**Software Requirements**

**Specification**

**for**

**Spot**

**Version 1.0 approved**

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**<February 20, 2018>**

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**Revision History**

**Name Date Reason For Changes Version**

**1. Introduction**

* 1. **Purpose**

The Spot mobile application project intent to help individuals who are visually impaired. Another reason for doing the project, Spot application concerning to give information of what a subject is. The application scans a subject with the help of AI to give information as a result.

**1.2 Document Conventions**

Documentation Convention of the SRS:

* SRS – Software Requirements Specification
* Intended Audiences or Readers are in *Italic Forms*
* SRS sections used for information has open and closed “double quotation mark”

**1.3 Intended Audience and Reading Suggestions**

The intended readers of the documents are the project manager, project team, the project adviser and the project consultant and the professors. The user readers are the part of the visually impaired community that can this read through the help of glasses. For further reading suggestions please check the references to have a quick idea about the application.

**1.4 Product Scope**

The scope of Spot mobile application is to identify the subject when the camera is pointed at it, it should also display the information like what the subject is, what is it for and a short background of that subject. The application should also process text and convert it into speech module which will be in English language.

**1.5 References**

Retrieved from http://www.tourism.gov.ph/sitepages/top10thingstodo.aspx

Retrieved from https://iq-research.info/en/page/average-iq-by-country

Exploring the links between intelligence and curiosity - Myria. (2015, April 19). Retrieved from https://myria.com/exploring-the-links-between-intelligence-and-curiosity

Inc., C. (2013, April 7). CamFind visual search - powered by CloudSight.ai on the App Store. Retrieved from https://itunes.apple.com/us/app/camfind-visual-search-powered-by-cloudsight-ai/id595857716?mt=8

INDUSTRY PERFORMANCE FOR TRAVEL AND TOURISM| MAY 2017. (n.d.). Retrieved from http://www.tourism.gov.ph/pages/industryperformance.aspx

Makers of app for the color blind wins top Microsoft award | BusinessMirror. (2017, April 21). Retrieved from http://www.businessmirror.com.ph/makers-of-app-for-the-color-blind-wins-top-microsoft-award/

Tourist arrivals to Philippines rise 14 percent in first five months of 2017. (2017, July 12). Retrieved from http://cnnphilippines.com/news/2017/07/12/tourist-arrivals-increase-in-jan-may-2017.html

Wolfram Language Artificial Intelligence: The Image Identification Project—Stephen Wolfram Blog. (n.d.). Retrieved from http://blog.stephenwolfram.com/2015/05/wolfram-language-artificial-intelligence-the-image-identification-project/

**2. Overall Description**

**2.1 Product Perspective**

The Spot mobile application is inspired by the Project Minerva of Team Opticode from the Lyceum of the Philippines University Laguna.

**2.2 Product Functions**

The major functions of the application that it should perform is the following:

* The application will scan the subjects
* The application will detect what the subject is
* The application will give information about the subject

The user should point their phone camera to the subject to have the major functions to be executed by the application.

**2.3 User Classes and Characteristics**

The application is generally intended for visually impaired people regardless of their expertise as long as they are capable of using mobile phones that are optimized for visual impairness e.g. enable talkback services which is a built in software for visually impaired in the android os which enables them to be guided and interact with their mobile phones

**2.4 Operating Environment**

The application will be operating for the visually impaired. The operating system to be used is android starting from kitkat to the latest android android operating system.

**2.5 Design and Implementation Constraints**

The users should be connected to the internet for the application to provide optimal results, as for the language of the application, English is the language that will be covered for the speech module and the result output of the text.

**2.6 User Documentation**

There are still no available online help and tutorials for this application.

**2.7 Assumptions and Dependencies**

*<List any assumed factors (as opposed to known facts) that could affect the requirements stated in the SRS. These could include third-party or commercial components that you plan to use, issues around the development or operating environment, or constraints. The project could be affected if these assumptions are incorrect, are not shared, or change. Also identify any dependencies the project has on external factors, such as software components that you intend to reuse from*

*another project, unless they are already documented elsewhere (for example, in the vision and scope document or the project plan).>*

**3. External Interface Requirements**

**3.1 User Interfaces**

The user interface for the Spot application is designed for visually impaired people. There designed with text that are bigger than the usual size, since the application can be used by the non-visually impaired there is also a button for the speech module if they want to listen to the result of the subject scan.

