make sure that it does not consume too much RAM on the handheld device. Should this ever occur, the application or handheld device shall display a warning to the user indicating a RAM error.

Requirement: The application must not cause any mobile processors to overheat substantially.

Fit Criterion: The application should immediately exit if the mobile processor exceeds 85 degrees fahrenheit.

### Precision or Accuracy Requirements

* All animal names and information must be accurate and use proper spelling and grammar.
* The application must be able to respond to the user's input at least once.

### Reliability and Availability Requirements

* The application will be available for the user 24 hours every day.
* If the application has any available updates, the user must be able to have those updates installed into their handheld device.
* In the case of failure, the application must be able to save the last known animal information the user was viewing.
* If the application fails while the player sends the animal to the database, they will be able to retry.
* The application should be able to run every time the user starts it. For every 100 application startup by the same user, it should not fail more than 5% of the time.

### Robustness or Fault-Tolerance Requirements

* If the application freezes or crashes, the user must be able to view the last page he was viewing.
* If the user's handheld device loses power while using the application, he will be able to view the last page he was on.
* If the application is unable to enable GPS in 30 seconds, it will continue to attempt a connection for 5 minutes. If it cannot detect a GPS, it will notify the user and then switch the GPS to disabled.

### Capacity Requirements

* Updates for the game should be kept under a limited memory for all handheld devices.
* The file should not exceed the capacity based on the policy of the mobile platform's built-in stores.

### Scalability or Extensibility Requirements

* The database will be able to handle a substantial amount of queries for thousands of animals. This number is expected to increase as users upload more photographs of these animals.

### Longevity Requirements

* The application will be tested intensively for bugs and issues before being released to the market.
* The application will be expected to operate for a minimum of 4 years.