

# Software Design Document

## Flight Planning

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# Summary of Changes

Editor	Revision	Description	Date
Various	0.1	Initial document body and writing	2017-04-13

## 1 Introduction

### 1.1 Purpose

This software design document describes the architecture and system design of the CIOS Digital Flight Planning Editor release 1.0. The intended audience for this software will be members of the Civilian Air Patrol nationwide who will design and load flight plans to be mounted onto a Garmin G1000 equipped aircraft.

### 1.2 Scope

The Flight Planning Editor will allow flight planners in the Civilian Air Patrol (CAP) to plan their flights in an easy fashion and store them in a Secure Digital (SD) card. A detailed project description is available in the Flight Plan Editor Vision and Scope Document. The section in that document titled Scope of Initial and Subsequent Releases lists the features that are scheduled for full or partial implementation in this release.

### 1.3 Overview

### 1.4 Reference Material

(OPTIONAL)

### 1.5 Definitions and Acronyms

(OPTIONAL)

## 2 System Overview

Give a general description of the functionality, context and design of your project. Provide any background information if necessary.

## **3 System Architecture**

### **3.1 Architectural Design**

### **3.2 Decomposition Description**

### **3.3 Design Rationale**

## **4 Data Design**

### **4.1 Data Description**

### **4.2 Data Dictionary**

## **5 Component Design**

## **6 Human Interface Design**

### **6.1 Overview of User Interface**

### **6.2 Screen Images**

### **6.3 Screen Objects and Actions**

## **7 Requirement Matrix**

## **8 Appendices**

## **9 Requirements**

### **9.1 Background**

One of the missions which the Civil Air Patrol may have to complete in the event of a serious earthquake is to survey bridge infrastructure to verify its structural integrity. Pilots are sent on missions to fly over and photograph bridges across the state of Washington. Currently, CAP pilots are given notebooks containing flight plans with a series of geographic coordinates. While flying, the pilots manually key the coordinates of their next location into the cockpit navigation system. The Flight Plan Editor software will allow CAP to generate flight plan datafiles that are compatible with the navigation system so that pilots can select them from the cockpit navigation menu, thereby relieving them of the responsibility of manually entering location coordinates.

## **References**