Company Management System

Version 1.3

Revision History

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| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| 22/SEP/10 | 1.0 | This is the initial vision for the CMS | Michael Harrison |
| 7/OCT/10 | 1.001 | Minor modifications and fixes | Michael Laws |
| 29/OCT/10 | 1.1 | Minor modifications and fixes | Ryan Rabe |
| 29/NOV/2010 | 1.2 | Minor modifications and fixes | Michael Harrison |
| 19/JAN/2011 | 1.3 | Minor modifications and fixes | Michael Laws |

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2.2.2 Midshipmen Company Leadership – secondary users of the proposed system. Just like the Company Officer, Company Commander and his appointed officers will have access to pertinent data fields, which will allow them to perform their duties more efficiently. 4

2.2.3 Company members – tertiary users of the proposed system, they will be able to access and modify their own fields. As a result, they will be able to access their whole “performance packet”, thus they will posses an accurate knowledge of their progress and possible shortcomings. More importantly, they will be able to correct administrative errors pertaining to their performance. 4

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3.1.1 The CMS is a self-contained product, but it complements the existing MIDS system. CMS will not interface with MIDS at all but rather work alongside to aid and supplement functionality. All the capabilities and functionalities of CMS will be controlled by granular user levels to account for all the different company billets. Product Perspective 5

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4.1.2 Security would be incumbent on the hosting system; however, proper programming and security considerations will be I included within the CMS architecture. 5

4.1.3 Server capabilities would include Web-Server, scripting, and database capabilities. Without web-server capabilities, a distributed application would need to be deployed in a compiled application, such as a Java, C#, or other such application. Scripting, such as PHP or Ruby on Rails, is necessary to the dynamic nature of the proposed system. Not having this capability would either drive the application toward a static website. Databases allow for the persistence of data, allowing standardization across the brigade. The absence of this would drive the system to flat-files or non-standardized information entries. 5

4.2 Dependencies 6

4.2.1 As mentioned above, we assume we will have access to certain hardware and software capabilities. Required hardware includes servers, to host data and processing. Software requirements include, but are not constrained to: web-server (such as Apache), scripting (PHP/Python/Ruby on Rails), and databases (MySQL, Access, etc). 6

4.3 Constraints 6

4.3.1 Developer As our team will graduate at the end of the year, it will be impossible for us to maintain the system ourselves, thus it is vital to the survivability of this system that it be easy to use, maintain, and update. 6

4.3.2 Access Due to certain security concerns, our system’s access to the United States Naval Academy servers may be limited. Additionally, since our system is operating within a government network, use third-party modules and/or features may be limited. 6

4.3.3 Legal The sensitive nature of personal data is of the utmost importance, thus the secure use and appropriate application thereof is paramount. With this said, the use of proper programming, secure and appropriate access, and encryption of data will mitigate this limitation. 6

# Introduction

## Purpose

The purpose of this document is to outline the project and its requirements. This document introduces the capabilities needed by the stakeholders and users (Company Officers/SELs, Company Commanders, other Company Staff, and general Company members). This details and analyzes each of the stakeholder’s roles, why this system will be useful to each, and what each aspect of the CMS will accomplish for the stakeholder.

## References

This system will allow the stakeholders to comply with general orders of company operations. The exact specifications of what the CMS will accomplish are detailed in the following documents.

[1020.3A](http://www.usna.edu/Commandant/Instructions/COMDTMIDNINST%201020.3A_Midshipman%20Uniform%20Regulations.pdf) 20JUN03 MIDSHIPMEN UNIFORM REGULATIONS

[1080.1U](http://www.usna.edu/Commandant/Instructions/COMDTMIDINST_1080.1U_ACADEMIC_ACCOUNTABILITY_SYSTEM.pdf) 17DEC08 ACADEMIC ACCOUNTABILITY SYSTEM

[1081.1B](http://www.usna.edu/Commandant/Instructions/COMDTMIDNINST_1081.1B_TAPS_ACCOUNTABILITY_OF_MIDSHIPMEN.pdf) [Revision Memo](http://www.usna.edu/Commandant/Instructions/1081.1B_REVISION_MEMO.pdf) 15SEP10 TAPS ACCOUNTABILITY OF MIDSHIPMEN

[1601.10E](http://www.usna.edu/Commandant/Instructions/COMDTMIDNINST%201601.10E%20-%20BANCROFT%20HALL%20WATCH%20ORGANIZATION.pdf) 10AUG06 BANCROFT HALL WATCH ORGANIZATION

