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Battle Book

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ABSTRACT

The Battle Book is a Transportation and Personnel Management System focused on the needs of the transportation chain of command. This system allows tracking of personnel and vehicle movements, with capabilities to update and monitor location and status of personnel and their associated gear. The system provides a cloud-based secure infrastructure to maintain accurate accountability within various deployed locations. This system also calculates operational readiness and assists in tracking progress of troops.

I. INTRODUCTION

The Battle Book is a cloud-based application that provides a platform for tracking personnel and vehicle movements. It allows for real-time updates and monitoring of personnel and asset locations, which is crucial for maintaining operational readiness and ensuring the safety of troops. The system is designed to be accessible to authorized users, including administrators and personnel, with different levels of access based on their roles.

II. IMPLEMENTATION

The Battle Book is implemented using a modular design, allowing for the addition of new modules as needed. The system is built on a cloud-based infrastructure, providing scalability and security to ensure the confidentiality of data. The Battle Book includes modules for personnel, vehicles, and administrative functions, each designed to meet specific needs.

A. AUTHENTICATION & ACCESS CONTROL

Authentication and access control are crucial aspects of the Battle Book system. Users are required to log in with their credentials, and access is granted based on their role and permissions. Administrators have the ability to manage user accounts and access details, while regular users are limited to certain functions.

B. PERSONNEL MODULE

The personnel module is where personal data is maintained. This module contains various features, such as: (i) printing, (ii) exporting to Excel, and (iii) adding to the manifest. It also allows the actor to better control the overall progress of troops.

C. VEHICLES MODULE

The vehicle module is similar to the personnel module, tracking the status of assigned vehicles, and managing them. It allows the actors to later add them to the manifest or track the vehicle readiness. This module also allows the actor to better control the overall progress of troops.

D. MANIFEST MODULE

This module is the main idea behind the Battle Book. It allows the actors to create a manifest for convoy or vehicle convoy. Gathering information of individuals and vehicles from the data stored in the personnel and vehicle modules, the manifest currently uses a generic template which contains the personnel, vehicles, and weapons. It has the necessary information to allow the actor to print and submit to the higher commanded. Also, this module can be exported to a spreadsheet.

E. MOVEMENTS MODULE

Similar to the manifest module, this module instead focuses on alternative methods of transportation other than a vehicle convoy. Thus, no vehicle information is needed.

F. OPERATIONS MODULE

This module does simple calculations and basic statistical analysis from data on both personnel and vehicle modules. It also provides overall operational readiness of the unit, which is calculated by the status of their location. For example, if a unit member is unavailable, they are classified as 'Unaccounted.'

III. SUMMARY & FUTURE WORK

The Battle Book has been designed to be a real-time, cloud-based system that provides efficient tracking of personnel and vehicle movements. It allows for the integration of additional modules and provides more functionality on the Battle Book, based on our findings and experience in employing surveys of active military members who test our product, as shown in Figure 5.

REFERENCES