

Project Deliverable C: Design Criteria and Target Specifications
GNG 1103 - Engineering Design, Section #A01, Team #14
Faculty of Engineering - University of Ottawa

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Introduction

The following deliverable will show how the clients' needs have been interpreted into design criteria along with the constraints of the project, the functional and nonfunctional requirements of the final solution and benchmarking of current solutions already on the market. This information will be used to help define the expectation of the final product and act as a guide to use while evaluating potential solution ideas and provide measurable design goals throughout the design process.

Constraints

As the final product will utilize ross videos dashboard software most of the constraints will come from the limitations of the software. Cost will also be a constraint as the team has a budget of \$100.

Design Criteria

Interpreted needs	Functional Requirements	Non-Functional Requirements	Design Criteria
People knowing the amount of people and the number of machines available will allow them to gauge if there is space for them or not	Flow of traffic can be monitored with the map. The number of available machines can be monitored on the map.	Colour coded for convenience.	Indication of foot traffic
Show availability of machines in Makerspace. Method to keep track of SD cards	Clear indication of available machines.	Colour coded for convenience	Able to track availability of machines
Map system to help users find the appropriate space.	Map has a guidance system to plot a path to the appropriate space.	Colour coded for convenience.	Search Bar
Clear indication of how much time remains before Makerspace is closed.	Show time accurately and specific to that day.	Look appealing	The map should have a timer.
System to submit complaints / suggestions.	A system where complaints/suggestions can be submitted.	Easy user interface	A complaint/suggestion system

Target Specifications

Due to our projected idea being software based we were unable to determine physical target specifications for our project. We did however decide that our focus for a target specification would be based on the accessibility, navigability, simplicity and user-friendliness of our project.

We would like our project to be able to be easily accessed by all CEED space users, easy to navigate, with a simple to use and easily understood user interface. .

Bench Marks

Website	UOttawa Library Room Booking	UOttawa Campus Interactive Map	Maphub (map of Berlin Zoo)	Class Find
Design	Very basic design	Basic map with buildings in a highlighted red	Very nice. Gives several different styles of map in different colours and art styles. Very cute and artsy	Slightly cluttered. Very basic
Booking Style	Reserves very far in advance allowing people to book too many rooms. Allows you to book with email. Allows you to choose from a range of buildings	N/A	N/A	N/A
Interactive Map	N/A	Shows a short form of each building on map. Able to select the building and get full name and link to web page about building.	Shows you were in park each animal is and when you click on the animal shows you a picture of animal.	You pick the building from a list of buildings and it shows you on the map where it is located.

Amount of Info given	Gives you what rooms are available and what rooms you have booked. Clearly states rules of booking and using	Gives name of building and directions. Can show warmest and shortest route. Doesn't give much info about	Gives location of animals and names of building. Shows you what the area the animal is at looks like.	Gives you the location of the building you are looking for and pictures of what the building and room you are
	rooms.	buildings	Doesn't give directions	looking for so you can see what they look like making it easier to find.

Link to Each Website

- UOttawa Library room booking <https://www.uottawa.ca/bibliorooms/month.php>
- UOttawa Campus Interactive Map <https://maps.uottawa.ca/>
- Maphub Burlin Zoo <https://maphub.net/hyperknot/custom-markers-berlin-zoo>
- Class Find <http://classfind.com/ottawa>

Knowledge Gaps

The team is always striving to fully understand every aspect of the problem and of the solution, although the team is not fully familiar with Ross Videos dashboard software and the limitations of it. The team has acknowledged this gap in knowledge internally and will address it by utilizing Ross videos community forum which will provide the team with help during troubleshooting and the explorations of the limitations of the software.

Conclusion

This deliverable will be referred to throughout the design process as it defines all client needs and target specification. This will be used to evaluate potential solutions and compare them to the benchmarking done on already available solutions. It has also made the group address the limitations of the Ross video dashboard software.