[1601.11C](http://www.usna.edu/Commandant/Instructions/COMDTMIDINST%201601.11C_COMPANY%20CHIEF_GYSGT_DUTIES_AND_RESPONSIBILITIES.pdf) 24AUG05 COMPANY CHIEF/GYSGT DUTIES AND RESPONSIBILITIES

# Positioning

## Problem Statement

The problem of excessive and overburdening paperwork in multiple areas of company management negatively affects company leadership, both at Midshipmen and Officer level. This problem results in many man-hours lost on tasks which could easily be automated; furthermore, it complicates record-keeping and, in many cases, makes both hierarchical and lateral communications unnecessarily difficult and/or impossible. A successful solution to this problem would be an implementation of a web-based database, which will centralize and streamline the record keeping, making company-related data easily accessible by all interested parties. Additionally, a properly designed front end to this database will be able to automate many tedious tasks, such as generating a daily 0800 report, tracking Midshipmen performance in areas of academics, physical fitness and room/uniform standard compliance.

## Stakeholder Summary

### Company Officer – will be the principal user of the proposed system, and will have the ultimate access to all the data contained herein. He will be able to review and modify all entries, and make his decisions based on accurate information.

### Midshipmen Company Leadership – secondary users of the proposed system. Just like the Company Officer, Company Commander and his appointed officers will have access to pertinent data fields, which will allow them to perform their duties more efficiently.

### Company members – tertiary users of the proposed system, they will be able to access and modify their own fields. As a result, they will be able to access their whole “performance packet”, thus they will posses an accurate knowledge of their progress and possible shortcomings. More importantly, they will be able to correct administrative errors pertaining to their performance.

# Product Overview

### The CMS is a self-contained product, but it complements the existing MIDS system. CMS will not interface with MIDS at all but rather work alongside to aid and supplement functionality. This is because Ward Hall will not allow third party software to interface with MIDS. All the capabilities and functionalities of CMS will be controlled by granular user levels to account for all the different company billets.

## Product Features

### 0800 Reports

The CMS will use a centrally stored database to dynamically create 0800 reports from requisite queries.

### Inspections with Reports and Statistics

Inspection information will be able to be entered and statistics regarding the entered inspections will be able to be queried.

### Watch Schedules

Appropriate users will be able to create and maintain watch schedules.

### Virtual Logbook for Watch Standers

The virtual logbook will interface with the watch schedule and allow for only the current watch stander, according to the watch schedule, to modify the logbook.

### Accountability and Formation Tracking

Appropriate users will be able to enter accountability information. Intuitive queries will be able to generate statistics.

### 1st LT Management

The 1st LT will be able to submit discrepancy reports and manage all the companies’ room discrepancies. This feature will greatly streamline submission of 1st LT discrepancies.

## Alternatives

There are no alternatives to this system. The existing paperwork is extremely time consuming and prone to human error.

# Limitations

## Assumptions

## The following list of assumptions includes maintenance, security, and server capabilities.

### Maintenance would include Ward Hall staff ensuring that the servers and databases work properly. Additionally, company MISLOs would need to maintain current company information.

### Security would be incumbent on the hosting system; however, proper programming and security considerations will be included within the CMS architecture.

### Server capabilities would include Web-Server, scripting, and database capabilities. Without web-server capabilities, a distributed application would need to be deployed in a compiled application, such as a Java, C#, or other such application. Scripting, such as PHP or Ruby on Rails, is necessary to the dynamic nature of the proposed system. Not having this capability would either drive the application toward a static website. Databases allow for the persistence of data, allowing standardization across the brigade. The absence of this would drive the system to flat-files or non-standardized information entries.

## Dependencies

### As mentioned above, we assume we will have access to certain hardware and software capabilities. Required hardware includes servers, to host data and processing. Software requirements include, but are not constrained to: web-server (such as Apache), scripting (PHP/Python/Ruby on Rails), and databases (MySQL, Access, etc).

## Constraints

### Developer As our team will graduate at the end of the year, it will be impossible for us to maintain the system ourselves, thus it is vital to the survivability of this system that it be easy to use, maintain, and update.

### Access Due to certain security concerns, our system’s access to the United States Naval Academy servers may be limited. Additionally, since our system is operating within a government network, use third-party modules and/or features may be limited.

### Legal The sensitive nature of personal data is of the utmost importance, thus the secure use and appropriate application thereof is paramount. With this said, the use of proper programming, secure and appropriate access, and encryption of data will mitigate this limitation.