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| **Group:** | James Beasley, Charles Beck, Charles Duso, Alexander Grzesiak, Erik Strauss |
| **Project Title:** | Boston University - Microfluid Experimentation Data Generator |
| **Deliverable:** | D.1.2. Consumer Discovery |
| **Course:** | CS386 – Spring 2017 |
| **Instructor:** | Professor Gerosa |
| **Github:** | https://github.com/TheAwesomeEgg/CS386ProjectGroup1.git |

# Vision: Trident

# Introduction

Trident is a web application is to be used in research towards microfluidic experimentation being conducted at Boston University. The application will allow researchers at Boston University to easily communicate instructions to the hardware they are developing for experimentation.

# Positioning

The core audience of this product are the students, professors at Boston University, and any entity working with Boston University to achieve their research goals. What we would like to achieve is a web UI that allows users to create data structures, and containing processes that will be executed by hardware at the same time as retrieving information from the experiments in one file. We want the university to be able to generate experiments and produce commands quickly.

## Problem Statement

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| --- | --- |
| The problem of | BU currently is without a system in which they can communicate instructions to their experimental hardware. |
| affects | This affects Boston University, the students , and the professors. Also anyone working with this team. |
| the impact of which is | Having the ability to manipulate microfluidics |
| a successful solution would be | Fast, reliable, and accurate |

## Product Position Statement

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| --- | --- |
| For | BU Microfluidics |
| Who | Researchers that can generate experiments |
| Trident | Is a web application |
| That | Generates commands in a file that experimental hardware can use. |
| Unlike | Manually written commands |
| Our product | Autonomously generates commands based off guide lines |

# 

# Stakeholder Descriptions

## Stakeholder Summary

| **Name** | **Description** | **Responsibilities** |
| --- | --- | --- |
| Boston University: Bio-medical engineering | BU is a private research university. The Bio-medical department is researching microfluidics. | The stakeholder maintains a market for this product. They also keep the product in use or generate interests into a product of similarity. |

## User Environment

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Add information about what they use to write commands and how they can use our application to improve their environment. How does our product interact with their world?

# Product Overview

## Needs and Features

|  |  |  |  |
| --- | --- | --- | --- |
| **Need** | **Priority** | **Features** | **Planned Release** |
| Usability | High | Useable on any device, Easy to understand the U/I and I/O | End of Cycle |
| Conversion of Commands | High | Translate guidelines into commands | End of Cycle |
| File Manipulation | High | Reading in files of readable commands, Writing to new files. | End of Cycle |
| Reliability | High | Correct command conversion, Always available. Being precise in changes. Secure in data and techniques used. | End of Cycle |
| Speed | Med | Reading and writing instructions quickly | End of Cycle |

# Other Product Requirements

|  |  |  |
| --- | --- | --- |
| **Requirement** | **Priority** | **Planned Release** |
| Robustness | Med |  |
| Good U/I | Low |  |
| Portability | High |  |
| Scale | Med |  |
| Security | Low |  |