**KIOSK TECHNOLOGY - FUNCTIONAL REQUIREMENTS**

This section details the requirements of the kiosk systems both functionally and technologically. This will describe in moderate detail the features that the kiosk systems will have along with their intended interactions with the users (zoo visitors).

To determine the kiosk systems functional requirements, the first thing to understand is the kiosk systems primary purpose as already defined by the client, Matthew Jones. With that in mind we can start with the functions that are vital to achieving the kiosks primary goals.

**Technologies and Background Features**

This section will list features and functions that are essential to the basic operation of the kiosk systems. Without them, the kiosks will be unusable.

**Database Access**

One of the kiosks’ vital functions is to connect to the database and records system also provided by Sovereign Software. This is a very important as the kiosks need to access the data of any animal within the zoo upon request of the user. This will require a connection to a server and is arguably one of the most crucial features of the kiosk systems.

Users of the kiosks will not be able to interact with the database itself, as access permissions on the kiosks will be restricted to read only. This feature is purely for kiosk users to request specific information.

**Touchscreen compatibility**

This function will serve as the main method of directly interacting with the kiosks. Using the kiosk will not be possible without a touchscreen as there are no plans for alternative methods of usability. The touchscreen will undoubtedly be the most useful interactive feature as not only is it required to use the kiosks in the first place, but it will be in constant use by visitors.

The ability to interact using a touchscreen will of course not just mean users can touch the screen to select buttons. It will allow enhanced navigation such as being able to scroll up and down a screen in situations where the page is too large to fit on a single screen. The user simply needs to drag their finger vertically across the screen as they would to scroll on any touchscreen device. A touchscreen function will also allow users to magnify areas of a page that they wish see closer, which is done in the same way as other devices by using two fingers and dragging them toward or away from each other.

**User Configuration and Accessibility**

One important aspect of providing a positive user experience is taking into consideration the fact that not everybody will be able to interact with the kiosk systems in a conventional manner. Because of this, it is necessary to include a multitude of accessibility options to allow everybody to make use of the kiosks. This will include accounting for various possibilities.

To accommodate for these possibilities, an options menu will be included that allows users the option to; select a different language, enable “colour deficiency” mode, provide “audio assistance” and finally, allow for various display modes. These options will solve a rather considerable amount of issues that may arise, including the following.

**Language Selection**

It is not impossible that some visitors to the zoo may not fully understand the English language, so a function that allows users to select their own language will be available. All the user needs to do is tap on the flag icon and then select the corresponding flag of the language they wish to use.

**Visual Aid options**

Another feature we believe to be critical comes in the form of an option that changes the display to assist users with colour deficiencies. We have focused on Protanopia, Deuteranopia and Tritanopia, as these three are the most common forms of colour blindness. The user would interact with this option in the same way they would change the language.

**Audio Narration**

This feature is crucial for users that suffer from complete blindness. With Audio narration, blind users will still be able to interact with the kiosk. The audio narration can be toggled in the options tab, and once enabled, a voice-over will play when highlighting menu buttons. It can also be used to narrate text to allow the blind user to access the information even though being unable to see it for themselves.

**Dyslexic-friendly display**

Lastly, we have decided to include an alternative display that allows users suffering from Dyslexia to be able to more easily the information onscreen. This feature is enabled much like the other options; by going into the options tab and changing the display to the dyslexic-friendly version.

In terms of user interaction, these options could be one of the most used features of the kiosks, as there will potentially be quite a few people that will rely on these options to be able to use them. Users will be able to utilise these features by selecting the options menu in the top left corner of the screen and selecting which features they wish to enable. From there the kiosk should be fully accessible for that user. Adding in these features also helps to ensure that we comply with the Equality Act.

**Front-End Features**

This section details the features that will be presented to the user directly on the kiosk screen.

**Map Display**

The kiosks will have a feature included that will display a map of Claybrook Zoo. The map will give various information such as where you can find specific animals, how they have been organised, allowing users to find an area containing a specific animal type they are fond of.

**Interactive Games**

Games can be found on the kiosks to give users a heavy interactive experience while learning about their favourite animals. The games are directed towards younger children and contain jungle/zoo themed versions of mix and match (match the animal to their habitat), jigsaw puzzles and quizzes for people who prefer to take on a more intellectually challenging game.

**Gallery**

This feature will allow users to browse a gallery containing a huge arrangement of photos and videos of animals at the zoo. This will be useful for times when animals are not at their most active, but a visitor may want to see what the animal is like when it is more active. The photos they can view consist of the animals in their natural habitat, photos at various angles of the animal etc.

**Search**

This last feature lets kiosk users search for any specific animal within the zoo. Once they find the correct animal, they can access information from the database – a page containing all the information on that animal. This is useful for people who ae only interested in a specific animal, and can also be useful when users want to search for information on the animal of the week for example.