**3.2 Hardware Interfaces**

*<Describe the logical and physical characteristics of each interface between the software product and the hardware components of the system. This may include the supported device types, the nature of the data and control interactions between the software and the hardware, and communication protocols to be used.>*

**3.3 Software Interfaces**

*<Describe the connections between this product and other specific software components (name and version), including databases, operating systems, tools, libraries, and integrated commercial components. Identify the data items or messages coming into the system and going out and describe the purpose of each. Describe the services needed and the nature of communications. Refer to documents that describe detailed application programming interface protocols. Identify data that will be shared across software components. If the data sharing mechanism must be implemented in a specific way (for example, use of a global data area in a multitasking operating system), specify this as an implementation constraint.>*

**3.4 Communications Interfaces**

*<Describe the requirements associated with any communications functions required by this product, including e-mail, web browser, network server communications protocols, electronic forms, and so on. Define any pertinent message formatting. Identify any communication standards that will be used, such as FTP or HTTP. Specify any communication security or encryption issues, data transfer rates, and synchronization mechanisms.>*

**4. System Features**

*<This template illustrates organizing the functional requirements for the product by system features, the major services provided by the product. You may prefer to organize this section by use case, mode of operation, user class, object class, functional hierarchy, or combinations of these, whatever makes the most logical sense for your product.>*

**4.1 System Feature 1**

*<Don’t really say “System Feature 1.” State the feature name in just a few words.>*

4.1.1 Description and Priority

*<Provide a short description of the feature and indicate whether it is of High, Medium, or Low priority. You could also include specific priority component ratings, such as benefit, penalty, cost, and risk (each rated on a relative scale from a low of 1 to a high of 9).>*

4.1.2 Stimulus/Response Sequences

*<List the sequences of user actions and system responses that stimulate the behavior defined for this feature. These will correspond to the dialog elements associated with use cases.>*

4.1.3 Functional Requirements

*<Itemize the detailed functional requirements associated with this feature. These are the software capabilities that must be present in order for the user to carry out the services provided by the feature, or to execute the use case. Include how the*

*product should respond to anticipated error conditions or invalid inputs.*

*Requirements should be concise, complete, unambiguous, verifiable, and necessary. Use “TBD” as a placeholder to indicate when necessary information is not yet available.>*

*<Each requirement should be uniquely identified with a sequence number or a meaningful tag of some kind.>*

REQ-1: REQ-2:

**4.2 System Feature 2 (and so on)**

**5. Other Nonfunctional Requirements**

**5.1 Performance Requirements**

*<If there are performance requirements for the product under various circumstances, state them here and explain their rationale, to help the developers understand the intent and make suitable design choices. Specify the timing relationships for real time systems. Make such requirements as specific as possible. You may need to state performance requirements for individual functional requirements or features.>*

**5.2 Safety Requirements**

*There are no harmful effects in using the application but please be reminded that proper guidance and control in using the application is needed.*

**5.3 Security Requirements**

*<Specify any requirements regarding security or privacy issues surrounding use of the product or protection of the data used or created by the product. Define any user identity authentication requirements. Refer to any external policies or regulations containing security issues that affect the product. Define any security or privacy certifications that must be satisfied.>*

**5.4 Software Quality Attributes**

*<Specify any additional quality characteristics for the product that will be important to either the customers or the developers. Some to consider are: adaptability, availability, correctness, flexibility, interoperability, maintainability, portability, reliability, reusability, robustness, testability, and usability. Write these to be specific, quantitative, and verifiable when possible. At the least, clarify the relative preferences for various attributes, such as ease of use over ease of learning.>*

**5.5 Business Rules**

*<List any operating principles about the product, such as which individuals or roles can perform which functions under specific circumstances. These are not functional requirements in themselves, but they may imply certain functional requirements to enforce the rules.>*