Review of Technical Specifications

BU ProPane Team:
Griffin Dunn
Colin Madigan
Phillip Stahlfeld

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Specification Overview

The following table shows an overview of the technical specifications for this project. A larger version of this table has been provided on the last page. The important thing to note about this table is that all of the required specifications have been met (green) in addition to one additional feature (blue).

Specification ID	Requirement	Evaluation Test	Evaluation Result	Met /Not Met
System Specifications				
3.1.1	The maximum time required to prepare the capture system for recording shall not exceed 5 minutes.	Video Record	Setup in 1.75 Minutes	Met
3.2.1	The ProPANE system shall capture all of the information written on a board and within the capture field provided that there exists a clear line of sight from the capture device to the information for a minimum of 5 continuous seconds.	Timestamped Images	Images taken at less than 5 second intervals	Met
3.3.1	The minimum operating distance from board for the capture system shall not exceed 220 inches.	Measurement during capture event	Captured at 60 inches	Met
3.3.2	The maximum operating distance from board for the capture system shall not be less than 60 inches.	Measurement during capture event	Captured at 60 inches	Met
Hardware Specifications				
4.1.1	The total weight of the capture device shall not exceed 2.5 kg.	Weighed capture device	Camera weighs 0.3 kg	Met
4.1.2	The capture device shall fit inside of a cube with 0.75 m sides in its most collapsed and fully assembled state.	Measured capture device	128.7 x 70.8 x 19.1 mm	Met
Software Specifications				
5.1.1	The analysis system shall support the Ubuntu 12.04 operating system.	Installed analysis system on computer running Ubuntu 12.04	Analysis system ran without error	Met
5.2.1	The ProPANE system shall generate images that are in an open format (no proprietary formats).	Checked output file format	Files are JPEGs	Met
5.2.2	The images generated by the ProPANE system shall be editable—to the extent of rotating and cropping—through the use of a free-from-cost editor.	Rotated and cropped images on GIMP	Successfully rotated and cropped images	Met
Interface Specifications				
6.1.1	The mechanism for starting the capture system shall be simple enough to use as to require no special training aside from reading the user manual.	Had third party start system with only knowledge of system being the user manual	Third party was able to start the app in 2 minutes	Met
6.1.2	The mechanism for stopping the capture system shall be simple enough to use as to require no special training aside from reading the user manual.	Had third party stop system with only knowledge of system being the user manual	Third party was able to stop the app	Met
6.2.1	The analysis system shall provide a mechanism for accessing the identified key images.	Browse key images	Viewed images through Windows, Mac, and Linux builtin file browsers	Met
6.2.2	The analysis system shall provide a graphical interface for exporting image files to a specified location.	Export key images	Exported images through Windows, Mac, and Linux builtin file browsers	Met
Additional Features				
7.3.2	The ProPANE analysis system shall alter images to make the board appear to be a single color set apart from the writing.	Ran system with new code	Whiteboard became uniform white	Met

Specification Changes

The only specification that has been altered since the beginning of the year is 5.1.1 where the operating system to be supported was originally 10.04. This minor change was approved by our clients.

Additional Specifications

It seems like a lot of the specifications for this project relate to the usage of the system and not quantifiable measures of what the system will actually have to accomplish. Even with the knowledge

acquired from the process of creating this system, we still find it difficult to create specifications for the system while still keeping it implementation agnostic. However, if we did this project again, we would add the following specifications for how the system should function:

- A key image shall be generated when at least 5% of all writing on the board and within the capture field has changed or been erased.

- The system shall be capable of capturing all information written on a board with dimensions 6 feet by 4 feet.

The first requirement would be used to ensure that the system is actually generating key images correctly. The second requirement would be used to ensure that the system is actually capturing a usable amount of board space.

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